



Ana Cláudia Rocha Reis

Sexual Offences against Minors Committed in Online Settings

Dissertation to obtain a Master's Degree in Law,
in the specialty of Business Law and Technology

Supervisor:
Dr. Athina Sachoulidou, Professor of the NOVA School of Law

2023, September

Anti-plagiarism Statement

I hereby declare that the work I present is my own work and that all my citations are correctly acknowledged. I am aware that the use of unacknowledged extraneous materials and sources constitutes a serious ethical and disciplinary offence.

Acknowledgements

I would like to express my deepest appreciation to my supervisor Professor Athina Sachoulidou who guided me through the entire process and shared with me her knowledge and expertise. I am extremely grateful for the patience and availability that Professor Athina had throughout the entire process which was essential for the writing of this Dissertation.

Secondly, as a Trainee Lawyer since November of 2022, I would take this opportunity to be thankful to Dr. Sebastião Oliveira, my mentor, for always giving me the needed time to dedicate to this Dissertation.

I would also like to extend my appreciation to my family: Mom, Dad, and Brother. This Dissertation is dedicated to you. Thank you for supporting me in every step of this journey and for, even when time did not seem to be enough, not letting me give up. I am really grateful for your presence in my life.

Finally, I want to take this opportunity to thank my friends for understanding my absence and for supporting me through all this process by pushing me to give my best and not letting me lose sight of my goals.

Abstract

Nowadays, there is no doubt that the access to the Internet has become very easy. And although that brings a lot of benefits to the society, there are a lot of concerns that emerge with this easy access, and we must pay attention to those concerns. In the last decades, there has been an increase on child sexual exploitation and sexual abuse through online settings and there is a need for effective mechanisms to address this issue.

This dissertation focuses on a theoretical approach and a critical approach to this matter by first analyzing some crucial theoretical notions on the topic of online child sexual exploitation and abuse and then analyzing the different legal mechanisms implemented to combat this issue. It reflects the importance of studying the topic and improving the already existing tools to fight it by giving some suggestions on how to achieve better protection of children. Based on the research done to develop this dissertation, conclusions include the need for new legal approaches to the issue and cooperation among private and public sectors, governments, and civil society, for this crime to be tackled.

Resumo

Hoje em dia, não há dúvidas que o acesso à Internet se tornou algo fácil. E, embora isso traga muitos benefícios para a sociedade, há muitas preocupações que surgem com esse fácil acesso e é o nosso dever prestar atenção a estas preocupações. Nas últimas décadas, tem se verificado um aumento do abuso e exploração sexual de crianças através de conexões online e é necessário que se criem mecanismos eficazes para combater este problema.

Esta dissertação concentra-se numa abordagem teórica e numa abordagem crítica sobre este assunto. Fá-lo primeiramente, através de uma análise teórica crucial dos termos do tópico do abuso e exploração sexual de crianças e posteriormente analisa os diferentes mecanismos legais implementados para combater este problema. Reflete também a importância do estudo do tópico e do melhoramento das ferramentas que já existem para o combate do problema, através de sugestões sobre como conseguir uma melhor proteção das crianças. De acordo com a pesquisa feita no desenvolvimento desta dissertação, as conclusões incluem a necessidade de novas abordagens legais sobre o tema e de cooperação entre os setores público e privado, governos e a sociedade em geral, para que este crime possa ser combatido de forma eficaz.

Table of Contents

INTRODUCTION.....	10
I.IDENTIFICATION AND DESCRIPTION OF THE PROBLEM	12
II.ANALYSIS OF THE TERMINOLOGY USED IN THIS AREA OF LEGAL REGULATION	15
1. CHILD.....	15
2. AGE OF SEXUAL CONSENT.....	15
3. CHILD SEXUAL ABUSE	16
4. ONLINE CHILD SEXUAL ABUSE.....	17
5. CHILD SEXUAL EXPLOITATION	17
6. COMMERCIAL SEXUAL EXPLOITATION OF CHILDREN.....	18
7. ONLINE CHILD SEXUAL EXPLOITATION.....	18
8. CHILD PORNOGRAPHY	19
9. CHILD SEXUAL ABUSE MATERIAL / CHILD SEXUAL EXPLOITATION MATERIAL (CSAM/CSEM)	20
10. SELF-GENERATED SEXUAL CONTENT	20
11. LIVE ONLINE CHILD SEXUAL ABUSE.....	20
12. LIVE STREAMING OF CHILD SEXUAL ABUSE (LSCSA)	21
13. SOLICITATION OF CHILDREN FOR SEXUAL PURPOSES / GROOMING.....	22
III.CRIMINOLOGICAL APPROACH TO ONLINE CHILD SEXUAL EXPLOITATION AND ABUSE	24
1. VICTIMIZATION RISK PARAMETERS	24
a) <i>Gender and Sexual Orientation</i>	25
b) <i>Age</i>	26
c) <i>Previous Abuse and Broken Families</i>	27
d) <i>Risky Online Behavior</i>	27
2. PROFILE OF THE OFFENDERS	28
a) <i>Gender</i>	30
b) <i>Age</i>	30
c) <i>Other Characteristics</i>	31
d) <i>Technological Sophistications</i>	32
e) <i>Organized Criminal Groups</i>	33
f) <i>Offenders Of Live Streaming of Child Sexual Abuse</i>	34
IV.THE LEGAL APPROACH TO ONLINE CHILD SEXUAL EXPLOITATION AND ABUSE	36
1. INTERNATIONAL LEGAL INSTRUMENTS	36
a) <i>Convention on the Rights of the Child</i>	36
b) <i>Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography</i>	38
2. EUROPEAN LEGAL INSTRUMENTS.....	41
a) <i>Budapest Convention</i>	41
b) <i>Lanzarote Convention</i>	44
c) <i>Directive 2011/93/EU</i>	46
3. NATIONAL LAW	49

a) <i>Portuguese Law</i>	49
4. CRIMINALIZATION OF CSAM.....	52
V.METHODS USED TO DETECT CSAM	54
1. AUTOMATED TOOLS.....	54
a) <i>Image hash database</i>	54
b) <i>Web-crawler</i>	55
2. AI AND MACHINE LEARNING.....	56
VI.FUTURE THREATS AND LEGAL RESPONSES TO THEM	60
1. FUNDING.....	60
2. POLICY AND LEGISLATION.....	61
3. CRIMINAL JUSTICE	66
4. LAW ENFORCEMENT.....	67
5. TECHNOLOGY	69
6. CIVIL SOCIETY.....	72
7. SUPPORT FOR AND EMPOWERMENT OF THE VICTIMS.....	74
8. RESEARCH AND INSIGHT.....	75
CONCLUSION	77
BIBLIOGRAPHY	LXXIX

LIST OF ABBREVIATIONS

AI Artificial Intelligence

BC Budapest Convention

CFR Charter of Fundamental Rights of the European Union

CRC Convention on the Rights of the Child

CRP Constitution of the Republic of Portugal

CSAM Child Sexual Abuse Material

CSEA Child Sexual Exploitation and Abuse

CSEAM Child Sexual Exploitation and Abuse Material

E2EE End-to-end Encryption

EAW European Arrest Warrant

E-evidence (Electronic Evidence)

EIOD European Investigation Order Directive

EU European Union

EU AIA European Union's Artificial Intelligence Act

ESPs Electronic Service Providers

ICTs Information and Communication Technologies

IP Internet Protocol

IWF Internet Watch Foundation

LC Lanzarote Convention

LSCSA Live Streaming of Child Sexual Abuse

MLA Mutual Legal Assistance

NCMEC National Center for Missing & Exploited Children

NGOs Non-Governmental Organizations

OPSC Optional Convention on the Rights of the Child on the sale of children, child prostitution and child pornography

P2P Peer-to-Peer

PPC Portuguese Penal Code

SNS Social networking sites

UN United Nations

URLs Uniform Resource Locators

US United States

VPNs Virtual Private Networks

WWW World Wide Web

Introduction

The Internet and digital technologies have become essential tools in everyone's life.¹ However they have come with a dark side with the opening of an immense online world where the most outrageous crimes against children occur. The growth of internet connectivity has been the reason for the growing number of children being abused and exploited online, which has severe consequences in the offline world as, in result of the abuses, victims need long-term recovery in order to deal with their trauma.²

The World Wide Web (WWW) was created in 1989, the same year as the Convention on the Rights of the Child (CRC), however, the vast interest towards the WWW when compared to the interest shown towards what is established in the CRC is a surprise. As a result of the WWW's development, the production and dissemination of photos of child abuse have significantly increased. Images of child sexual abuse were extremely hard to find in most countries before the Internet as such photographs could only be obtained through the appropriate connections or by taking significant risks. Prior to the Internet, there were reportedly 400 or so photographs of child abuse, according to Interpol's intelligence information.³ However, now it is common for suspects to be arrested for having thousands of pictures of child abuse. Another part of this child exploitation industry is also the internet circulation, distribution, production, offering, possession, and live streaming of child sexual abuse content, created from real life child sexual abuse. There are thousands of pictures of sexually assaulted children online today. Just in 2022 alone, more than 32 million reports of suspected online child sexual abuse were registered.⁴

It is urgent to raise awareness on the topic of online child sexual exploitation and abuse (CSEA) and to find effective ways to fight it. Therefore, this Dissertation aims to respond

¹ Drejer, C., Riegler, M. A., Halvorsen, P., Johnson, M. S., and Baugerud, G. A. (2023) *Live Streaming Technology and Online Child Sexual Exploitation and Abuse: A Scoping Review*. Trauma, Violence, & Abuse. Page 1.

² INTERPOL. (2022) *INTERPOL Secretary General: Online child sexual abuse at record levels*. Available at: <https://www.interpol.int/News-and-Events/News/2022/INTERPOL-Secretary-General-Online-child-sexual-abuse-at-record-levels>

³ Carr, J. (2010). *The Internet Dimension of Sexual Violence Against Children*. In: *Protecting Children from Sexual Violence: A Comprehensive Approach*, Council of Europe. Pg.278.

⁴ Negreiro, M. (2023). *Combating child sexual abuse online*. European Parliament Research Service. Page 1. Available at: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/738224/EPRS_BRI\(2022\)738224_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/738224/EPRS_BRI(2022)738224_EN.pdf)

to this question: how have the various types of *online* CSEA evolved through the years and how effectively are different legal framework addressing them?

To legally regulate the Internet is one of the greatest challenges of the 21st century, as the Internet's unique characteristics arise difficulties to criminal law that is used to regulate crimes that happen within national borders. This is why it is important to address the challenges that need to be faced and the improvements that need to be made regarding international legal frameworks and cooperation among different legal frameworks and civil societies. The lack of established legal definitions, the differences found in legal frameworks and the lack of data regarding *online* CSEA are the reason it is important to do research and discuss this topic. In fact, the focus of this Dissertation is to analyze the prevalence of *online* CSEA nowadays, how this crime can affect the victims and society in general, what can be taken of successful legal frameworks, how can different legal frameworks be improved, and how law and technology can adapt to emerging threats.

To do so there will be an exhaustive analysis of different literature and studies made by international organizations, such as, Interpol, UNICEF and others. The bibliography used in this Dissertation is not all from the last 5 years as initially expected. Due to the lack of information and research regarding this issue, to have a comprehensive analysis of *online* CSEA, the articles used are dated from the early 2000s, to the current year. Along with the exposure of relevant information taken from the bibliography used, there is a critical approach to the different aspects that this paper touches on and, also, some recommendations to law makers, civil society and the public in general with the aim of improving the responses to *online* CSEA.

To deliver the objectives of this Dissertation in the best way possible, the paper will follow a structure that goes from some theoretical aspects of the topic to some critical analysis. Therefore, it is divided in six chapters that aim to inform anyone that has interest in the topic and to incentivize everyone to help combat *online* CSEA.

I. Identification and Description of the Problem

It is possible to state that CSEA has increased overall as a result of the Internet,⁵ because the technology is of easy, cheap and portable access and makes it possible to store and distribute enormous amounts of Child Sexual Exploitation and Abuse Material (CSEAM).⁶ The 2022 Internet Watch Foundation (IWF) Report's number of *online* CSEA are surprisingly high. Out of the 375,230 reports that the IWF investigated, 68% lead to identification of online images of a child being sexually abused. This Report has also determined a 137% growth of Child Sexual Abuse Material (CSAM) featuring boys when comparing to 2021, although 96% of the imagery found were portraying a female child being abused. Also, a warning 66% of these abuses were hosted in a European country.⁷ In fact, the combat against *online* CSEA comes with the most variable challenges and this Dissertation aims to bring those challenges to discussion and critically analyze possible ways to face and overcome them.

First of all, it is highly challenging to develop a legal definition of child sexual exploitation and abuse that would be accepted unanimously across the world due to the variety of values shaping each legal order. Also, different national legal systems' interpretations of what the term "child" stands for may result in different approaches to CSEA. For instance, before the 1880s, in the United States (US), girls could consent to sexual conduct after they were only 10 years old.⁸ Currently, CSEA is prohibited practically everywhere, and this is one of the few aspects where there is consensus among different legal orders. Notwithstanding this, the legal regulation of *online* CSEA remains particularly difficult as it involves the online world which presents unique circumstances that do not exist in the offline world,⁹ such as the global and anonymous nature of the Internet, the ease of creating and disseminating content, and the difficulty of identifying and prosecuting perpetrators across national borders.¹⁰ Through the use of Information

⁵ Clough, J. (2015). Cybercrime. In *Principles of Cybercrime* (pp.33-28). Cambridge: Cambridge University Press. Pg.27.

⁶ Clough, J. (2015). Cybercrime. In *Principles of Cybercrime* (pp.33-28). Cambridge: Cambridge University Press. Pg.291.

⁷ Internet Watch Foundation (2023) *IWF 2022 CSAM Annual Report*. Iwf.org.uk. Available at: <https://annualreport2022.iwf.org.uk>

⁸ Jepkins, P. (2001) *Beyond Tolerance: Child Pornography on the Internet*. New York and London: New York University Press. Pg.26.

⁹ Quayle, E. (2020) *Prevention, disruption and deterrence of online child sexual exploitation and abuse*. ERA Forum 21, 429-447.

¹⁰ ECPAT International. (2021). *Global Report: Offenders on the Move*. Page 49.

and Communication Technologies (ICTs), potential offenders are able to gain improved access to victims and to CSEAM, expanding their pool of potential victims, providing the chance to assume false identities, and making it easier to spread harmful content to children.

In the 1990s, sexual exploitation was defined as “a practice by which person(s) achieve sexual gratification or financial gain or advancement through the abuse of a person’s sexuality by abrogating that person’s human right to dignity, equality, autonomy and physical and mental well-being”.¹¹ Nowadays, not only it is challenging to establish an international standard definition of CSEA, as explained above, but there is also no commonly accepted approach to the protection of children from sexual exploitation and abuse, whether it occurs online or offline. Even if all legal orders had the same definitions of CSEA, there would still be significant jurisdictional issues and challenges with criminality in cross-border investigations,¹² including the admissibility of evidence gathered in other countries, due to legal, moral and procedural divergencies.¹³ Another challenge is related to the issue of dual criminality in countries that are not European Union (EU) Member States, which means that for a crime to be extraditable from one country to another, it must be considered a crime in both jurisdictions.¹⁴ However, some actions that are considered criminal in one country may not be criminal in another, which may make it difficult to prosecute offenders across borders. In the EU context, due to the Framework Decision on the European Arrest Warrant¹⁵ (EAW), the dual criminality criteria is no longer a requirement for specific offences, such as, sexual exploitation of children and child pornography.¹⁶ Moreover, there may be differences in the legal frameworks for collecting evidence¹⁷ in countries outside the EU and in Denmark and

¹¹ Edwards, L. (2009) *Pornography, Censorship and the Internet*. In I. Edwards, & C. Waelde (Eds.), *Law and the Internet*. 3rd ed. Oxford. Pg.623-670.

¹² O’Connell, T. (2018). The Evolution of International Water Law. In M. Fitzmaurice, A. Ong & P. Merjouis (Eds.), *Research Handbook on International Water Law*. Page 33.

¹³ Casino, F. and others (2022) *SoK: cross-border criminal investigations and digital evidence*, *Journal of Cybersecurity*, Volume 8, Issue 1, pp.1.

¹⁴ ECPAT International. (2022). *Extraterritoriality: Preventing sexual exploitation of children by nationals and companies abroad*. Page 6.

¹⁵ European Union. (2002) Council of the European Union, *Council Framework Decision 2002/584 on the European Arrest Warrant and the Surrender Procedures between Member States*, 13 June 2002, - 002/584/JHA.

¹⁶ European Union. (2002) Council of the European Union, *Council Framework Decision 2002/584 on the European Arrest Warrant and the Surrender Procedures between Member States*, 13 June 2002, - 002/584/JHA. Article 2, paragraph 2.

¹⁷ Witting, S. K. (2021). Transnational by Default: Online Child Sexual Abuse Respects No Borders. *The International Journal of Children's Rights* 29, 3, 731-764. Page 733.

Ireland, which can complicate investigations in cases of *online* CSEA. For instance, because these countries are outside the scope of the European Investigation Order Directive (EIOD)¹⁸, it may be necessary to require a court order to access certain types of data or information, which can hinder the ability of law enforcement agencies to investigate cases across borders. Furthermore, there are also practical challenges, such as language barriers, time zone differences, and the availability of resources, which can impact the efficiency and effectiveness of cross-border investigations. Finally, the lack of harmonization extends to the age at which an individual is considered capable of consenting to sexual activity, further complicating efforts to address this issue on a global scale. The legal age of consent is an indicator of how each legal order views adulthood and the age at which a youngster is presumed to know right from wrong. The legal minimum age of consent for sexual activity varies greatly across the globe. In certain African countries, like Nigeria, the minimum age for sexual consent is eleven. On the contrary, there are countries, like Bahrain (Asia), where the minimum age of sexual consent is twenty-one. In the case of the EU Member States, the legal minimum age for consenting to sexual activity ranges from 14 (Portugal and Italy) to 18 years old (Malta).¹⁹

Due to all the variations in national legal systems and interpretations of what constitutes a “child” and due to the unique characteristics of the online world, it is essential to understand the main typologies of *online* CSEA and to develop effective prevention and response strategies. Therefore, the following chapters analyze relevant theoretical and legal aspects regarding CSEA.

¹⁸ European Union: European Parliament and Council of European Union, Directive 2014/41/EU regarding the European Investigation Order in criminal matters, 3 April 2014.

¹⁹ World Population Review (2023) *Age of Consent by Country* 2023. Available at: <https://worldpopulationreview.com/country-rankings/age-of-consent-by-country>.

II. Analysis of the Terminology Used in this Area of Legal Regulation

1. Child

In the CRC (1989), “child” is defined as “every human being below the age of eighteen years”²⁰, if, under national law, the age of majority is not attained before that human being is 18 years old.

In the Budapest Convention (2001) the term “minor” is used in Article 9, paragraph 3, which addresses child pornography, and specifies that the mentioned term covers all individuals under the age of 18. A State party can, nonetheless, opt for a lower age limit, which must not be less than 16 years old.²¹

In the Lanzarote Convention (2007) according to Article 3(a), a child is defined as “any person under the age of 18 years”.²²

The referred legal instruments are legally binding for those countries that are State Parties, meaning, those that have ratified the mentioned instruments. It should be emphasized that these legally binding instruments do not inherently define who is a child, but these provisions do set out their scope of application within international law, meaning that the mentioned provisions are applicable to all people under the age of 18, even if with exceptions.²³

2. Age of Sexual Consent

The Lanzarote Convention (2007), in its Article 18, paragraph 2, defers to the States Parties to the Convention the determination of the age below which it is unlawful to engage in sexual activity with a child.²⁴

²⁰ UN General Assembly, *Convention on the Rights of the Child*, 20 November 1989, United Nations, Treaty Series, vol. 1577. Article 1.

²¹ Council of Europe Convention on Cybercrime, CETS No.185, Budapest, 23.XI.2001. Article 9, paragraph 3.

²² Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse (Lanzarote Convention), 12 July 2007, CETS No.:201. Article 3(a).

²³ Interagency Working Group. (2016). *Terminology Guidelines for the Protection of Children from Sexual Exploitation and Sexual Abuse*. Luxembourg: Publications Office of the European Union. Pg. 5.

²⁴ Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse (Lanzarote Convention), 12 July 2007, CETS No.:201. Article 18, paragraph 1(a) and Article 18, paragraph 2.

In the European Union (EU) Directive 2011/93 on Combating the Sexual Abuse and Sexual Exploitation of Children and Child Pornography the term “age of sexual consent” is used in Article 2, where it is defined as “the age below which, in accordance with national law, it is prohibited to engage in sexual activities with a child”.²⁵

The age of consent as defined by law means that engaging a child under that age in sexual activities is prohibited in all situations, and that the consent of such child is legally irrelevant. A minor who has reached the age of sexual consent may participate in sexual activity with his/her own consent.

3. Child Sexual Abuse

In the Lanzarote Convention’s Preamble, the “sexual exploitation and sexual abuse of children” are both mentioned as “all forms of sexual abuse of children, including acts which are committed abroad, are destructive to children’s health and psycho-social development”²⁶. According to Article 3(b), “sexual exploitation and sexual abuse of children shall include the behavior as referred to in Articles 18 to 23 of this Convention”²⁷. The latter include crimes involving child prostitution, child pornography, child sexual abuse, child participation in pornographic acts, child corruption, and child solicitation for sex purposes. The term “sexual abuse” is defined in Article 18, paragraph 1, as follows: “(a) engaging in sexual activities with a child who, according to the relevant provisions of national law, has not reached the legal age for sexual activities” and “(b) engaging in sexual activities with a child where: use is made of coercion, force or threats; or abuse is made of recognized position of trust, authority or influence over the child, including within the family; or abuse is made of a particularly vulnerable situation of the child, notably because of a mental or physical disability or a situation of dependence”.²⁸ According to the EU Directive 2011/93, forcing a child to witness sexual activity or sexual abuse, having sex with a child, or coercing, forcing, or threatening a child into

²⁵ European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA. Article 2.

²⁶ Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse, (Lanzarote Convention), 12 July 2007, CETS No.:201. Preamble, Paragraph 4.

²⁷ Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse (Lanzarote Convention), 12 July 2007, CETS No.:201. Article 3(b).

²⁸ Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse (Lanzarote Convention), 12 July 2007, CETS No.:201. Articles 18, paragraph 1(a) and (b).

having sex with a third party are all included in the comprehensive definition of sexual abuse offences in Article 3.²⁹

4. Online Child Sexual Abuse

In the Proposal for a Regulation of the European Parliament and of the Council laying down rules to prevent and combat child sexual abuse (2022) online child sexual abuse is defined as “the online dissemination of child sexual abuse material and the solicitation of children”³⁰. This term is widely used to describe both child sexual abuse that is made possible by ICTs (such as online grooming) and child sexual abuse that is committed elsewhere and then repeated by sharing it online, such as through images and videos, where it turns into exploitation.³¹

5. Child Sexual Exploitation

The fundamental idea of exchange that underlies exploitation is what sets the concept of child sexual exploitation apart from other types of child sexual abuse. While it is necessary to differentiate between these two concepts, it is also crucial to recognize that there is a great deal of semantic overlap between them and that the difference will likely never be entirely obvious.³²

The Explanatory Report to the Lanzarote Convention refers that the term “sexual exploitation” relates to cases of “prostitution and use of force/threats or a position of trust/authority for sexual relations”.³³ This position of power that the offender has is what differentiates exploitation from abuse, meaning that the abuse is the act of violence and

²⁹ European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA. Article 3.

³⁰ European Commission. (2022). Proposal for a Regulation on the European Parliament and of the Council laying down rules to prevent and combat child sexual abuse, Brussels, 11 May 2022, COM(2022) 209 final, 2022/0155(COD). Article 2(p).

³¹ Interagency Working Group. (2016). *Terminology Guidelines for the Protection of Children from Sexual Exploitation and Sexual Abuse*. Luxembourg: Publications Office of the European Union. Pg.23.

³² Interagency Working Group. (2016). *Terminology Guidelines for the Protection of Children from Sexual Exploitation and Sexual Abuse*. Luxembourg: Publications Office of the European Union. Pg.25.

³³ Council of Europe (2007) *Explanatory Report to the Council of Europe Convention on the Protection of Children against Sexual Exploitation and Abuse*, European Threat Series – No.201, Lanzarote. Section 13.

assault, the exploitation is the use of the position of power to coerce/force the victim to partake in sexual actions.

In the Lanzarote Convention (2007) this term relates to the actions that constitute the crimes of child sexual exploitation and child sexual abuse as defined in Articles 18 to 23.³⁴ The Preamble describes child sexual exploitation of a child by referring to child pornography and prostitution as exploitation.³⁵

The EU Directive 2011/93, in its Article 4, defines offenses involving sexual exploitation, which include behaviors like forcing a child to take part in pornographic performances, knowingly attending pornographic events that feature children, forcing a child to engage in child prostitution, and having sex with a child where prostitution is involved.³⁶

6. Commercial Sexual Exploitation of Children

Under international law, there is no definition for the concept of “commercial sexual exploitation of children”. As previously stated, “exploitation” is the term used to describe the unfair use of something or someone for one’s own advantage or benefit. This includes both monetary and non-monetary exchanges. Thus, a distinction between “sexual exploitation” and “commercial sexual exploitation” can be drawn, as the latter refers to a type of sexual exploitation where the main motivation is financial gain, frequently associated with organized crime.³⁷

7. Online Child Sexual Exploitation

The term “online child sexual exploitation” refers to all sexually exploitative acts committed against children that at some point have a link to the online world. It encompasses any use of ICTs that results in sexual exploitation, causes a child to be

³⁴ Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse (Lanzarote Convention), 12 July 2007, CETS No.:201. Article 18 to 23.

³⁵ Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse (Lanzarote Convention), 12 July 2007, CETS No.:201. Preamble, paragraph 4.

³⁶ European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA. Article 4.

³⁷ Interagency Working Group. (2016). *Terminology Guidelines for the Protection of Children from Sexual Exploitation and Sexual Abuse*. Luxembourg: Publications Office of the European Union. Page 27.

sexually exploited, or leads to the production, purchase, sale, possession, distribution, or transmission of images or other materials documenting such sexual exploitation.³⁸

8. Child Pornography

In the Optional Convention on the Rights of the Child on the sale of children, child prostitution and child pornography (OPSC) (2000), the term ‘child pornography’ is defined on Article 2 as “representation, by whatever means, of a child engaged in real or simulated explicit sexual activities or representation of sexual parts of a child for primarily sexual purposes”.³⁹

The Lanzarote Convention (2007), in its Article 20, paragraph 2, defines “child pornography” as “any material that visually depicts a child engaged in real or simulated sexually explicit conduct or any depiction of a child’s sexual organs for primarily sexual purposes”.⁴⁰

In the EU Directive 2011/93 child pornography is defined in Article 2 as “(i) any material that visually depicts a child engaged in real or simulated sexually explicit conduct; (ii) any depiction of the sexual organs of a child for primarily sexual purposes; (iii) any material that visually depicts any person appearing to be a child engaged in real or simulated sexually explicit conduct or any depiction of the sexual organs of any person appearing to be a child, for primarily sexual purposes; or (iv) realistic images of a child engaged in sexually explicit conduct or realistic images of the sexual organs of a child, for primarily sexual purposes”.⁴¹

Although “child pornography” is still used as a type of crime in many nations, there is an increasing trend among both law enforcement organizations and child protection organizations to question the suitability of this term and propose alternative terminology, as it is discussed in the next section.⁴²

³⁸ Interagency Working Group. (2016). *Terminology Guidelines for the Protection of Children from Sexual Exploitation and Sexual Abuse*. Luxembourg: Publications Office of the European Union. Pg.27.

³⁹ UN General Assembly, *Optional Protocol to the Convention on the Rights of the Child on the Sale of Children, Child Prostitution and Child Pornography*, 16 March 2001, A/RES/54/263. Article 2.

⁴⁰ Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse (Lanzarote Convention), 12 July 2007, CETS No.:201. Article 20, paragraph 2.

⁴¹ European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA. Article 2.

⁴² Interagency Working Group. (2016). *Terminology Guidelines for the Protection of Children from Sexual Exploitation and Sexual Abuse*. Luxembourg: Publications Office of the European Union. Page 38.

9. Child Sexual Abuse Material / Child Sexual Exploitation Material (CSAM/CSEM)

The term ‘child pornography’ is increasingly being replaced with the term ‘child sexual abuse material’.⁴³ This change in terminology originates from the claim that sexualized content that shows or otherwise portrays children is in fact a typology of child sexual abuse and should not be referred to as “pornography”. Adults who engage in consensual sexual acts and distribute them (often legally) to the general public for their enjoyment are generally referred to as pornographers. The term “child pornography” could seem to imply that the acts are carried out with the child’s consent and represent acceptable sexual material, just like with the terms “child prostitution” and “child prostitute”. Therefore, the term “pornography” is criticized in relation to children because as its use may have an effect of downplaying the seriousness of what truly constitutes sexual abuse and exploitation of children.⁴⁴

10. Self-generated Sexual Content

This term is applied when a child under 18 years old captures sexual image or video of her/himself. Although these pictures may be captured willingly by the child, it is important to refer that it does not mean that they are responsible or consent to the distribution of the material. Therefore, this term makes it abundantly clear that the content or material is child-oriented, sexualized (apart from indecent, which may entail a more subjective value judgement), and self-generated (whether illegal or not, and whether coerced or not).⁴⁵

11. Live Online Child Sexual Abuse

The Lanzarote Convention (2007) describes various forms of “use” of children and mandates that State Parties criminalize a number of offenses involving a child’s

⁴³ United Nations Office on Drugs and Crime (2015) *Study on the Effects of New Information Technologies on the Abuse and Exploitation of Children*. Rep. New York. Page 10.

⁴⁴ D. Frange. et al. (2015). *The Importance of Terminology Related to Child Sexual Exploitation*. Journal of Criminal Investigation and Criminology, vol. 66, no. 4. Pages 291-299.

⁴⁵ Interagency Working Group. (2016). *Terminology Guidelines for the Protection of Children from Sexual Exploitation and Sexual Abuse*. Luxembourg: Publications Office of the European Union. Page 44.

participation in pornographic performances, including coercing a child into participating in such performances, recruiting a child to participate in such performances, and profiting from or otherwise utilizing a child for such purposes.⁴⁶

In the EU Directive 2011/93 a “live exhibition aimed at an audience, including by means of information and communication technology, of (i) a child engaged in real or simulated sexually explicit conduct; or (ii) the sexual organs of a child for primarily sexual purposes” is included in the Directive’s definition of “pornographic performance” in Article 2(e).⁴⁷

The practice of live online child sexual abuse is on the increase and is associated with both the sexual exploitation of children through prostitution and sexual performances, as well as the creation of materials that depict child sexual abuse. In this area, there has not been enough criminalization because there is not a distinct definition of these practices as crimes.⁴⁸ Additionally, it might fit the United Nations (UN) OPSC description of “child prostitution” as “the use of a child in sexual activities for remuneration or any form of consideration” (Article 2(b))⁴⁹.

12. Live Streaming of Child Sexual Abuse (LSCSA)

International, regional, and national legal documents do not expressly refer to LSCSA. However, under the sections of legal documents that forbid the “participation of a child in pornographic performances”, this type of conduct may be criminalized.⁵⁰ For example, Article 2(e) of the EU Directive 2011/93 defines “pornographic performance” as “a live exhibition aimed at an audience, including by means of information and communication technology, of [...] a child engaged in real simulated sexually explicit conduct [...] or the

⁴⁶Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse (Lanzarote Convention), 12 July 2007, CETS No.:201.

⁴⁷ European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA. Article 2(e).

⁴⁸ International Centre for Missing and Exploited Children. (2016). *Child Pornography: Model Legislation and Global Review*, 8th Edition. Page 2.

⁴⁹ UN General Assembly, *Optional Protocol to the Convention on the Rights of the Child on the Sale of Children, Child Prostitution and Child Pornography*, 16 March 2001, A/RES/54/263. Article 2(b).

⁵⁰ UNODC. (2020). *Online Child Sexual Exploitation and Abuse*, Teaching Module Series: Cybercrime. Module 12: Interpersonal Cybercrime. Available at: <https://www.unodc.org/e4j/en/cybercrime/module-12/key-issues/online-child-sexual-exploitation-and-abuse.html>

sexual organs of a child for primarily sexual purposes”.⁵¹ Also, pursuant to Article 21, paragraph 1, of the Lanzarote Convention, “recruiting a child into participation in pornographic performances or causing a child to participate in such performances; [...] the coercing of a child into participating in pornographic performances or profiting from or otherwise exploiting a child for such purposes; [...] and knowingly attending pornographic performances involving the participation of children” is to be criminalized.⁵²

13. Solicitation of Children for Sexual Purposes / Grooming

The Lanzarote Convention (2007) is the first international legal document to define grooming. It describes the practice as “solicitation of children for sexual purposes”.⁵³ Article 23 stipulates that State Parties shall criminalize “the intentional proposal, through information and communication technologies, of an adult to meet a child who has not reached the age set in application of Article 18, paragraph 2, for the purpose of committing any of the offences established in accordance with Article 18, paragraph 1(a), or Article 20, paragraph 1(a), against him or her, where this proposal has been followed by material acts leading to such a meeting”.⁵⁴

The EU Directive 2011/93, following the Lanzarote Convention on preventing child sexual abuse, child sexual exploitation, and child pornography, also defines “solicitation of children for sexual purposes” in Article 6 as “the proposal, by means of information and communication technology, by an adult to meet a child who has not reached the age of sexual consent, for the purpose of committing any of the offences referred to in Article 3, paragraph 4 and Article 5, paragraph 6, where that proposal was followed by material acts leading to such a meeting”⁵⁵. The offences included are the engagement “in sexual

⁵¹ European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA. Article 2(e).

⁵² Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse (Lanzarote Convention), 12 July 2007, CETS No.:201. Article 21, paragraph 1.

⁵³ Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse (Lanzarote Convention), 12 July 2007, CETS No.:201, Article 23.

⁵⁴ Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse (Lanzarote Convention), 12 July 2007, CETS No.:201, Article 23.

⁵⁵ European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA. Article 6.

activities with a child who has not reached the age of sexual consent”⁵⁶ and the “production of child pornography”⁵⁷.

In the context of CSEA, grooming is defined by relevant dictionaries as the act of “preparing or training (someone) for a particular purpose or activity” and as “(a pedophile) prepare (a child) for a meeting, especially via an Internet chat room, with the intention of committing a sexual offence”⁵⁸ or “the criminal activity of becoming friends with a child, especially over the Internet, in order to try and persuade the child to have a sexual relationship”.⁵⁹

There does not seem to be any linguistic justification or other justification for restricting the definition of soliciting children for sexual purposes to actions where a physical, in-person meeting has been attempted and/or taken place. The solicitation of children for sexual activity, which is on the rise online, has the potential to result in detrimental sexual activity for the child even if it never happens offline. Similar to this, solicitation / grooming can take place entirely offline, though they are frequently facilitated by ICTs, such as phone or text communication. Soliciting a child to provide, for example, sexual images of him/herself is a component of this practice. As a result, the definition of “soliciting children online for sexual purposes” must include the following elements: (i) contacting a child; (ii) if online, through ICTs; (iii) with the intention of luring or inciting the child; and (iv) to engage in any kind of sexual conduct by any means, whether online or offline.⁶⁰

⁵⁶ European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA. Article 3, paragraph 4.

⁵⁷ European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA. Article 5, paragraph 6.

⁵⁸ See: Oxford English Dictionary Online. (2019). Oxford University Press.

⁵⁹ See: Cambridge Advanced Learner’s Dictionary. (2003). Cambridge University Press.

⁶⁰ Interagency Working Group. (2016). *Terminology Guidelines for the Protection of Children from Sexual Exploitation and Sexual Abuse*. Luxembourg: Publications Office of the European Union. Page 51.

III. Criminological Approach to Online Child Sexual Exploitation and Abuse

Child sex offenders can now communicate with potential victims anywhere in the world, post pictures of their abuse, and support one another in committing more crimes than ever before.⁶¹ Modern technology enables these criminals to remain anonymous, hide their digital footprints, assume different identities, pursue numerous victims simultaneously and track their movements. Children are now more accessible than ever due to unsecured social media profiles and online game forums and due to the increased use of mobile devices and increased access to the Internet.⁶² Before expanding the conversation to video and photo-sharing platforms, offenders frequently start grooming their victims online and gain a child's interest and trust.⁶³ CSEA offences were not created by the Internet, but have significantly been altered by the Internet in two ways: it has facilitated the already existing forms of the crime and created entirely new forms. For example, LSCSA is one of the most recent types of CSEA enabled by the use of the Internet.⁶⁴

1. Victimization Risk Parameters

There are some risks involved for children who use the Internet, but not all children face the same degree of risk. In fact, some children are inherently more likely to become victims than others.⁶⁵ This is because some people are more vulnerable to suffer harm than others. Children who are more vulnerable offline are also more vulnerable online and children who report more dangers offline also report more dangers online.⁶⁶ The children who are most vulnerable to online risks include girls, children from low-income households, children in communities with a limited understanding of different forms of sexual exploitation and abuse, children who are uneducated and children who face mental

⁶¹ UNICEF. (2017). *The State of the World's Children 2017: Children in a Digital World*, UNICEF Division of Communication. Page 76.

⁶² Kara Özçalık, C. and Atakoğlu, R. (2020) *Online child sexual abuse: prevalence, victims and offenders features*, Journal of Psychiatric Nursing. Page 79.

⁶³ Europol. (2016). *Internet Organized Crime Threat Assessment (IOCTA) 2016*, Publications Office of the European Union. Available at: <https://www.europol.europa.eu/iocta/2016/online-child-exploit.html>. Page 24.

⁶⁴ United Nations Office on Drugs and Crime (2015) *Study on the Effects of New Information Technologies on the Abuse and Exploitation of Children*. Rep. New York. Page 15.

⁶⁵ Hanson, E., (2016) *Exploring the relationship between neglect and child sexual exploitation: Evidence Scope* 1. Research in practice. Page: 2. Available at: https://www.basw.co.uk/system/files/resources/basw_54643-4_0.pdf

⁶⁶ UNICEF. (2017). *The State of the World's Children 2017: Children in a Digital World*, UNICEF Division of Communication. Page 80.

health problems.⁶⁷ Children are also at risk from unsupervised computer access and naivety. Those situations that could make it more likely that children will be victims of certain crimes constitute risk variables. Such elements may be related to the child's family and social environment, or to the traits or actions of the young victims themselves. Risk factors are not absolute and can only be inferred after the fact through correlations between them and victimization outcomes across different child groups. Protective factors that relate to conditions that lessen the possibility of victimization, such as a safe environment, may balance out risk factors.⁶⁸

a) Gender and Sexual Orientation

Gender has a variety of effects on child sexual abuse in both the offline and online worlds. Although males are increasingly at risk as well, previous research on CSEA have shown that girls make up the majority of victims.⁶⁹ Nonetheless, while girls are more likely to be depicted than boys, studies looking at existing CSAM have revealed that the content showing boys is frequently more obscene.⁷⁰ Male victimization may be more common than it is generally acknowledged, particularly in light of the fact that boys may frequently be unwilling to report their abuse due to the stigma attached to both experiencing abuse and engaging in same gender sexual relationships.⁷¹ In fact, boys are most frequently harmed by exposure to improper content. One of the reasons for this is that boys are more prone than girls to play video games, so they are more likely to encounter the violence and occasionally gendered content that is typical of the online gaming environment.⁷² Moreover, young men who look for specific types of pornography may discover that their searches turn up more explicit and violent content than they anticipated. Yet, when it comes to sexually explicit self-generated content and CSAM delivered by perpetrators as

⁶⁷ UNICEF. (2017). *The State of the World's Children 2017: Children in a Digital World*, UNICEF Division of Communication. Page 80.

⁶⁸ United Nations Office on Drugs and Crime (2015) *Study on the Effects of New Information Technologies on the Abuse and Exploitation of Children*. rep. New York. Page 23.

⁶⁹ Kara Özçalık, C. and Atakoğlu, R. (2020) *Online child sexual abuse: prevalence, victims and offenders features*, Journal of Psychiatric Nursing. Page 79.

⁷⁰ Quayle, E. and Jones, T. (2011) *Sexualized images of children on the Internet*. Sexual Abuse, 23(1), 7-21; ECPAT International. (2018). *Trends in online child sexual abuse material*. Pages 12-13.

⁷¹ Gagnier C., Collin-Vézina D. (2016). *The disclosure experiences of male child sexual abuse survivors*. Journal of Child Sexual Abuse, 25(2), 221–241.

⁷² Hasebrink, U., Livingstone, S., Haddon, L. and Ólafsson, K. (2009) *Comparing children's online opportunities and risks across Europe: Cross-national comparisons for EU Kids Online*. LSE, London: EU Kids Online. Pages 27 and 28.

part of a grooming process, girls may be exposed to a higher proportion of harmful content.⁷³

LGBTQIA+ youth may be more likely to be solicited online and may get exposed to more online sexual harms, cyberbullying or other forms of harassment.⁷⁴ Gay boys or boys who are questioning their sexuality may be more likely than other children to participate in or be the victim of internet-initiated sex crimes.⁷⁵

b) Age

The majority of people are unaware that child sexual abuse also means the abuse of very young children, including babies. Depending on the child's age, they may be more or less vulnerable to online sexual exploitation and abuse. In the household or in a relationship where there is a position of trust, younger children, for instance, are particularly susceptible to be abused by an adult or older peer. Teenagers, on the other hand, are frequently exposed to a greater variety of threats from abusers outside the family, especially from offenders in the digital domain.⁷⁶

The 2022 IWF Annual Report shows that the most reported imagery of sexual abuse of children (58%) portrays children aged 11 to 13 years old. Nonetheless, compared to 2021, there was a 13% increase of child sexual abuse Uniform Resource Locators (URLs) listed by IWF of CSAM portraying children aged 7 to 10 years old.⁷⁷ On public and semi-public internet forums, adolescents are more inclined to upload explicit or suggestive photographs of themselves, despite the fact that they may lack the maturity to identify danger and leave the internet forum.⁷⁸

⁷³ ECPAT International. (2018). *Trends in online child sexual abuse material*. Pages 12-13.

⁷⁴ Setter, C., et al. (2021) *Global Threat Assessment 2021*, WeProtect Global Alliance. Page 18.

⁷⁵ Pedersen, W., Bakken, A., Stefansen, K., & Soest, T. V. (2023). *Sexual Victimization in the Digital Age: A Population-Based Study of Physical and Image-Based Sexual Abuse Among Adolescents*. *Archives of Sexual Behavior*, 52(1), 399-410.

⁷⁶ UNICEF. (2017). *The State of the World's Children 2017: Children in a Digital World*, UNICEF Division of Communication. Page 81.

⁷⁷ Internet Watch Foundation (2023) *IWF 2022 CSAM Annual Report*. [Iwf.org.uk](https://annualreport2022.iwf.org.uk). Available at: <https://annualreport2022.iwf.org.uk>

⁷⁸ United Nations Office on Drugs and Crime (2015) *Study on the Effects of New Information Technologies on the Abuse and Exploitation of Children*. rep. New York. Page 25.

c) Previous Abuse and Broken Families

The probability of victimization is increased by past abuse and dysfunctional families, particularly when it comes to the commercial sexual exploitation of children. According to a study conducted in 2018⁷⁹, from a group of 135 young victims, 97,8% of the ones that were physically abused after being groomed were from low socioeconomic backgrounds.⁸⁰ It has been demonstrated that children from households with unemployment, lower socioeconomic level, or immigrant backgrounds engage in more sexual conduct online. In addition, it has been noted that children who are not socioeconomically disadvantaged but who have felt excluded due to early traumatic life events are more likely to engage in online sexual activity for monetary gain. These children experience a sense of belonging in online communities, and the online sexual behavior manifests as a modified form of self-harm.⁸¹ Also, children who have experienced abuse in the past may struggle with low self-esteem or a feeling of shame and loneliness that offenders can exploit.⁸²

d) Risky Online Behavior

One important aspect that influences the level of exploitation experienced is the extent to which children engage in unsafe online behavior and disregard privacy and cybersecurity. Children who exhibit dangerous behavior both online and offline are more likely to be exploited.⁸³ Young people who engage in risky or aggressive online behavior, such as posting rude comments in online forums, visiting pornographic websites, or opening material they receive from strangers through Peer-to-Peer (P2P) networking sites, tend to receive more explicit invites when it comes to cyber-enticement, solicitation, or grooming.⁸⁴ Although some technologies can be used for solicitation more easily than

⁷⁹ Koçtürk N, Yüksel F. (2018) *A modern danger for adolescents: From online flirtation to sexual abuse*. Dusunen Adam The Journal of Psychiatry and Neurological Sciences.

⁸⁰ Koçtürk N, Yüksel F. (2018) *A modern danger for adolescents: From online flirtation to sexual abuse*. Dusunen Adam The Journal of Psychiatry and Neurological Sciences. Page 297.

⁸¹ Kara Özçalık, C. and Atakoğlu, R. (2020) *Online child sexual abuse: prevalence, victims and offenders features*, Journal of Psychiatric Nursing. Page 79.

⁸² Noll JG, Shenk CE, Barnes JE, Haralson KJ. (2013) *Association of maltreatment with high-risk internet behaviors and offline encounters*. Pediatrics 2013. Pages 500-517.

⁸³ United Nations Office on Drugs and Crime (2015) *Study on the Effects of New Information Technologies on the Abuse and Exploitation of Children*. rep. New York. Page 26.

⁸⁴ United Nations Office on Drugs and Crime (2015) *Study on the Effects of New Information Technologies on the Abuse and Exploitation of Children*. rep. New York. Page 26.

others, such as sites that do not require registration, the danger of solicitation seems to be more strongly correlated with psychological characteristics and risky behavior and not as much with any specific technical platform.⁸⁵

The Internet gives children the chance to create a separate identity/persona from their social profiles, which are intricately linked to their real-world identities. This gives them the freedom to be anyone they want online and potentially take chances they would not otherwise be able to.⁸⁶ For instance, the emergence of online gaming has created a relatively new avenue of access for victims. Internet games are made to keep players interested in the game for an extended period of time and can be adrenaline charged with violent representations. Many players develop attachment issues with points or other indicators of gaming success, which has even resulted in instances where children have committed suicide after losing such markers.⁸⁷ Some players, including young people, become addicted to online gaming and start to prefer their fast-paced virtual life to their reality. Online gaming forums, as well as other internet forums, lack the social signs that would often warn young people about unwanted advances. Online players can also alter their social standing by associating with virtual friends. Offenders may take advantage of this situation by offering to assist children with their gaming skills in exchange for sexual meetings either online or offline, by starting a relationship with the intention of performing such actions in the future.⁸⁸

2. Profile of the Offenders

The Internet is a valuable tool for online child sex offenders. While there are offenders who use it to groom children, others use it to network with like-minded people or to commit non-contact crimes like downloading CSAM.⁸⁹ Because many online offenders

⁸⁵ Kara Özçalık, C. and Atakoğlu, R. (2020) *Online child sexual abuse: prevalence, victims and offenders features*, Journal of Psychiatric Nursing. Page 79.

⁸⁶ UK Safer Internet Centre. (2021). *Safer internet day press release 2020*.

⁸⁷ Erevik EK, Landrø H, Mattson ÅL, Kristensen JH, Kaur P, Pallesen S. (2022) *Problem gaming and suicidality: A systematic literature review*. Addict Behav Rep. Page 7.

⁸⁸ Bowles, N. and Keller, M.H. (2019). *Video games and online chats are 'hunting grounds' for sexual predators*. The New York Times.

⁸⁹ Balfe, M., Gallagher, B., Masson, H., Balfe, S., Brugha, R., and Hackett, S. (2015). *Internet Child Sex Offenders' Concerns about Online Security and their Use of Identity Protection Technologies: A Review*. Child Abuse Rev., 24: 427– 439.

avoid law enforcement identification, there is not a lot of information about the demographic, psychological, and Internet usage habits of these offenders. Also, the lack of distinction between online-only offenders, contact-only offenders, and mixed offenders, the limited sample sizes, and the dependence on convenience samples from forensic settings rather than the broader community, are some other significant flaws in the literature on child sex offenders.⁹⁰

Before exploring some of the main characteristics of the offenders it is important to explain the respective terminology used in scholarly works. Contact offender / Perpetrator is a term that is mostly used for child sexual abuse offenders who engage in offences against children that involve direct physical contact. Dual offenders, being offenders or perpetrators who engage in child sexual abuse both online and offline. The same term also includes those who commit contact offenses with an online component, such as online solicitation that results in a face-to-face meeting.⁹¹ The term ‘online sex offender’ refers to a variety of situations and offences. First, it comprises those who download, access, or distribute CSAM.⁹² It is also used for those who approach and groom children online with the ultimate goal of meeting them offline for sexual exploitation. This category includes criminals who attempt to coerce children into sexually harmful behaviors like masturbation, viewing pornographic content, sending pornographic images of themselves, or, as the most recent trends indicate, participating in live streaming of sexually harmful behaviors.⁹³

There is a subset of hyperconfident individuals who are more open about their personal details and may even disclose their sexual intentions to the children from the beginning of the interaction, despite the fact that the majority of online perpetrators lie about their true intentions. On the other hand, abusers who are extremely cautious are the most

⁹⁰ Neutze, J., Grundmann, D., Sxherner, G., Beier KM. (2012). *Undetected and detected child sexual abuse and child pornography offenders*. Int’l J L & Psychiatry 35:168-75.

⁹¹ DeMarco, J. et al. (2018). *Behaviour and Characteristics of Perpetrators of Online-facilitated Child Sexual Abuse and Exploitation - A Rapid Evidence Assessment - Final Report*. London: NatCen. Page 5.

⁹² Seto, M.C., Hanson, R. K., & Babchishin, K. M. (2011). *Contact sexual offending by men with online sexual offenses*. Sexual Abuse: A Journal of Research and Treatment, 23, 124-145.

⁹³ Simons, D. A. (2015). *Adult sex offender typologies – office of justice programs*, Office of Justice Programs. Pages 2 and 3.

difficult to identify because they avoid providing any information that could reveal their identity or motives.⁹⁴

The most frequent aggressive online sex solicitations involve calling a child on the phone (34% of cases), visiting a child in their home (18% of cases), giving a child money, gifts, or other items (12% of cases), sending offline mail to a child (9% of cases), asking to meet a child (7% of cases), and purchasing travel tickets for a child (3% of cases).⁹⁵

a) Gender

While both men and women may engage in CSEA, and although their roles often vary depending on the specific action involved, male offenders often make up the majority of those who engage in conduct related to *online* CSEA.⁹⁶ Since men are typically better able to employ physical force to kidnap victims and use violence to demand obedience, they tend to be more involved in the “practical” components of child exploitation and abuse. Men may also create false emotional attachments with young victims in order to enlist them in their exploitation. Women, on the other hand, may, more frequently, operate commercial operations that sexually exploit children, and may also occasionally recruit victims by establishing “friendships” and gaining their trust.⁹⁷

b) Age

Both adults and adolescents have the potential to sexually abuse children, their age typically varies from 18 to 55 years old, but they can be younger or older than that.⁹⁸ According to a study carried out in 2012⁹⁹, there was no statistically significant difference

⁹⁴ Martellozzo, E. (2011). *Understanding the Perpetrators' Online Behavior*. In Davidson, J. and Gottschalk, P. *Internet Child Abuse: Current Research and Policy*. Routledge, 104-125. Pages 106-109.

⁹⁵ United Nations Office on Drugs and Crime (2015) *Study on the Effects of New Information Technologies on the Abuse and Exploitation of Children*. rep. New York. Pg.28

⁹⁶ INTERPOL. (2023). *International Child Sexual Exploitation Database*. Available at: <https://www.interpol.int/en/Crimes/Crimes-against-children/International-Child-Sexual-Exploitation-database>

⁹⁷ United Nations Office on Drugs and Crime (2015) *Study on the Effects of New Information Technologies on the Abuse and Exploitation of Children*. rep. New York. Pg.30.

⁹⁸ Nikolovska, H. (2023). *Online predator statistics [2023 Update]*, Screen and Reveal. Available at: https://screenandreveal.com/online-predators-statistics/?utm_content=cmp-true

⁹⁹ Lee, A. F., Li, N.-C., Lamade, R., Schuler, A., & Prentky, R. A. (2012). *Predicting hands-on child sexual offenses among possessors of Internet child pornography*. *Psychology, Public Policy, and Law*, 18(4), 644–672.

in age between the three subgroups of online-only offenders, contact-only offenders, and dual offenders. The average age of offenders of online-facilitated child sexual abuse was 41 years old. Similarly, another study conducted in 2014¹⁰⁰ reported that the offender age ranged between 25 and 50 years old. Also, a study carried out in 2016¹⁰¹ suggested that the differences in the ages of the sample of offenders who recruited children online for sexual activities were due to the gender of the victim, meaning that offenders targeting female victims were younger (average age being 29) than the offenders targeting male victims (average age being 41).¹⁰²

c) Other Characteristics

Offenders of online child sexual abuse tend to be Caucasian men, European descent and tend to have a good education. Also, according to research on the marital status of CSAM offenders, the majority of offenders (about 45%) are single, another 28% are married, and the other 27% are divorced or separated.¹⁰³ The comfort and skill with which offenders use technology may be related to the fact that offenders of child sexual abuse generally have relatively high levels of education.¹⁰⁴ Also, there is a potential link between criminal offenders and experiences of emotional, physical, or sexual abuse as children, as well as weak parental bonding.¹⁰⁵ Abusers, both offline and online, are more likely than the general population to have undergone physical and sexual abuse themselves.¹⁰⁶ Children who watch and experience violence, including domestic abuse, appear to have a heightened chance of later taking part in sexual abusive behavior. It could be that these “experiences of physical violence and the breaching of personal boundaries by assault

¹⁰⁰ Houtepen, J., Sijtsma, J. and Bogaerts, S. (2014). *From child pornography offending to child sexual abuse: a review of child pornography offender characteristics and risks for cross-over*. Aggression and Violent Behavior, 19, 466-473.

¹⁰¹ Van Gijn-Grosvenor, E. and Lamb, M. (2016). *Behavioural differences between online sexual groomers approaching boys and girls*. Journal of Child Sexual Abuse, 25(5), 577-596.

¹⁰² DeMarco, J. et al. (2018). *Behaviour and Characteristics of Perpetrators of Online-facilitated Child Sexual Abuse and Exploitation - A Rapid Evidence Assessment - Final Report*. London: NatCen. Page 22.

¹⁰³ Finkelhor, D., Mitchell, K. J., Wolak, J. (2005). *Online Victimization: What Youth Tell Us*. In Cooper, S. W., et al. Medical, Legal, and Social Science Aspects of Child Sexual Exploitation: A Comprehensive Review of Pornography, Prostitution, and Internet Crimes. Pages 437-467.

¹⁰⁴ United Nations Office on Drugs and Crime (2015) *Study on the Effects of New Information Technologies on the Abuse and Exploitation of Children*. rep. New York. Pg.45.

¹⁰⁵ Simons, D. A., Wurtele, S. K., Durham, R. L. (2008). *Developmental experiences of child sexual abusers and rapists*, Child Abuse and Neglect, 32(5). Pages 549-560.

¹⁰⁶ United Nations Office on Drugs and Crime (2015) *Study on the Effects of New Information Technologies on the Abuse and Exploitation of Children*. rep. New York. Pg.29.

may in some way give permission for the young person to go on to inflict sexual violence on another child".¹⁰⁷ Moreover, offenders who engage in online-enabled child sexual abuse are less likely than contact-only offenders to have criminal records, prior convictions, or antisocial histories.¹⁰⁸

d) Technological Sophistications

It's difficult to comprehend how internet child sexual offenders act and think. This is primarily due to the secrecy surrounding these crimes,¹⁰⁹ which is a result of the rapid growth of ICTs. Email instant messaging and web cameras are just a few of the popular technology that criminals use to take advantage of children or to harm children. P2P file-sharing appears to be a widespread practice among child sex offenders.¹¹⁰ Offenders often appreciate the Internet for its availability, affordability, and, perhaps most crucially, its anonymity. Rather than being a totally anonymizing technology, the Internet should be seen as a pseudo anonymizing one. If the tracer has the time and resources, they can find a lot of people online. For instance, Internet Protocol (IP) addresses can be automatically logged by software, websites, or peers in P2P file-sharing networks, which might help law enforcement locate an offender.¹¹¹

Social networking sites (SNS) appear to be the preferred setting for online child sex abuse.¹¹² In order to create a profile on any SNS, a user must submit certain personal data, mainly their name, sex, and age, as well as upload an image of themselves. However, because the accuracy of this information is not verified, individuals are free to supply any identity-related information they choose, including a false name and a false age. Since SNS communication is multimodal and includes text messages, photos, videos and sound,

¹⁰⁷ Vizard E. (2013). *Practitioner Review: The victims and juvenile perpetrators of child sexual abuse – assessment and intervention*. Journal of Child Psychology and Psychiatry. Page 507.

¹⁰⁸ Brown, S. (2020). *Key messages from research on Child sexual exploitation perpetrated by adults*, Centre of expertise on child sexual abuse. Page 3.

¹⁰⁹ Smallbone, S. and Wortley, R. (2001). *Child Sexual Abuse: Offender Characteristics and Modus Operandi*. Trends and issues in Crime and Criminal Justice. No.193. Pages 1-6.

¹¹⁰ Steel C. M. (2009). *Child pornography in peer-to-peer networks*, Child Abuse & Neglect, 33(8). Pages 560-568.

¹¹¹ Balfe, M. et al. (2014) *Internet Child Sex Offenders' Concerns about Online Security and their Use of Identity Protection Technologies: A Review*, Wiley Online Library. Page 430.

¹¹² Martellozzo, E. (2011). *Understanding the Perpetrators' Online Behavior*. In Davidson, J. and Gottschalk, P. *Internet Child Abuse: Current Research and Policy*. Routledge, 104-125. Page 106.

it enables the spread of child abuse content in all conceivable formats, including live streaming.¹¹³

The never stopping development of the Internet hasn't allowed for the exact determination of behavioral patterns of online sex offenders. That is one of the main difficulties when researching about the different ways offenders take advantage of the tools provided by the Internet to commit *online* CSEA.

e) Organized Criminal Groups

Internet organized crime differs from conventional organized crime, which relies on physical violence and relationships built on trust. Alternatively, ICTs might enable transient networks among offenders who do not have any in-person connections over great distance.

With time the offenders' goals have changed, moving from curiosity-driven activities to mostly financially driven, and they tend to occur in a much more organized and structured way.¹¹⁴ Commercial organized criminal networks are known to be involved in the production and distribution of CSAM, and, in particular, in markets for commercial child sexual exploitation, in the domain of ICT-facilitated child abuse and exploitation.¹¹⁵ There may be organized criminal organizations working in this type of crime from places including South-East Asia, the Commonwealth of Independent States, Mexico, and Nigeria.¹¹⁶ Even though there may be some commercial activity, these groups are usually primarily concerned with facilitation, sharing, and community-type activities. With the use of euphemisms and encouraging words, they can provide members with a validation of the legitimacy of abusive behavior and even encourage such behavior. Groups of offenders can promote the sharing of information and legalese-avoiding strategies. Members may discuss topics such as the usage of encryption to conceal illegal content or

¹¹³ Dushi, D. (2019). *The Phenomenon of Online Live-Streaming of Child Sexual Abuse: Challenges and Legal Responses*. dissertation. University of Bologna. Page 26.

¹¹⁴ Clough, J. (2015). Cybercrime. In *Principles of Cybercrime* (pp.3-28). Cambridge: Cambridge University Press.

¹¹⁵ McNamara, R. (2006). *OSCE Ministers Urge Concerted Action to Combat Sexual Exploitation of Children*, Commission on Security and Cooperation in Europe. Available at: <https://www.csce.gov/international-impact/osce-ministers-urge-concerted-action-combat-sexual-exploitation-children?page=1>

¹¹⁶ United Nations Office on Drugs and Crime (2015) *Study on the Effects of New Information Technologies on the Abuse and Exploitation of Children*. rep. New York. Pg.47.

servers located in lawless nations that don't cooperate with international law enforcement. Also, members of these organized criminal groups may inform one another of ongoing undercover operations.¹¹⁷

f) Offenders Of Live Streaming of Child Sexual Abuse

Offenders of LSCSA have some characteristics and dynamics that are different from the offenders of other *online* CSEA typologies, therefore, the findings regarding LSCSA offenders, including offender demographics and enabling platforms are presented in this section. Different offender types are distinguished. The individual who watches and pays for the LSCSA is frequently described as the perpetrator/offender. The individuals who are making the abuse happen by assisting the exploitation and abuse, are referred to as facilitators.¹¹⁸

Addressing the characteristics of the offenders, the ages range from 20 to 76 years, with an average of 52 years old.¹¹⁹ LSCSA is, most of the times, a crime that has the intention of profit for the offenders and, by using machine learning to predict the traits of frequent LSCSA offenders, it was discovered that offenders who perform multiple transactions had shorter intervals between transactions. The severity of the offence likewise grew along with the frequency of transactions.¹²⁰ High-volume offenders seem to engage in more frequent, lower-value transactions. In fact, they are not expected to spend more than 250 dollars in a single transaction.¹²¹ Also, looking at the criminal records of these

¹¹⁷ Beech, A., et al. (2008). *The Internet and Child Sexual Offending: A Criminological Review*. Aggression and Violent Behavior, 13(3). Pages 221 and 222.

¹¹⁸ Napier, S., Teunissen, C., Boxall, H. (2021). *How do child sexual abuse live streaming offenders access victims?*, Australian Institute of Criminology, *Trends & Issues in Crime and Criminal Justice* No. 642. Page 4.

¹¹⁹ Cubitt, T., Napier, S., Brown, R. (2021). *Predicting prolific live streaming of child sexual abuse*, Australian Institute of Criminology, *Trends & Issues in Crime and Criminal Justice* No. 634. Page 6.

¹²⁰ Brown, R., Napier, S., Smith, R. (2020). *Australians who view: An analysis of financial transactions*, Australian Institute of Criminology, *Trends & Issues in Crime and Criminal Justice* No. 589. Page 11.

¹²¹ Drejer, C., Riegler, M. A., Halvorsen, P., Johnson, M. S., & Baugerud, G. A. (2023). *Livestreaming Technology and Online Child Sexual Exploitation and Abuse: A Scoping Review*. *Trauma, Violence, & Abuse*. Page 8.

offenders, it is noticeable that low-harm offences were frequently committed in the past. Previous sexual offences were not a reliable indicator of frequent LSCSA.¹²²

The majority of these crimes have been committed online utilizing personal or public computers, laptops, tablets, and mobile phones. Additionally, the records reveal that widely known platforms including Facebook, Yahoo!, text messages, Skype, and Viber are used to start contact via chat as well as to facilitate and view LSCSA.¹²³ Prior to streaming, there is frequently online chat used to negotiate the price and the means of payment. The price is affected by a number of variables, including the age of the victim, the severity of the abuse, the length of the stream, and the number of children involved.¹²⁴

There are two common ways of how offenders choose their victims: contacting women or teenagers online to start a relationship and then asking them for access to children; or building relationships with families while traveling. Even though a facilitator is frequently involved in this type of abuse, most of the time the perpetrators speak with their victims directly.¹²⁵ Grooming techniques like providing compliments or asking inappropriate or personal questions are frequently used. By promising the child's education, the payment of tuition, or the provision of other material in exchange for live streaming of the abuse, offenders would establish relationships with the facilitator (normally a family member) and the victims.¹²⁶

¹²² Cubitt, T., Napier, S., Brown, R. (2021). *Predicting prolific live streaming of child sexual abuse*, Australian Institute of Criminology, *Trends & Issues in Crime and Criminal Justice* No. 634. Page 17.

¹²³ Napier, S., Teunissen, C., Boxall, H. (2021). *Live streaming of child sexual abuse: An analysis of offender chat logs*, Australian Institute of Criminology, *Trends & Issues in Crime and Criminal Justice* No. 639. Page 8.

¹²⁴ Terre des Hommes Netherlands. (2013). *Full screen on view: An exploratory study on the background and psychosocial consequences of webcam child sex tourism in the Philippines*. Page 25.

¹²⁵ Napier, S., Teunissen, C., Boxall, H. (2021). *How do child sexual abuse live streaming offenders access victims?*, Australian Institute of Criminology, *Trends & Issues in Crime and Criminal Justice* No. 642. Page 12.

¹²⁶ Terre des Hommes Netherlands. (2013). *Full screen on view: An exploratory study on the background and psychosocial consequences of webcam child sex tourism in the Philippines*. Page 47.

IV. The Legal Approach to Online Child Sexual Exploitation and Abuse

On this chapter the aim is to analyze the different legal tools that have set the standards to regulate *online* CSEA. It will provide an overview of the gaps and flaws that exist on the legislative framework applicable to the specific risks that relate to children using the Internet. Therefore, this analysis will go through relevant international law, EU law and national law.

1. International Legal Instruments

a) Convention on the Rights of the Child

The CRC, which was adopted by the UN in November 1989, has been ratified by 196 countries, every member of the UN except for the USA¹²⁷, making it the most widely ratified human rights treaty in history.¹²⁸ The CRC outlines children's human rights, which prominently include protection from sexual exploitation and abuse. The 18 independent experts who make up the CRC Committee on the Rights of the Child, which was introduced by Articles 43 and 45 of the CRC, oversee how each State Party is carrying out the CRC.¹²⁹

Article 19 CRC

Article 19¹³⁰ establishes the obligation of States to protect children from all forms of violence, including sexual violence.¹³¹ This is the core provision of the CRC when discussing the efforts that need to be taken to combat all forms of violence to children.¹³²

¹²⁷ *Status of Ratification Interactive Dashboard*, United Nations, Office of the High Commissioner of Human Rights. Available at <https://indicators.ohchr.org>.

¹²⁸ Freeman, M. (2020). *The Convention on the Rights of the Child and Its Principles*. In: A Magna Carta for Children: Rethinking Children's Rights (The Hamlyn Lectures, pp.85-130). Cambridge: Cambridge University Press. Page 85.

¹²⁹ Mol, C. (2022). *The Child's Right to Participate in the UN Convention on the Rights of the Child*. In: The Child's Right to Participate in Family Law Proceedings: Represented, Heard or Silenced? (European Family Law, pp.19.86). Intersentia. Page 22.

¹³⁰ UN General Assembly, *Convention on the Rights of the Child*, 20 November 1989, United Nations, Treaty Series, vol. 1577. Article 19.

¹³¹ Independent Commissioner for Child Sexual Abuse Issues (no date) *International and European Law*, UBSKM. Available at: <https://beauftragte-missbrauch.de/en/themen/recht/international-and-european-law>

¹³² Arkadas-Thibert, A. (2022). *Article 34: The Right to Protection from All Forms of Sexual Exploitation and Sexual Abuse*. In: Vaghri, Z., Zermatten, J., Landsdow, G., Ruggiero, R. (eds) *Monitoring State Compliance with the UN Convention on the Rights of the Child*. Children's Well-Being: Indicators and Research, vol 25. Springer, Cham. Page 294.

All harm, including mental violence, every form of exploitation, including sexual exploitation, and also unintentional harm, for example, neglect, is included in the comprehensive definition of violence.¹³³ This way, the Committee has prevented the use of the term ‘violence’ in restrictive ways.¹³⁴

Article 34 CRC

Article 34 of the CRC requires that children are protected from all types of sexual exploitation and abuse.¹³⁵ This includes coercing or inducing a child to engage in any illegal sexual action, abusing children through prostitution or other illegal sexual activities, and abusing children through pornographic acts and materials.

Article 36 CRC

A comprehensive set of preventive and protective provisions against all types of exploitation are outlined in Article 36 of the CRC.¹³⁶ This provision incorporates other Convention Articles, such as Article 19, and Articles 32 to 35 that deal with the exploitation of minors occurring in particular settings. The purpose of Article 36 is to close any potential gaps in the Convention’s prohibition on the exploitation of children. As a result, it broadens the scope of exploitations that minors are to be protected from, media exploitation, commercial exploitation, medical experimentation, and children exploitation for research of their capacities.¹³⁷ In addition, the use of the term “shall” in Article 36 is meant to indicate that it is mandatory that State Parties take the necessary measures to protect children from all forms of exploitation. They must put in place all the necessary measures to respect, safeguard and achieve the right of all children to be protected from all types of exploitation, including preventive measures.

Article 39 CRC

¹³³ General comment No.13 (2011) on children’s rights in relation to the digital environment. Paragraph 4.

¹³⁴ Arkadas-Thibert, A. (2022). *Article 34: The Right to Protection from All Forms of Sexual Exploitation and Sexual Abuse*. In: Vaghri, Z., Zermatten, J., Landsdown, G., Ruggiero, R. (eds) *Monitoring State Compliance with the UN Convention on the Rights of the Child*. Children’s Well-Being: Indicators and Research, vol 25. Springer, Cham. Page 294.

¹³⁵ UN General Assembly, *Convention on the Rights of the Child*, 20 November 1989, United Nations, Treaty Series, vol. 1577. Article 34.

¹³⁶ UN General Assembly, *Convention on the Rights of the Child*, 20 November 1989, United Nations, Treaty Series, vol. 1577. Article 36.

¹³⁷ Arkadas-Thibert, A. (2022) *Article 36: The Right to Protection from Other Forms of Exploitation*. In: Vaghri, Z., Zermatten, J., Lansdown, G., Ruggiero, R. (eds) *Monitoring State Compliance with the UN Convention on the Rights of the Child*. Children’s Well-Being: Indicators and Research, vol 25, Springer, Cham. Page 350.

This provision stipulates that States offer healing and reintegration in a setting that supports the health, self-respect, and dignity of child victims of sexual abuse.¹³⁸

From these provisions it is important to retain that children shall be protected from every form of exploitation, such as sexual exploitation and abuse. Therefore, States have the obligation to implement laws and policies that guarantee the protection of children against sexual and other forms of exploitation. Also, States must ensure that efficient enforcement mechanisms are in place.¹³⁹

b) Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography

By broadly ratifying the OPSC, State Parties have decided on new duties in addition to those stated in the CRC. This means that the CRC is supplemented by the OPSC which has been ratified by 178 countries and sets out specific guidelines for putting a stop to CSEA. The OPSC came about as a result of the Commission on Human Rights' insistence that there needs to be a global reaction to the 'alarming magnitude' of child sexual exploitation.¹⁴⁰ In order to implement effective solutions to these pressing issues, it aimed to clarify CRC responsibilities with regard to sexual exploitation and impose new obligations on State parties.¹⁴¹ The OPSC criminalizes certain actions, such as attempt and complicity related to the sale of minors, child prostitution, and child pornography. It establishes basic requirements for safeguarding victims in criminal proceedings and upholds victims' rights to look for help. Also, it supports the growth of international collaboration as well as the introduction and implementation of extraterritorial laws.

¹³⁸ UNICEF. (2020). *Handbook on the optional protocol on the sale of children, child prostitution and child pornography*. UNICEF Innocenti Research Centre. Page 1. Available at: <https://www.unicef.org/media/66806/file/Handbook-Optional-Protocol.pdf>

¹³⁹ UN Committee on the Rights of the Child (2021) *General comment No.25 on children's rights in relation to the digital environment*. CRC/C/GC/25. Pages 18 and 19.

¹⁴⁰ Tobin, J. (2019). *The Optional Protocol on the Sale of Children, Child Prostitution, and Child Pornography*, in J.Tobin (ed.), *The UN Convention on the Rights of the Child: A Commentary*. Oxford: Oxford Commentaries on International Law. Page 1713.

¹⁴¹ Tobin, J. (2019). *The Optional Protocol on the Sale of Children, Child Prostitution, and Child Pornography*, in J.Tobin (ed.), *The UN Convention on the Rights of the Child: A Commentary*. Oxford: Oxford Commentaries on International Law. Page 1714.

Articles 2 and 3 OPSC

Article 2 sets out the behaviors that the OPSC forbids, and it must be taken into consideration together with Article 3, which enumerates behaviors that, as a minimum, must be “fully covered” by the criminal laws of State Parties.¹⁴²

The term “child” is not specified in the OPSC, but as it is an optional protocol to the CRC, the definition is in line with the relevant clause in the CRC and for that it means “every human being below the age of eighteen years”¹⁴³. The inclusion of non-visual ways, as text and sound, into the behaviors enumerated in Article 3 makes the definition of CSEA incredibly extensive and effective. However, it excludes cases in which the victim is made to look to be a minor or cases of virtual child pornography,¹⁴⁴ which is the creation of altered or blended electronically made photographs of children engaging in sexual activity online.¹⁴⁵ Such visuals provide the impression that children are truly participating due to their realism. Even though this definition of CSEA encompasses the majority of pornographic material, nude or semi-nude images that display children in sexually suggestive poses without exposing their genitalia (“erotic posing”)¹⁴⁶ are not included. Conversely, “explicit erotic posing”¹⁴⁷, namely images that focus on the genitals of the children and in which the child is either completely or partially dressed, is prohibited by the provision.

According to Article 3, a State Party “must ensure” that, “at a minimum”, the enumerated behaviors, are “fully covered” by criminal law.¹⁴⁸ Article 3’s terminology (“at a minimum”) places State parties under a particularly strict obligation. However, it does not limit the scope of criminalization, meaning that State parties are free to take further steps in addition to the behaviors enumerated on the OPSC. Therefore, “at a minimum”, Article 3, paragraph 2, requires State Parties to criminalize the sale of children, child prostitution and child pornography and, also, State Parties are required to criminalize the attempt to commit any of the acts enumerated in paragraph 1 of Article 3, as well as the

¹⁴² UN General Assembly, *Optional Protocol to the Convention on the Rights of the Child on the Sale of Children, Child Prostitution and Child Pornography*, 16 March 2001, A/RES/54/263. Articles 2 and 3.

¹⁴³ UN General Assembly, *Convention on the Rights of the Child*, 20 November 1989, United Nations, Treaty Series, vol. 1577. Article 1.

¹⁴⁴ International Telecommunication Union. (2012). *Understanding cybercrime: Phenomena, Challenges and Legal Responses*. Page 170.

¹⁴⁵ Mclean, C. (2007). *The Uncertain Fate of Virtual Child Pornography Legislation*, Cornell Journal of Law and Public Policy, 17(1), Article 6. Page 222.

¹⁴⁶ Quayle, E. (2008). *The COPINE Project*, Irish Probation Journal, vol. 5. Page 66.

¹⁴⁷ Quayle, E. (2008). *The COPINE Project*, Irish Probation Journal, vol. 5. Page 66.

¹⁴⁸ UN General Assembly, *Optional Protocol to the Convention on the Rights of the Child on the Sale of Children, Child Prostitution and Child Pornography*, 16 March 2001, A/RES/54/263. Article 3.

collaboration or participation in any of those acts. This must be done in conformity with the legal guidelines that each State has regarding attempt, complicity, and participation. According to Article 3, paragraph 3, suitable sanctions that take into consideration the seriousness of the actions must be used to punish the offenders that commit or attempt to commit the offenses listed by the OPSC or in some way participate in those offences.¹⁴⁹

Article 7 OPSC

According to this provision, State Parties are required to take action, subordinating to the limitations of their national laws, to close down locations utilized for such activities as well as to provide for the seizure of instruments used to conduct or facilitate the offences covered by the Protocol as well as confiscate proceeds from such offenses.¹⁵⁰ All the offences covered by the OPSC fall under the obligation portrayed in Article 7, including the offences of attempt and complicity mentioned in Article 3.¹⁵¹

Articles 8, 9 and 10 OPSC

Article 8 deals with victim protection, Article 9 is about prevention, and Article 10 is about international collaboration.¹⁵² Article 8 includes 10 provisions related to the support that child victims are entitled to have, together with one provision related to the rights of those who work with child victims. And, also, a last provision that protects the right to a fair trial for those who have been accused of an action described in the OPSC.¹⁵³ Regarding prevention, which is the main subject of Article 9, the Committee on the Rights of the Child emphasizes the need for a comprehensive strategy that has in consideration the root causes that make children more vulnerable to being victims of sale, prostitution

¹⁴⁹ UNICEF. (2020). *Handbook on the optional protocol on the sale of children, child prostitution and child pornography*. UNICEF Innocenti Research Centre. Page 12. Available at: <https://www.unicef.org/media/66806/file/Handbook-Optional-Protocol.pdf>

¹⁵⁰ UN General Assembly, *Optional Protocol to the Convention on the Rights of the Child on the Sale of Children, Child Prostitution and Child Pornography*, 16 March 2001, A/RES/54/263. Article 7(a) and (c).

¹⁵¹ UNICEF. (2020). *Handbook on the optional protocol on the sale of children, child prostitution and child pornography*. UNICEF Innocenti Research Centre. Page 12. Available at: <https://www.unicef.org/media/66806/file/Handbook-Optional-Protocol.pdf>

¹⁵² UN General Assembly, *Optional Protocol to the Convention on the Rights of the Child on the Sale of Children, Child Prostitution and Child Pornography*, 16 March 2001, A/RES/54/263. Articles 8, 9 and 10.

¹⁵³ UNICEF. (2020). *Handbook on the optional protocol on the sale of children, child prostitution and child pornography*. UNICEF Innocenti Research Centre. Page 15. Available at: <https://www.unicef.org/media/66806/file/Handbook-Optional-Protocol.pdf>

or pornography.¹⁵⁴ Such causes include poverty and unstable environments.¹⁵⁵ International assistance and collaboration, which is the subject devoted in Article 10, is particularly encouraged by the Committee on the Rights of the Child that sees it as essential to the implementation of the OPSC.¹⁵⁶

2. European Legal instruments

a) Budapest Convention

The Council of Europe Convention on Cybercrime¹⁵⁷, known as the Budapest Convention (BC), is the most relevant international convention on cybercrime and electronic evidence.¹⁵⁸ Its main objectives are to harmonize domestic substantive legal elements of offenses and related provisions in the domain of cybercrime, to give criminal justice authorities procedural tools to use electronic evidence in connection to any crime, and to engage in effective international cooperation.¹⁵⁹ Criminal offenses are covered in the BC's first section, which provides standard definitions. These offenses can be divided into 4 groups. The first group defines offenses against the confidentiality, integrity and availability of data or computer systems (Article 2 to Article 6 of the BC), the second group includes computer-related offences (Articles 7 and 8 of the BC), the third group entails content-related offences (Articles 9 of the BC), and the fourth and final group refers to offenses that involve the infringement of intellectual property and related rights (Article 10 of the BC).¹⁶⁰ The BC is available for signing by the Member States and the non-Member States, as well as for accession by additional non-Member States. It is thus

¹⁵⁴ UN Committee on the Rights of the Child (CRC) *UN Committee on the Rights of the Child: Concluding Observations, Morocco*, 17 March 2006, CRC/C/OPSC/MAR/1. Paragraphs 34-35.

¹⁵⁵ UN Committee on the Rights of the Child (CRC) *UN Committee on the Rights of the Child: Concluding Observations, Morocco*, 17 March 2006, CRC/C/OPSC/MAR/1. Paragraphs 32-33.

¹⁵⁶ UNICEF. (2020). *Handbook on the optional protocol on the sale of children, child prostitution and child pornography*. UNICEF Innocenti Research Centre. Page 16. Available at: <https://www.unicef.org/media/66806/file/Handbook-Optional-Protocol.pdf>

¹⁵⁷ Council of Europe Convention on Cybercrime, CETS No.185, Budapest, 23.XI.2001.

¹⁵⁸ Seger, A. (2016). *The Budapest Convention on Cybercrime: A Framework for Capacity Building, Global Forum on Cyber Expertise*. Available at: <https://thegfce.org/the-budapest-convention-on-cybercrime-a-framework-for-capacity-building/#:~:text=The%20Budapest%20Convention%20is%20a,more%20effective%20and%20subject%20to>

¹⁵⁹ Council of Europe (2001) *Explanatory Report to the Convention on Cybercrime*, European Threat Series – No.185, Budapest. Section 16.

¹⁶⁰ Csonka, P. (2006). *The council of europe's convention on cyber-crime and other European initiatives*. Èrès. Volume 77. Page 483.

the most often utilized multilateral legal tool for creating cybercrime laws. As of this moment, the Convention has been ratified by 68 nations.¹⁶¹

Article 9 BC

This provision aims to increase safety for children, especially regarding sexual exploitation, by updating criminal law to better prohibit the use of computers in the act of sexual offenses against children.¹⁶² The definition of “pornographic material” in Article 9, paragraph 2, is related to the categorization of materials as obscene, conflicting with public morality, or accordingly corrupt.¹⁶³ Therefore, content that has aesthetic, medicinal, scientific, or other merits may not be deemed pornographic. In terms of Article 9, paragraph 2(b) and (c), the BC definition of ‘child pornography’ exceeds the requirements of the OPSC since it also covers pornography that is either virtual or just purports to depict children engaging in sexually explicit behavior.¹⁶⁴ Contrary to the OPSC definition of ‘child pornography’, Article 9, paragraph 2 of the BC only applies to visual images of child pornography, excluding all other forms of child pornography, such as audio or text. The Convention leaves the interpretation of Article 9, paragraph 3, which refers to the definition of the term ‘minor’, up to the Member States allowing State Parties to determine an age limit that must not be less than 16 years old.¹⁶⁵ Nevertheless, by allowing such choice, the sense of accordance with the definition of the term ‘child’ gets more difficult.

Also, while the possession of child pornography in a computer system or the mere access to it through a computer system is not criminalized on Article 3, paragraph 1(c) of the OPSC¹⁶⁶, the BC, on its Article 9, paragraph 1(d) and (e) criminalizes such actions.

Child pornography has moved from the offline to the online worlds. Nevertheless, Art.9(1) BC only criminalizes the creation of child pornography with the intention of disseminating it over a computer system, because the majority of the States already

¹⁶¹ Council of Europe. *Parties/observers to the Budapest Convention and Observer Organisations to the T-CY* – www.coe.int. Available at: <https://www.coe.int/en/web/cybercrime/parties-observers>.

¹⁶² Council of Europe (2001) *Explanatory Report to the Convention on Cybercrime*, European Threat Series – No.185, Budapest. Section 91.

¹⁶³ Council of Europe (2001) *Explanatory Report to the Convention on Cybercrime*, European Threat Series – No.185, Budapest. Section 99.

¹⁶⁴ Council of Europe (2001) *Explanatory Report to the Convention on Cybercrime*, European Threat Series – No.185, Budapest. Section 100.

¹⁶⁵ Council of Europe (2001) *Explanatory Report to the Convention on Cybercrime*, European Threat Series – No.185, Budapest. Section 104.

¹⁶⁶ Witting, S. K. (2021). Transnational by Default: Online Child Sexual Abuse Respects No Borders. *The International Journal of Children's Rights* 29, 3, 731-764. Pages 748 and 749.

criminalized the traditional creation of child pornography and the exchange of child pornography in physical form.¹⁶⁷ This means that Article 9, paragraph 1(a) of the BC does not apply to either of those acts. In order to safeguard individual rights (such as freedom of expression and freedom of the arts), a certain behavior should not be classified as “child pornography” if it serves a legitimate purpose and has a significant literary, aesthetic, political, or scientific value for children.¹⁶⁸

Article 11 BC

This provision criminalizes aiding and abetting in the conduct of any child pornographic offenses, attempting to distribute or transmit child pornography, and creating child pornography for the purpose of dissemination over a computer network.¹⁶⁹ According to Article 11, paragraph 1, parties are required to criminalize the act of adding or abetting the commission of the offenses established in Articles 2 to 10 of the BC. Although one of the flaws of these provision is that it does not require service providers to monitor the content uploaded by its users, it is important to notice that a service provider that assists, as a conduit, the exchange of child pornography through the Internet and does not have the criminal intention to do so, under this provision, cannot be liable for aiding the criminal act.¹⁷⁰ Regarding the criminalization of attempting to commit an offence related to child pornography, Article 11, paragraph 2 only criminalized the offences defined in Article 9, paragraph 1(a) and (c) of the BC, because the other offences were difficult to consider as a possible attempt, for example, the offence of offering or making available child pornography (Article 9, paragraph 1(b) of the BC).¹⁷¹ Nonetheless, under Article 11, paragraph 3, a Party has no obligation to criminalize attempt, it can decide the offences, if any, to which it will attach the criminalization of attempt¹⁷², which, in reality, takes all of the strength of Article 11, paragraph 2.

¹⁶⁷ Council of Europe (2001) *Explanatory Report to the Convention on Cybercrime*, European Threat Series – No.185, Budapest. Section 93.

¹⁶⁸ Council of Europe (2001) *Explanatory Report to the Convention on Cybercrime*, European Threat Series – No.185, Budapest. Section 99.

¹⁶⁹ Council of Europe Convention on Cybercrime, CETS No.185, Budapest, 23.XI.2001. Article 11.

¹⁷⁰ Council of Europe (2001) *Explanatory Report to the Convention on Cybercrime*, European Threat Series – No.185, Budapest. Section 119.

¹⁷¹ Council of Europe (2001) *Explanatory Report to the Convention on Cybercrime*, European Threat Series – No.185, Budapest. Section 120.

¹⁷² Council of Europe (2001) *Explanatory Report to the Convention on Cybercrime*, European Threat Series – No.185, Budapest. Section 122.

b) Lanzarote Convention

The most extensive worldwide legislative framework on the protection of children against sexual exploitation and abuse is the Council of Europe Convention on the Protection of Children against Sexual Exploitation and Sexual Abuse, generally known as the Lanzarote Convention (LC). Since its signature in 2007, the LC emphasizes protecting children's best interests by preventing abuse and exploitation, providing assistance to victims, punishing offenders, and encouraging collaboration between local and international law enforcement.¹⁷³ In fact, the LC requires the criminalization of all types of sexual offences committed against children, whether offline or online. With the help of the Convention, behaviors like LSCSA and online grooming are now criminalized. The LC is available for signing by Member States, by non-Member States that have participated in its development, by the EU, and is open for accession by additional non-Member States.¹⁷⁴ All 46 of the Council of Europe's member states have signed it and ratified it.¹⁷⁵

Article 20 LC

The term "minor" shall encompass all people who are less than 18 years old, in accordance with Article 3(a) of the LC.¹⁷⁶ Also, according to the LC, images of "erotic posing" are not included in the definition of "sexually explicit conduct".¹⁷⁷

The crimes involving child pornography, enumerated in Article 20 of the LC, are nearly entirely consistent with the Budapest Convention's Article 9. However, because it also criminalizes, on its Article 20, paragraph 1(f), the intentional access to child pornography through computer systems, the LC is more exhaustive. As a result, this provision also applies to child pornography that is streamed online rather than downloaded. It enables

¹⁷³ International Centre for Missing and Exploited Children. (2016). *Child Pornography: Model Legislation and Global Review*, 8th Edition. Page 14.

¹⁷⁴ The accession process at the Council of Europe level consists of three steps: (1) Request for accession in an official letter (signed by the Minister of Foreign Affairs or a diplomatic representative) addressed to the Secretary General; (2) Consultation of the Parties to the Convention to obtain their unanimous consent; (3) Decision on the request by the Committee of Ministers.

¹⁷⁵ Council of Europe Portal (no date) *Mapping out the Lanzarote Convention – Children's Rights*. Coe.int. Available at: <https://www.coe.int/en/web/children/mapping-out-the-lanzarote-convention>

¹⁷⁶ Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse (Lanzarote Convention), 12 July 2007, CETS No.:201. Article 3(a).

¹⁷⁷ Council of Europe (2007) *Explanatory Report to the Council of Europe Convention on the Protection of Children against Sexual Exploitation and Abuse*, European Threat Series – No.201, Lanzarote. Section 143.

law enforcement organizations to bring charges against criminals in situations when they may demonstrate that the offender visited a website but did not download any content. Therefore, Article 20(1) LC offers the most complete list of offences regarding child pornography. Furthermore, unlike Article 9 BC, which restricts the application of the provision to ICTs, Article 20(1) LC extends coverage to conduct unrelated to computer networks.

Article 20(3) of the LC gives Parties the possibility of making reservations regarding paragraph 1(a) and (e) of the LC. Therefore, Parties are not obliged to criminalize the production or possession of child pornography, when such images are produced or possessed with the consent of the child depicted and only for the use of the possessor him/herself.¹⁷⁸ Such provision is considered to make the LC particularly creative and advanced, as it might be seen as a response to an issue: the prosecution of consensual “sexting” between children. Combining the terms “sex” and “texting”, this phrase refers to the digital recording of sexually suggestive or explicit photographs and their distribution via mobile phone messaging, internet messengers, social networks, etc.¹⁷⁹ Therefore, international law prohibition on child pornography may result in the prosecution of children for actions that must be seen as typical of young people discovering their sexuality. In light of this, Article 20(3) of the LC gives Member States the option of including an exemption provision in their national law to avoid the prosecution of children for consensual sexting under the child pornography provision. The fact that children have sex and participate in sexual behavior that is channeled through modern communication technologies is a reality in many countries, which is taken into consideration by this exception provision.¹⁸⁰ If the target of the protection clause, the children, were made the offender for engaging in sexual experimentation, the goal of the child pornography regulations, which is to protect children from exploitation and abuse, would be seen as meaningless.

¹⁷⁸ Council of Europe (2007) *Explanatory Report to the Council of Europe Convention on the Protection of Children against Sexual Exploitation and Abuse*, European Threat Series – No.201, Lanzarote. Section 114.

¹⁷⁹ Crofts T., Lee M. (2013). *Sexting, Children and Child pornography*, Sydney Law Review, Vol.35(5). Page 85.

¹⁸⁰ Crofts T., Lee M. (2013). *Sexting, Children and Child pornography*, Sydney Law Review, Vol.35(5). Page 103.

Article 23 LC

The solicitation of children for sexual purposes/grooming is criminalized in Article 23 of the LC.¹⁸¹ Firstly, it should be highlighted that grooming is only illegal if the child has not achieved the legal age of consent to sexual activity. In addition, there has to be a “material act” that triggers the encounter. A broad explanation of the contrast between preparatory activities and their criminalization in law must be given in order to comprehend this addition. Criminal law’s fundamental principle is that as long as a conduct does not cross the line into being an attempted crime, it is not criminalized. Preparatory activities are, therefore, often not regarded as having met the bar for prosecution. Article 23 of the LC requires that the adult proposes to meet the child and establishes the purpose of such meeting as sexual involvement with the groomed child.¹⁸² The aim of this provision is prevention of over-criminalization and the possibility that such a criminal provision is unconstitutional since simple (sexual) online communication with a child, is a preparatory activity and is further protected by the freedom of expression. The phrase “material act” is defined in Section 160 of the LC Explanatory Report as a specific action, such as the offender showing up at the designated meeting location.¹⁸³

c) Directive 2011/93/EU

The EU harmonizes the criminal offenses related to sexual abuse of children, sexual exploitation of children, child pornography, grooming, and sex tourism under Directive 2011/93/EU that replaced the Council Framework Decision 2004/68/JHA.¹⁸⁴ The Directive establishes minimum harmonization provisions regarding the offences that State Parties should incorporate in their domestic law. Such offenses can be organized into four groups: sexual abuse of children (Article 3), sexual exploitation of children (Article 4), child pornography (Article 5) and grooming (Article 6). Also, the Directive

¹⁸¹ Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse (Lanzarote Convention), 12 July 2007, CETS No.:201. Article 23.

¹⁸² Council of Europe (2007) *Explanatory Report to the Council of Europe Convention on the Protection of Children against Sexual Exploitation and Abuse*, European Threat Series – No.201, Lanzarote. Sections 157 and 158.

¹⁸³ Council of Europe (2007) *Explanatory Report to the Council of Europe Convention on the Protection of Children against Sexual Exploitation and Abuse*, European Threat Series – No.201, Lanzarote. Section 160.

¹⁸⁴ European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA.

contains standards for the maximum duration of imprisonment that each Member State should incorporate in their domestic law¹⁸⁵ and tries to stop child sex offenders who have previously been found guilty of a crime from engaging in professional activities that require regular contact with children.¹⁸⁶ In addition, the Directive mandates that Member States take down websites with child sexual abuse content stores on their territory or in non-Member States and, if necessary, prohibit access to these sites inside their borders in order to reduce the spread of such material online.¹⁸⁷

Overall, the Directive offers more specific standards for criminal law involving the sexual abuse and exploitation of minors than did the LC¹⁸⁸ and emphasizes the need for effective, appropriate, and dissuasive punishments for types of sexual abuse and sexual exploitation of minors made possible by the use of ICTs.¹⁸⁹

Article 6 EU Directive 2011/93/EU

Article 6, paragraph 1, criminalizes the recruitment of children for sexual activity and establishes that this offense must be punishable for a maximum time of imprisonment of at least 1 year.¹⁹⁰ The grooming of minors for the purpose of engaging in sexual activity with a child who has not reached the age of sexual consent (Article 3, paragraph 4 of the Directive), or the creation of child pornography (Article 5, paragraph 6 of the Directive) are both prohibited under Article 6, paragraph 1. The latter further stipulates that some tangible action must have preceded the meeting in question, which is similar to what is established in Article 23 of the LC. There are some implementation issues regarding the transposition of Article 6, paragraph 2 of the Directive by Member States (excluding Denmark). For example, in Czech Republic, whether the action was an attempt, or an

¹⁸⁵ Brink, T. van den et al. (2022). *Flexible Implementation and the EU Sexual Abuse Directive – Working Paper*. Cadmus – European University Institute Research Repository. Page 11. Available at: https://cadmus.eui.eu/bitstream/handle/1814/74736/RSC_WP_2022_35.pdf?sequence=1&isAllowed=y

¹⁸⁶ European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA. Article 10.

¹⁸⁷ European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA. Recitals 46 and 47 and Article 25.

¹⁸⁸ International Centre for Missing and Exploited Children. (2016). *Child Pornography: Model Legislation and Global Review*, 8th Edition. Page 11.

¹⁸⁹ European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA. Recital 12.

¹⁹⁰ European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA. Article 6, paragraph 1.

actual completed act does not change the punishment that may be determined, it is always punished as a completed criminal offence. However, in the Netherlands, the maximum penalty applicable to these criminal offences is reduced by one third if it is a case of attempt.¹⁹¹

Article 25 Directive 2011/93/EU

Determining whether to add a requirement for Member States to prohibit websites that contain or disseminate child pornography was an issue during the legislative process of the Directive.¹⁹² However, what was established in the final version of the Directive, on its Article 25 was that Member States must take the appropriate steps to remove CSAM from their own territory as well as attempt to remove it from other territories as well.¹⁹³ In addition, Member States also have the possibility to, in their territory, block the access to websites that contain or disseminate CSAM.¹⁹⁴ The requirement of mandatory blocking of these websites that was included in the original Proposal of the Directive, generated the most debate throughout the negotiations of the final version of the Directive. Concerns were raised about the practical efficacy of this approach, particularly given that those who distribute CSAM do it more using P2P networks than on the Internet.¹⁹⁵ Additionally, the blocking would be expensive, especially when compared to the advantages it would offer.¹⁹⁶

¹⁹¹ Brink, T. van den et al. (2022). *Flexible Implementation and the EU Sexual Abuse Directive – Working Paper*. Cadmus – European University Institute Research Repository. Page 21. Available at: https://cadmus.eui.eu/bitstream/handle/1814/74736/RSC_WP_2022_35.pdf?sequence=1&isAllowed=y

¹⁹² Brink, T. van den et al. (2022). *Flexible Implementation and the EU Sexual Abuse Directive – Working Paper*. Cadmus – European University Institute Research Repository. Page 10. Available at: https://cadmus.eui.eu/bitstream/handle/1814/74736/RSC_WP_2022_35.pdf?sequence=1&isAllowed=y

¹⁹³ Brink, T. van den et al. (2022). *Flexible Implementation and the EU Sexual Abuse Directive – Working Paper*. Cadmus – European University Institute Research Repository. Page 27. Available at: https://cadmus.eui.eu/bitstream/handle/1814/74736/RSC_WP_2022_35.pdf?sequence=1&isAllowed=y

¹⁹⁴ Brink, T. van den et al. (2022). *Flexible Implementation and the EU Sexual Abuse Directive – Working Paper*. Cadmus – European University Institute Research Repository. Page 28. Available at: https://cadmus.eui.eu/bitstream/handle/1814/74736/RSC_WP_2022_35.pdf?sequence=1&isAllowed=y

¹⁹⁵ Parti, K., & Marin, L. (2013). *Ensuring freedoms and protecting rights in the governance of the internet: a comparative analysis of blocking measures and internet providers' removal of illegal internet content*, Journal of Contemporary European Research, 9(1), pp. 138-159. Page 28.

¹⁹⁶ Brink, T. van den et al. (2022). *Flexible Implementation and the EU Sexual Abuse Directive – Working Paper*. Cadmus – European University Institute Research Repository. Page 28. Available at: https://cadmus.eui.eu/bitstream/handle/1814/74736/RSC_WP_2022_35.pdf?sequence=1&isAllowed=y

3. National Law

a) Portuguese Law

In Portugal, around 88% of the population uses the Internet nowadays, compared to 67% in 2014.¹⁹⁷ Also, in 2022, homes with children under the age of 15 had high rates of internet access (99.2%).¹⁹⁸ This scenario raises the risk of online grooming and of the distribution of CSAM. In fact, in 2022, 15,3% of the investigations opened in Portugal were related to CSAM and CSEM.¹⁹⁹ As online grooming was just made a crime in 2015, there are few investigations into it.²⁰⁰

The legal minimum age in Portugal that must be reached before sexual behavior can be consented to, according to Article 171 of the Portuguese Penal Code (PPC)²⁰¹, is 14 years old. Anyone who engages in a relevant sexual act with a child under that age is thought to be committing the crime of sexual abuse of minors. Boys' and girls' age of consent is the same. Any person who sexually acts over a child under 14 years of age, whether through obscene words, through text, through shows, or through pornographic objects, as well as any person who allures a child under 14 years of age to watch any type of sexual activity will be penalized with up to 3-year imprisonment, according to Article 171, paragraph 3, of the PPC²⁰². Additionally, Article 171, paragraph 4, has established that if the acts mentioned on paragraph 3 are committed with the intention of profit, the sentence of imprisonment can range from 6 months to 5 years.²⁰³

However, the fact that the age of sexual consent established on the PPC is such a low age is dangerous and unfavorable to an effective protection of children against CSEA.²⁰⁴

¹⁹⁷ Instituto Nacional de Estatística (2022) *Survey on Information and Communication Technologies usage in Households and by Individuals*. Page 1.

¹⁹⁸ Instituto Nacional de Estatística (2022) *Survey on Information and Communication Technologies usage in Households and by Individuals*. Page 3.

¹⁹⁹ Sistema de Segurança Interna (2022) *Relatório Anual de Segurança Interna 2022*. Page 44.

²⁰⁰ Sistema de Segurança Interna (2022) *Relatório Anual de Segurança Interna 2022*. Page 54.

²⁰¹ Ministry of Justice, Decree Law n° 48/95, 15 of March (Portuguese Penal Code), Republic Diary No.63/1995, Serie 1 of 1995-03-15. Article 171.

²⁰² Ministry of Justice, Decree Law n° 48/95, 15 of March (Portuguese Penal Code), Republic Diary No.63/1995, Serie 1 of 1995-03-15. Article 171, paragraph 3.

²⁰³ Ministry of Justice, Decree Law n° 48/95, 15 of March (Portuguese Penal Code), Republic Diary No.63/1995, Serie 1 of 1995-03-15. Article 171, paragraph 4.

²⁰⁴ CIAF Portugal and ECPAT International. (2018). *Sexual Exploitation of Children in Portugal*, Submission for the Universal Periodic Review of the human rights situation in Portugal. Page 4.

According to Article 174 of the PPC²⁰⁵, an adult who has or attempts to have sexual involvement with a child who is between 14 and 18 years of age with the aim of profit is committing a crime that is punishable by up to 3-year imprisonment.²⁰⁶ A person who produces CSAM or encourages or facilitates the production of such content using a child who is under 18 years old is subject to a sentence of between 6 months and 5 years in prison, as stated in Article 176, paragraph 1 of the PPC²⁰⁷. The aforementioned PPC provisions demonstrate the legislator's desire to penalize individuals who employ minors to create entertainment or distribute content. However, there should be a formal definition of the term child pornography that is in line with Article 2(c) of the OPSC.

Although these provisions do not mention *online* CSEA, according to Article 13 of Decree Law nº7/2004 on e-commerce²⁰⁸, Intermediary Service Providers are obligated to block CSAM and report the situation to law enforcement authorities. The punishment for companies who fail to comply is a fine that can range from €5.000,00 to €100.000,00²⁰⁹ (Article 37, nº2 of the Decree-Law nº7/2004).

Online grooming is a crime according to Article 176-A, paragraph 1 of the PPC, which establishes that any adult who communicates electronically with a child with the intention of committing any of the crimes under Article 171, paragraphs 1 and 2 (sexual abuse of a child under 14 years of age), and Article 176, paragraph 1, (a), (b) and (c) (child pornography), is punished up to a year of imprisonment.²¹⁰ This punishment increases to a maximum of two years if the grooming is followed by 'material acts'.²¹¹ However, the problem here is that, regarding online grooming, these provisions do not provide equal

²⁰⁵ Ministry of Justice, Decree Law nº 48/95, 15 of March (Portuguese Penal Code), Republic Diary No.63/1995, Serie 1 of 1995-03-15. Article 174, paragraph 2.

²⁰⁶ CIAF Portugal and ECPAT International. (2018). *Sexual Exploitation of Children in Portugal*, Submission for the Universal Periodic Review of the human rights situation in Portugal. Page 4.

²⁰⁷ Ministry of Justice, Decree Law nº 48/95, 15 of March (Portuguese Penal Code), Republic Diary No.63/1995, Serie 1 of 1995-03-15. Article 176, paragraph 1.

²⁰⁸ Decreto-Lei nº7/2004, de 7 de janeiro, Comércio Eletrónico no Mercado Interno e Tratamento de Dados Pessoais.

²⁰⁹ CIAF Portugal and ECPAT International. (2018). *Sexual Exploitation of Children in Portugal*, Submission for the Universal Periodic Review of the human rights situation in Portugal. Page 5.

²¹⁰ Ministry of Justice, Decree Law nº 48/95, 15 of March (Portuguese Penal Code), Republic Diary No.63/1995, Serie 1 of 1995-03-15. Article 176-A, paragraph 1.

²¹¹ Ministry of Justice, Decree Law nº 48/95, 15 of March (Portuguese Penal Code), Republic Diary No.63/1995, Serie 1 of 1995-03-15. Article 176-A, paragraph 2.

protection to all children, as Articles 171, paragraphs 1 and 2 only apply to children under 14 years old.²¹²

In addition, the PPC stipulates the territoriality principle, according to which, regardless of the offender's nationality, Portuguese law applies to crimes committed on Portuguese territory.²¹³ Article 5 of the PPC establishes the rules for when the crimes take place outside the Portuguese territory. Article 5 of the PPC is applicable to crimes that include sexual abuse of children under 14 years of age (Article 171 of the PPC), criminalization of clients in the context of child sexual exploitation (Article 172 of the PPC) and prohibition of child pornography (Article 176 of the PPC). According to Article 5, paragraph 1(d)(i, ii and iii), if the offender is identified in Portugal and cannot be extradited, or if the minor frequently lives in Portugal, or if the offender normally lives in Portugal, Portuguese courts are equally qualified to judge specific offenses committed outside of the Portuguese territory. If the crime is committed outside the Portuguese territory against a Portuguese citizen, for the Portuguese law to be applicable there are some criteria that need to be verified. Therefore, the offender must be found in Portugal, the crime must also be punishable by the legislation of the territory where the crime was committed, and there must be no possibility of extradition.²¹⁴

“The norms issued by the competent organs of international organizations to which Portugal belongs come directly into force in Portuguese Internal Law, on condition that this is laid down in the respective constituent treaties” states Article 8, paragraph 3 of the Constitution of the Republic of Portugal of 1976 (CRP)²¹⁵. Portugal therefore adheres to the purely materialistic approach to international law, which holds that both national and international law ultimately control the behavior of the citizens and as a result, are immediately applicable without the need for state legislation. But it's crucial that Portugal also passes domestic laws that complies with international law in order to prevent a conflict of laws since, in times of conflict, national legal orders take a subservient position. International treaties are also sometimes written in ambiguous and generic words, necessitating legal elaboration.

²¹² CIAF Portugal and ECPAT International. (2018). *Sexual Exploitation of Children in Portugal*, Submission for the Universal Periodic Review of the human rights situation in Portugal. Page 5.

²¹³ Ministry of Justice, Decree Law n° 48/95, 15 of March (Portuguese Penal Code), Republic Diary No.63/1995, Serie 1 of 1995-03-15. Article 4.

²¹⁴ Ministry of Justice, Decree Law n° 48/95, 15 of March (Portuguese Penal Code), Republic Diary No.63/1995, Serie 1 of 1995-03-15. Article 5, paragraph 1(e)(i, ii, iii).

²¹⁵ Constitution of the Portuguese Republic [Portugal], 25 April 1976. Article 8, paragraph 3.

4. Criminalization of CSAM

Regarding the analyzed international, European, and Portuguese legal instruments, State Parties should follow some standards to ensure that the effective criminalization of *online* CSEA.

First of all, it is essential to ensure that across different legal instruments, the term ‘child’ is always defined as any person under the age of 18 years.²¹⁶ For this to be possible, the definition of the term ‘minor’ should also be harmonized as any person under the age of 18 years. If, like what is established in the BC, the State Parties of a legal framework have the option to differ on the age that determines who is a minor and who is not, the unified definition of the term ‘child’ gets more difficult. It is, therefore, crucial for the protection of children all over the world that these definitions are not different among binding legal instruments.

The inclusion of comprehensive definition of CSEA offline and facilitated with the use of ICTs, must also be ensured by each State.²¹⁷ Legal framework, such as the CRC and the OPSC were developed at a period when social media and ICTs were still in their initial stages of development and were not used as widely as they are today. Therefore, the provisions of the CRC and of the OPSC must be interpreted in a way that takes into account modern circumstances.²¹⁸ Moreover, given that the online reality is always changing, States parties should regularly review their laws and policies and make any necessary revisions to ensure that they are in line with the constant changing nature of the online world.²¹⁹ For example, Article 3, paragraph 1(c) of the OPSC implements the criminalization of offering, obtaining, procuring or providing a child for exploitation through prostitution. State parties, therefore, have to explicitly state in their criminal or penal codes that it is a crime to do any of those actions even if they are done through

²¹⁶ United Nations Children’s Fund. (2022). *Legislation for the digital age: Global guide on improving legislative framework to protect children from online child sexual exploitation and abuse*. UNICEF, New York. Page 57.

²¹⁷ United Nations Children’s Fund. (2022). *Legislation for the digital age: Global guide on improving legislative framework to protect children from online child sexual exploitation and abuse*. UNICEF, New York. Page 57.

²¹⁸ United Nations (2019) *Guidelines regarding the implementation of the Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography*. CRC/C/156. Paragraph 1.

²¹⁹ United Nations (2019) *Guidelines regarding the implementation of the Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography*. CRC/C/156. Paragraph 19.

ICTs.²²⁰ Also, regarding Article 7 of the OPSC, because the online world provided the possibility for new ways of committing the offences covered by the OPSC through online spaces, such as chat rooms, there is a need for Article 7 to be applied to those online ‘premises’.²²¹

There is a lack of accordance between legal instruments when defining child pornography. For example, the criminalization of CSAM in the OPSC is much more restrictive than the criminalization of CSAM in the BC. On the latter, contrary to the OPSC, child pornography includes content that is virtual or that appears to depict a child. Also, while the access to and the possession of CSAM through the use of ICTs are not criminalized in the OPSC²²², the BC, criminalizes such actions. For the better protection of children, it is essential that states criminalize CSAM in the most harmonized way and extensive way possible, so that no room is left for the existence of such content whether in the offline or the online world.

When it comes to the complete criminalization of *online* CSEA, States still have a lot of work to do.²²³ Efforts for the actual enforcement of international and European legal instruments into every State’s domestic law, and efforts to eliminate the differences between crucial legal provisions among different legal instruments are essential for the effective criminalization of *online* CSEA and for the effective and total protection of children against those crimes.

²²⁰ United Nations (2019) *Guidelines regarding the implementation of the Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography*. CRC/C/156. Paragraph 65.

²²¹ United Nations (2019) *Guidelines regarding the implementation of the Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography*. CRC/C/156. Paragraph 75.

²²² Witting, S. K. (2021). Transnational by Default: Online Child Sexual Abuse Respects No Borders. *The International Journal of Children's Rights* 29, 3, 731-764. Page 748 and 749.

²²³ ECPAT International. (2022). *Legislation Addressing Online Child Sexual Exploitation and Abuse*. Disrupting Harm Data Insight 4. Global Partnership and End Violence Against Children. Page 6.

V. Methods Used to Detect CSAM

More than 32 million reports of suspected child sexual abuse were received by the National Center for Missing & Exploited Children (NCMEC)'s CyberTipline in the year 2022 alone, and 99,5% of those reports were about suspected CSAM.²²⁴ Governments are aware of the magnitude of the problem. The US Supreme Court started hearing arguments about changes that can be done to Section 230 of the Communications Decency Act, which protects internet platforms from liability for content uploaded by their users. The United Kingdom is debating its Online Safety Bill and the EU recently proposed the Artificial Intelligence Act (EU AIA), the first comprehensive Artificial Intelligence (AI) law in the world, which aims to improve the conditions for the development and use of this ground-breaking technology.²²⁵ Nonetheless, laws and regulations can only achieve a limited number of goals. It is true that technology contributed to the spread of CSAM, but it is also true that technology, for example, AI and machine learning, may now significantly help to achieve regulatory goals by detecting harmful online content.²²⁶

1. Automated Tools

a) Image hash database

Historically, the main method for detecting CSAM has been image hashing.²²⁷ Using this technique, each picture that has been previously classified as CSAM is matched to a special hash value. This hash value, which is generated by mathematical process that transforms a large amount of data in a smaller amount of data, is used to encrypt and authenticate an image's content.²²⁸ In fact, the hash value is a fingerprint for the image.

²²⁴ National Centre for Missing & Exploited Children. (2023). *Cybertipline 2022 Report*. Available at: <https://www.missingkids.org/cybertiplinedata>

²²⁵ European Parliament News. (2023). *EU AI Act: first regulation on artificial intelligence*. Available at: https://www.europarl.europa.eu/news/en/headlines/society/20230601STO93804/eu-ai-act-firstregulation-onartificialintelligence?&at_campaign=20226Digital&at_medium=Google_Ads&at_platform=Search&at_creation=RSA&at_goal=TR_G&at_advertiser=Webcomm&at_audience=artificial%20intelligence%20act&at_topic=Artificial_intelligence_Act&at_location=PT&gclid=Cj0KCQjwgNanBhDUARIsAAeIcAuGb3sDdSq4hzZskTsQhOWAH0Q-R_uDfil6ccj7tQKA3XfNIHT1ZGIaAuGsEALw_wcB.

²²⁶ Grzegorczyk, M. (2022). *New! How AI is leading the fight against online child abuse*. UNICRI. Available at: <https://unicri.it/News/AI-for-Safer-Children-%20article-Emerging-Europe>

²²⁷ Westlake, B. G. and Guerra, E. (2021). *Detecting child sexual abuse images: Traits of child sexual exploitation hosting and displaying websites*, Child Abuse & Neglect, Volume 122. Page 2.

²²⁸ Lee, H., Ermakova, T., Ververis, V. and Fabian, B. (2020). *Detecting Child Sexual Abuse Material: A comprehensive survey*. Forensic Science International: Digital Investigation, Volume 34. Page 6.

A database is then used to collect each image along with its hash value. If a picture that has been recognized and hashed reappears on the Internet, it may be located faster based on the database, and further steps can be taken to delete that picture. Therefore, databases should be periodically updated to maximize the chance of detecting re-uploaded CSAM.²²⁹ The usage of image hash databases has so far been effective and is largely being used, particularly for locating known CSAM in P2P networks.²³⁰ However, this approach has significant limitations. Firstly, the database only includes child sexual abuse image searches, but CSAM searches also need to incorporate results from video and audio content, as the reporting of child sexual abuse videos has exceeded the reporting of child sexual abuse images for the first time in 2019.²³¹ The database's inability to detect CSAM that has not already been classified as such is another limitation.²³² Furthermore, the capacity to identify CSAM is constrained for Electronic Service Providers (ESPs) and other parties without access to hash value databases. As a result, new detection criteria must be developed to enhance the detection of CSAM that has not been hashed.²³³

b) Web-crawler

Web-crawlers, commonly referred to as search bots, are intended to automatically scan websites and gather information about them in accordance to predetermined criteria. This includes pulling, indexing and downloading material from the crawled websites into a database. A way to find new material, is through visiting hyperlinks listed by the webpage. Those hyperlinks may also provide particular characteristics of the websites and therefore be used to detect CSAM. Keywords may also be used to detect CSAM if they are included in web-crawlers. The defined keywords are then searched for to see if they are present on the crawled websites. It is crucial to comprehend the names given to CSAM files by offenders or the code they employ on websites to identify themselves to

²²⁹ Westlake, B., Bouchard, M., Frank, R. (2012). *Comparing methods for detecting child exploitation content online*. Proceedings of the 2012 European Intelligence and Security Informatic Conference. IEEE, Odense, Denmark. Pages 156-163.

²³⁰ Da Silva Eleurico, P.M., de Castro Polastro, M., Police, B. F. (2012). *An adaptive sampling strategy for automatic detection of child pornographic videos*. Proceedings of the Seventh International Conference on Forensic Computer Science, Brasilia, DF, Brazil. Pages 12 to 19.

²³¹ Westlake, B. G. and Guerra, E. (2021). *Detecting child sexual abuse images: Traits of child sexual exploitation hosting and displaying websites*, Child Abuse & Neglect, Volume 122. Page 2.

²³² Lee, H., Ermakova, T., Ververis, V. and Fabian, B. (2020). *Detecting Child Sexual Abuse Material: A comprehensive survey*. Forensic Science International: Digital Investigation, Volume 34. Page 6.

²³³ Westlake, B. G. and Guerra, E. (2021). *Detecting child sexual abuse images: Traits of child sexual exploitation hosting and displaying websites*, Child Abuse & Neglect, Volume 122. Page 1.

other individuals looking for CSAM. The positive aspect of using keywords is the ability to discover new CSAM, which can help locate children who are actively being harmed.²³⁴ However there are some limitations to the use of keywords. Firstly, terminologies and expressions used by offenders are continually changing, so by the time a keyword is determined to be pertinent to detect CSAM, it has probably lost its relevance. Also, websites may select some keywords that are not allowed to be used on their system and false positives will start to appear as automated tools identify them as containing CSAM when they do not.²³⁵ Therefore, effective keyword selection is necessary to reduce the frequency of false positives.

Web crawlers can successfully detect CSAM webpages if provided with the right criteria. Keywords and image databases are examples of such criteria. However, the limited image databases make them less reliable, and the correct selection of the keywords is harder due to the constant evolution of the Internet. Therefore, preparatory research must be conducted so that appropriate criteria is employed.

2. AI and Machine Learning

AI is the term used to describe the way computers utilize algorithms or certain rules for decision making, without any input from humans and at a very fast pace. Machine learning is a component of AI that replicates human learning by using data and algorithms.²³⁶ One reason AI can be very helpful in assisting the protection of children online is because it operates very fast and makes a large number of decisions in a short period of time.²³⁷ Contrary to hashing technologies, AI classifiers have the potential to recognize new CSAM. Aside from law enforcement developing AI classifiers to assist investigations, industry is also developing AI applications to detect CSAM.²³⁸

²³⁴ Lee, H., Ermakova, T., Ververis, V. and Fabian, B. (2020). *Detecting Child Sexual Abuse Material: A comprehensive survey*. Forensic Science International: Digital Investigation, Volume 34. Page 6.

²³⁵ Westlake, B. G. and Guerra, E. (2021). *Detecting child sexual abuse images: Traits of child sexual exploitation hosting and displaying websites*, Child Abuse & Neglect, Volume 122. Page 2.

²³⁶ Winder, D. (2021). *Stamping out CSAM with machine learning?* Infosecurity Magazine. Available at: <https://www.infosecurity-magazine.com/magazine-features/csam-machine-learning/>

²³⁷ Goetze, Z. (2022). *The role of artificial intelligence in protecting children in the digital space*. ECPAT. Available at: <https://ecpat.org/ai-digitalspace/>

²³⁸ NetClean. (2023). *Technologies to stop child sexual abuse material: Artificial Intelligence*. NetClean Knowledge Hub. Available at: <https://www.netclean.com/knowledge/tech-for-good/technologies-to-stop-csam-artificial-intelligence>

Microsoft is one of the brands that implemented AI on their system and, in 2009, by partnering with Dartmouth College, created the PhotoDNA technology, which allows the detection and removal of numerous uploads of child sexual abuse images, even when those uploads have gone through small changes. This makes it possible to remove different versions of an image from a platform without requiring human analysis of each image.²³⁹ The PhotoDNA technology was donated to NCMEC, a clearinghouse and reporting center for all matters related to preventing CSEA and supporting victims. Microsoft provides this powerful technology for free to technology companies, developers and Non-Governmental Organizations (NGOs), in order to fight CSEA. Microsoft has also made PhotoDNA technology available to law enforcement agencies and they have incorporated this technology into the forensic tools that they use. Microsoft released PhotoDNA as a cloud service in 2015, allowing smaller businesses and other organizations to give users the possibility of uploading content freely while maintaining the integrity of their platforms.²⁴⁰

To detect images with equal visual content is the goal of PhotoDNA technology. However, because this technology was developed to detect images even if they have gone through slight changes, the output data must be sufficiently identical to make sure that a match is really displaying the same image.²⁴¹ Another limitation of the Photo DNA technology is that it is only able to detect known child sexual abuse images.

In 2018 Google introduced an AI tool, similar to the PhotoDNA technology, that is aimed to improve the way service providers, NGOs and technology companies detect child sexual abuse images and videos.²⁴²

²³⁹ INHOPE. (2020). *Artificial Intelligence in the fight against child sexual abuse material – part 2*. INHOPE Article. Available at: <https://www.inhope.org/EN/articles/artificial-intelligence-in-the-fight-against-child-sexual-abuse-material>

²⁴⁰ Microsoft (no date) *Photodna*. Available at: <https://www.microsoft.com/en-us/photodna>

²⁴¹ Hasija, N. (2021). *Photodna: Detecting child abuse*. Medium.com. Available at: <https://medium.com/@nedheesh.hasija/photodna-detecting-child-abuse-b490128a9d49>

²⁴² Todorovic, N. (2018). *Using AI to help organizations detect and report Child sexual abuse material online*. Google. Available at: <https://blog.google/around-the-globe/google-europe/using-ai-help-organizations-detect-and-report-child-sexual-abuse-material-online/>

This is possible due to the use of deep neural networks which are a machine learning technology that enables a computer to perform tasks that would be extremely challenging to complete using traditional programming techniques.²⁴³ Therefore, the deep neural networks allow the system to go through a large amount of images and prioritize the ones that are more probable to be CSAM. The advantage of this AI classifier is that it detects new CSAM, meaning that children who are currently being abused have a bigger chance of being identified and the abuse is stopped.²⁴⁴ Nevertheless, an AI classifier is not free of flaws and will occasionally make mistakes. In essence, the AI tool success depends on the quality of the data that has been given to it. As a result, it continues to rely on human verification to make sure the detection is correct and when a mistake is made, it is normally not easy to go back and fix the specific error.²⁴⁵

Although using AI and machine learning to the detection of CSAM has proved to be advantageous, these methods are not free of flaws and limitations. They have inappropriately prevented Holocaust education and pictures of art on Facebook due to nudity, as well as promoted harmful CSAM on Instagram.²⁴⁶ In order to increase precision and reduce error, it is crucial that new procedures and identification criteria are created. Also, there is an energetic debate about the laws that would influence the use of AI by law enforcement, such as the Proposed EU AIA disclosed on 21 April 2021.²⁴⁷ This new proposed legislative framework is mainly concerned with enforcing rules on data quality, transparency, liability, and human supervision. Additionally, it intends to solve ethical issues and implementation problems in a number of industries, including health care, education and finance.²⁴⁸ Another goal of the proposed law is the creation of a European

²⁴³ Mercier, M. (2022). *What is a deep neural network? Learn more about deep neural networks and how Deep Learning Works*. Botpress Blog. Available at: <https://botpress.com/blog/deep-neural-network#:~:text=Deep%20neural%20networks%20are%20composed,more%20neurons%20in%20the%20network>.

²⁴⁴ Todorovic, N. (2018). *Using AI to help organizations detect and report Child sexual abuse material online*. Google. Available at: <https://blog.google/around-the-globe/google-europe/using-ai-help-organizations-detect-and-report-child-sexual-abuse-material-online/>

²⁴⁵ NetClean. (2023). *Technologies to stop child sexual abuse material: Artificial Intelligence*. NetClean Knowledge Hub. Available at: <https://www.netclean.com/knowledge/tech-for-good/technologies-to-stop-csam-artificial-intelligence>

²⁴⁶ Westlake, B. G. and Guerra, E. (2021). *Detecting child sexual abuse images: Traits of child sexual exploitation hosting and displaying websites*, Child Abuse & Neglect, Volume 122. Page 2.

²⁴⁷ Raposo, V. L. (2022). *Ex machina: preliminary critical assessment of the European Draft Act on artificial intelligence*. International Journal of Law and Information Technology, 30(1), Spring 2022. Page 88.

²⁴⁸ Feingold, S. (2023). *The European Union's Artificial Intelligence Act – explained*. World Economic Forum. Available at: <https://www.weforum.org/agenda/2023/06/european-union-ai-act-explained/>

AI Board that would monitor the implementation of the EU AIA and guarantee its application across the EU. The Board would have to formulate opinion reports and suggestions on emerging subjects as well as provide guidance to national authorities.²⁴⁹

Whether searching for CSAM on personal devices violates fundamental human rights and privacy regulations is also a topic of discussion among authorities and the general public.²⁵⁰ The widespread hesitancy of people to automated decision-making through AI applications in morally contentious fields, like policing, has increased this fear of monitoring.²⁵¹ The main problem is that AI systems used to identify humans are still not competent at understanding settings, detecting human uniqueness, and empathizing with situations, which may increase concern of ordinary material being mistakenly labeled as CSAM. The increased discussion on obscure applications of algorithms and the lack of agreement on whether humans or AI should be utilized for CSAM content surveillance fuel fears about automated solutions to CSAM. These algorithms may be subjected to racial, ethical, and gender preconceptions and discrimination, which are referred to as algorithmic biases.²⁵²

In response to these worries, the UN have developed guidelines to standardize how law enforcement uses AI. They have also issued a warning about possible biases in the present algorithms, which were developed using data that is biased against some groups and tolerant toward others.²⁵³ However, there is still a long path of research that needs to be done so that the use of fully automated tools is free of flaws.

²⁴⁹ Raposo, V. L. (2022). *Ex machina: preliminary critical assessment of the European Draft Act on artificial intelligence*. International Journal of Law and Information Technology, 30(1), Spring 2022. Page 91.

²⁵⁰ Calo, M. R. (2011). *The Boundaries of Privacy Harm*. Indiana Law Journal, 86(3), Article 8. Page: 1149.

²⁵¹ Bigman, Y. E. and Gray, K. (2018). *People are averse to machines making moral decisions*, Cognition, Vol.181. Page 22.

²⁵² Schuetz, P. N. K. (2021). *Fly in the Face of Bias: Algorithmic Bias in Law Enforcement's Facial Recognition Technology and the Need for an Adaptive Legal Framework*, Iawineq, 39(1). Pages 221-254.

²⁵³ United Nations Interregional Crime and Justice Research Institute. (2021). *250 Law enforcement representatives and experts from more than 60 countries joined the stakeholder meeting of the 'AI for safer children' initiative*. Available at: <https://unicri.it/News-First-Stakeholder-Meeting-AI-Safer-Children-Initiative>

VI. Future Threats and Legal Responses to Them

More nations than ever before have access to affordable, dependable connectivity that might drastically alter children's way of living by enabling them to take advantage of otherwise unachievable educational, cultural, and economic possibilities. Often, however, children are unable to take advantage of these chances because the Internet is a place where the most vulnerable are exposed to significant risk of harm.²⁵⁴ A new strategy is required for the worldwide response to *online* CSEA, otherwise, more children will continue to be put in danger and experience the pain of abuse. The best way to achieve change is to increase children's internet safety and lessen the potential for criminal activity. It is, therefore, very important to address future threats in a proactive way so that effective responses arise.

This chapter demonstrates the prevalence of *online* CSEA by highlighting the way many of the new technologies have the potential of escalating the difficulties faced by those trying to lower risk and damage, and it also highlights ways to improve the response to *online* CSEA. All while discussing key themes in the subsequent sub-sections, such as funding of policing, policy and legislation, criminal justice, law enforcement, technology, civil society, support for the victims, and research.

1. Funding

To combat the problem of *online* CSEA, governments, industries and civil society must invest an adequate amount of financial resources. The funds currently available are neither adequate to bring about the necessary transformation in the way the world responds to threats, nor is it equivalent to the size of the problem.²⁵⁵ The persistent underfunding of policing is the primary source of many problems. Investment is critically needed for preventive measures, such as the development of programs that would provide help to people who fear they might offend, the development of educational initiatives targeted to the civil society, and the expanding of the digital investigative capabilities of

²⁵⁴ Broadband Commission for Sustainable Development's Working Group on Child Online Safety. (2019). *Child Online Safety: Minimizing the Risk of Violence, Abuse and Exploitation Online*. BroadBand Commission for Sustainable Development. Page 9.

²⁵⁵ Setter, C, et al. (2021) *Global Threat Assessment 2021*, WeProtect Global Alliance. Page 84.

law enforcement authorities, as well as to create and improve the crucial structures for coordination necessary to successfully combat transnational and technologically advanced crime.²⁵⁶ The importance of funding is truly crucial for combatting *online* CSEA. The reason why its relevance is not thought of first is because there is not enough research or even transparency from law enforcement agencies about how much money is spent every year just to prevent, combat, and sentence CSEA offenders. Perhaps if each country was more transparent about this type of information the conscious about the need for funding in combating *online* CSEA would be bigger and more people, organizations, and governments would be willing to help.

2. Policy and Legislation

A country must have a strong legal system that outlines children's rights, crimes against children, and the penalties those crimes carry in order to safeguard children against sexual exploitation and abuse. Considering the transnational nature of *online* CSEA, cross-border collaboration as well as standardized definitions in different legal frameworks would be a good place to start. There are some legal flaws that are common and need to be taken into consideration, such as, the definition of sexual exploitation in gender terms that would be only applicable to girls, and the tendency to forget that support for child victims is needed in rustic areas as much as in urban areas.²⁵⁷

Online CSEA must be properly taken into account in any updated national child protection plans of action to end exploitation and abuse against children. However, there is an evident struggle for governance institutions to efficiently respond to CSEA due to the shortage of financial resources and of political power, as well as the limited representation of important sectors, such as the private sector involving technology and financial businesses. It is necessary to, after implementing policies that address CSEA, work towards their effectiveness and functioning, so that their interventions are properly reviewed and strengthen accordingly to what is necessary.²⁵⁸ This entails goals or initiatives that take into account the unique online dynamics and links between the online

²⁵⁶ Michael Hill. (2021). *Interpol: International police coordination required to combat cyberthreats*. Available at: <https://www.csoonline.com/article/571015/interpol-international-police-coordination-required-to-combat-global-cyberthreats.html>

²⁵⁷ Rodford, L., Allnock, D. and Hynes P. (2020). *Promising Programmes to Prevent and Respond to Child Sexual Abuse and Exploitation*. UNICEF. Page 29.

²⁵⁸ United Nations Children's Fund. (2021). *Ending online child sexual exploitation and abuse: Lessons learned and promising practices in low- and middle-income countries*, UNICEF, New York. Page 68.

and offline worlds. In fact, regarding CSEA there seems to be separation between policies that apply to *online* CSEA and policies that apply to *offline* CSEA, and it would be important to link both so that there are fundamental policies established about CSEA and then specific approaches to implement when the matter is *online* CSEA.²⁵⁹ Also, the lack of data regarding *online* CSEA is resulting in limited attention to the topic. There needs to be a regular collection of data in order to raise awareness and attention to *online* CSEA.²⁶⁰ The updated budgets, accomplishments, and factors must be measured and coordinated with those in the fields of social protection, health, and education.²⁶¹

To facilitate the full realization of children's rights in the digital world, governments have the responsibility to, where required, revise the legislative framework. If the government does not totally commit to combating *online* CSEA, it is substantially more difficult for other parties, such as civil community, law enforcement, and the corporate sector, to engage with confidence and efficiently in this domain.²⁶² A thorough legislative framework should encompass preventive measures, such as the increasement of public awareness of the issue and the education of citizens, including parents and caregivers, on how to help children avoid and manage risks online; the prohibition of all types of online child abuse;²⁶³ the provision of efficient services that guarantees full recovery and reintegration of child victims in the society; the construction of child-sensitive and accessible reporting, complaint, and counseling channels; and the implementation of suitable sanctions to offenders, whether through imprisonment or through probations systems that ensure their supervision, which is an essential step to fight impunity and prevent re-offending.²⁶⁴

²⁵⁹ United Nations Children's Fund. (2021). *Ending online child sexual exploitation and abuse: Lessons learned and promising practices in low- and middle-income countries*, UNICEF, New York. Page 68.

²⁶⁰ United Nations Children's Fund. (2021). *Ending online child sexual exploitation and abuse: Lessons learned and promising practices in low- and middle-income countries*, UNICEF, New York. Page 68.

²⁶¹ Gawn, A. (2021). *Rebooting child protection systems: 5 ways to address child sexual abuse online*. WeProtect Global Alliance. Available at: <https://www.weprotect.org/blog/rebooting-child-protection-systems-five-ways-to-address-child-sexual-abuse-online/>

²⁶² Special Representative of the Secretary-General on Violence against Children. (2014). *Releasing children's potential and minimizing risks: ICTs, the Internet and Violence against Children*, New York: United Nations. Page 41.

²⁶³ International Telecommunication Union. (2020). *Guidelines for policy-makers on Child Online Protection*, International Telecommunication Union, Development Sector. Page 30.

²⁶⁴ Special Representative of the Secretary-General on Violence against Children. (2014). *Releasing children's potential and minimizing risks: ICTs, the Internet and Violence against Children*, New York: United Nations. Pages 44 and 45.

A new Regulation (the Proposal for a Regulation laying down rules to prevent and combat child sexual abuse) that will require service providers to evaluate the risk of child sexual abuse on their platforms and, where appropriate, put preventive measures in place was proposed by the European Commission in May 2022.²⁶⁵ This Proposal's overall goal is to enhance the internal market's functionality by establishing clear, standard, and balanced EU provisions to prevent and combat CSEA.²⁶⁶ Therefore, service information providers would be required to conduct targeted inspections for known CSAM, new CSAM and grooming in end-to-end encryption (E2EE) communications on their products and services and to report any incidents to a new specialized EU center. It is everyone's duty to protect the children from sexual offenders. In favor of the EU's proposed law to safeguard children from sexual abuse, more than 90 organizations working on behalf of children have signed an open letter. Major European and worldwide organizations that work to protect children's safety and security strongly support the proposal. These organizations include Thorn, Missing Children Europe, Eurochild, and many others. The law that permits service providers to continue voluntarily detecting and reporting online child sexual abuse and removing child sexual abuse content would expire on August 3, 2024, if this proposed law is not passed. If this occurs, tech businesses won't be able to identify, report, and delete unlawful materials from communication platforms, which are now the most effective means of disseminating information about child sexual abuse and of grooming children. Because of this, predators will find it simpler to harm minors sexually and escape punishment. Therefore, it is essential that this proposed law is passed as soon as possible and that the new rules to protect children are put in place and taken seriously by the different States.

However, there are some challenges associated with the adoption of this Regulation. Firstly, the Proposal focuses on known CSAM, new CSAM, and grooming without considering the low accuracy of the technology used to identify new CSAM and the even lower accuracy of the technology used to identify grooming, when comparing with the

²⁶⁵ Directorate-General for Migration and Home Affairs. (2022). *Fighting child sexual abuse: Commission proposes new rules to protect children*, European Commission – Press release, Brussels. Available at: https://home-affairs.ec.europa.eu/news/eu-proposes-new-rules-fight-child-sexual-abuse-2022-05-11_en; European Commission. (2022). Proposal for a Regulation on the European Parliament and of the Council laying down rules to prevent and combat child sexual abuse, Brussels, 11 May 2022, COM(2022) 209 final, 2022/0155(COD).

²⁶⁶ European Parliamentary Research Service. (2023). *Proposal for a regulation laying down the rules to prevent and combat child sexual abuse: Complementary Impact Assessment*. Page 1.

technology used to detect known CSAM.²⁶⁷ Because the technology used to detect new CSAM is based on predictive systems that employ AI technologies, when identifying new CSAM, extreme cautions are required since a system error might have detrimental consequences on data subjects who would be immediately be identified as perhaps having committed a very serious crime and have their personal information and communications details recorded.²⁶⁸ Regarding the technology used to detect grooming, the main concern is how intense the intrusion in personal communications would have to be since grooming detection would encompass any written or voiced communications.²⁶⁹

Secondly, opinions on the effects of implementing such technologies vary, the majority of experts believe that doing so will increase the amount of reported CSAM and grooming and decrease its accuracy, therefore, increasing the unnecessary workload of law enforcement agencies. Also, it is possible that service information providers start to report content that constitutes CSAM and content that might or might not constitute CSAM to make sure they are not liable for not complying with the Regulation.²⁷⁰ Both of these factors show that this approach could result in false positive reports that can compromise the effectiveness of law enforcement agencies' work.²⁷¹

It is also important to know how the implementation of this Regulation would affect fundamental rights. The Proposal's measures, which include detection orders for CSAM and grooming, may have a harmful effect on children's basic rights when using internet services. Particularly impacted are Article 7 of the Charter of Fundamental Rights (CFR) of the EU²⁷² that establishes the right to privacy and family life, Article 8 of the CFR, which establishes the rights to data protection, and Article 11 of the CFR which protects the right to freedom of expression and information. Limiting these rights may have an effect on how children grow as individuals and on their freedom to do so. First, in relation

²⁶⁷ European Parliamentary Research Service. (2023). *Proposal for a regulation laying down the rules to prevent and combat child sexual abuse: Complementary Impact Assessment*. Page 28.

²⁶⁸ Joint Opinion 4/2022 on the Proposal for a Regulation of the European Parliament and of the Council laying down rules to prevent and combat child sexual abuse, European Data Protection Board and European Data Protection Supervisor, July 2022. Page 21.

²⁶⁹ Joint Opinion 4/2022 on the Proposal for a Regulation of the European Parliament and of the Council laying down rules to prevent and combat child sexual abuse, European Data Protection Board and European Data Protection Supervisor, July 2022. Page 22.

²⁷⁰ European Parliamentary Research Service. (2023). *Proposal for a regulation laying down the rules to prevent and combat child sexual abuse: Complementary Impact Assessment*. Page 26.

²⁷¹ Joint Opinion 4/2022 on the Proposal for a Regulation of the European Parliament and of the Council laying down rules to prevent and combat child sexual abuse, European Data Protection Board and European Data Protection Supervisor, July 2022. Page 22.

²⁷² European Union. (2012). *Charter of Fundamental Rights of the European Union*, 26 October 2012, 2012/C 326/02.

to situations where traffic and location data are monitored, the proposal would conflict with the right to a private life and communications,²⁷³ and it would probably result in a particularly significant violation in situations when interpersonal communication material is involved. Second, because screening by service providers is a type of data processing, it would violate the right to the protection of personal data.²⁷⁴ Thirdly, the screening of user communications could discourage individuals from openly expressing their opinions and hearing the views of others, which would have a significant negative impact on the freedom of expression and information.²⁷⁵ Also, the goal of Article 16 of the CFR (freedom to conduct a business) is to protect every EU citizen's right to run a business without facing discrimination or excessive limitations. This right is interfered with by requiring service providers to establish and operate an expensive computer system to watch all electronic communications made over their network.²⁷⁶ There is an evident contradiction between the proposed regulation and the substance of the fundamental right to privacy in the form of communication confidentiality with regard to responsibilities on scanning the content of interpersonal communications by interpersonal communications providers, which includes grooming, new CSAM and known CSAM. In E2EE communications, scanning material from users' own device is a violation of the fundamental right of data protection. Even if it is now acknowledged that the core of the right to data protection is violated in the case of E2EE channels of communication,²⁷⁷ it is important to evaluate if the device side scanning of interpersonal conversations is out of proportion to the objectives of the Regulation²⁷⁸ as it causes weaknesses and puts users at risk of unauthorized access by other governments and criminal organizations.²⁷⁹

²⁷³ European Union. (2012). *Charter of Fundamental Rights of the European Union*, 26 October 2012, 2012/C 326/02. Article 7.

²⁷⁴ European Union. (2012). *Charter of Fundamental Rights of the European Union*, 26 October 2012, 2012/C 326/02. Article 8.

²⁷⁵ European Union. (2012). *Charter of Fundamental Rights of the European Union*, 26 October 2012, 2012/C 326/02. Article 11.

²⁷⁶ Joint Opinion 4/2022 on the Proposal for a Regulation of the European Parliament and of the Council laying down rules to prevent and combat child sexual abuse, European Data Protection Board and European Data Protection Supervisor, July 2022. Page 15.

²⁷⁷ Joint Opinion 4/2022 on the Proposal for a Regulation of the European Parliament and of the Council laying down rules to prevent and combat child sexual abuse, European Data Protection Board and European Data Protection Supervisor, July 2022. Page 23.

²⁷⁸ ETNO. (2022). ETNO Position Paper: European Commission's proposal for a regulation laying down rules to prevent and combat child sexual abuse, ETNO Association. Page 4.

²⁷⁹ European Parliamentary Research Service. (2023). *Proposal for a regulation laying down the rules to prevent and combat child sexual abuse: Complementary Impact Assessment*. Page 85.

3. Criminal Justice

The criminal and civil justice systems are crucial in how the States react to CSEA. It is of great public interest to investigate and prosecute those who commit crimes involving sexual abuse of children, but there are some improvements that could be done regarding this matter.²⁸⁰ Firstly, the amount of time it takes to investigate and prosecute cases of CSEA is a major source of concern. Delays in the criminal justice system can worsen the effects of sexual abuse and have a significant negative impact on the mental and physical health of victims as well as of those who are accused of the crime. This can constrain efforts to hold offenders accountable and has caused some victims to retract their statements and stop cooperating with investigations.²⁸¹ Secondly, obtaining enough evidence to link a suspect to *online* CSEA is one of the biggest challenges faced when trying to achieve a successful investigation. The suspect may initially be identified merely by an online username, account number, or IP address that virtually identifies the offender's device used to get access to the Internet. Once a suspect's true identity or whereabouts are known, it becomes necessary to gather evidence of the claimed crime or further crimes. This is frequently done through a process of search, detainment, and investigation of internet-enabled devices.²⁸² In fact, there is a variety of challenges posed by technology that make it difficult for police to manage the process of detecting accurate evidence. Firstly, the real identity of an internet sexual offender may be concealed and made untraceable using encryption technology. The usage of virtual private networks (VPNs) to access the Internet, E2EE services, and the dark web are the main obstacles to either identifying suspects or locating evidence of their crimes. Also, due to streaming and cloud computing technologies, people no longer need to keep data on their electronic devices, and even while criminals may easily commit this kind of crime across borders, the police must go through complex cross-border investigative procedures. With this comes the difficulty of getting the necessary proof from these technologies. In fact, in criminal justice, the standard of proof is 'beyond a reasonable doubt'²⁸³ and in many cases

²⁸⁰ Independent Inquiry Child Sexual Abuse. (2022). *The Report of the Independent Inquiry into Child Sexual Abuse*. iicsa.org.uk. Page 234.

²⁸¹ Independent Inquiry Child Sexual Abuse. (2021). *Child Sexual Abuse in contemporary institutional context: An analysis of Disclosure and Barring Service*. Chapter 5.4.3. Page 72.

²⁸² Skidmore, M., Aitkenhead, B. and Muir, R. (2022). *Turning the Tide Against Online Child Sexual Abuse*. The Police Foundation. Page 39.

²⁸³ Cornell Law School. (2020). *Beyond a reasonable doubt*. Legal Information Institute. Available at: https://www.law.cornell.edu/wex/beyond_a_reasonable_doubt#:~:text=In%20a%20criminal%20case%2C%20the,the%20evidence%20presented%20at%20trial.

the lack of evidence results in the police determining that there is no sufficient evidence to pursue a criminal conviction, which also can discourage victims to seek help from law enforcement authorities.²⁸⁴

Dealing with cases fairly is the primary goal of the criminal justice system. Therefore, a fair conclusion needs a thorough and objective police investigation, a timely and efficient decision of whether or not to charge the suspect, and a fair trial that starts and ends within a reasonable amount of time.

4. Law Enforcement

Since 2018, the number of cases of *online* CSEA have been increasing and in 2021 reached 29.3 million reports.²⁸⁵ Also, there was an increase in the use of social media, online gaming, dark web forums, and other networking platforms during the COVID-19 pandemic, which provided offenders with more opportunities to exploit and abuse children online.²⁸⁶

Due to these factors, any comprehensive plan to make the Internet a safer place for children must include full participation from law enforcement. However, the rapid evolution of technology comes with serious challenges for those combating *online* CSEA, such as, the difficulty to keep up with the continuously changing nature of technology being regularly several steps behind perpetrators when referring to technology; the difficulty of always being aware of new apps, new softwares, and new programs that are used by the offenders; the difficulties regarding the increasing storage capacity of technological devices; and the difficulties on figuring out passwords of encrypted devices.²⁸⁷ In fact, as a result of a lack of funding and the absence of suitable training programs, law enforcement agencies do not have the qualifications and capacity to analyze computer data and digital evidence in order to investigate and combat

²⁸⁴ Independent Inquiry Child Sexual Abuse. (2021). *Child Sexual Abuse in contemporary institutional context: An analysis of Disclosure and Barring Service*. Chapter 5.4.3. Page 73.

²⁸⁵ National Center for Missing and Exploited Children. (2022). *2021 Annual Report*. Page 3.

²⁸⁶ Kolodner, H. (2021). *A study of recidivism among online sexual predators*. International Social Science Review, 97(2). Pages 1-17.

²⁸⁷ Cullen, O., Ernst, K. Z., Dawes, N., Binford, W. and Dimitropoulos, G. (2020). *Our Laws Have Not Caught up with the Technology: Understanding Challenges and Facilitators in Investigating and Prosecuting Child Sexual Abuse Materials in the United States*, Laws and Emerging Technologies. Page 6.

cybercrime, especially cybercrime involving children.²⁸⁸ Therefore, for the purpose of conducting investigations into crimes against children committed over the Internet, law enforcement must get the necessary training. The subjects covered in training should include investigative and prosecution methods, online technological developments, analysis of digital forensic, preventing *online* CSEA, and victim assistance.²⁸⁹ Moreover, it is important that these training programs also focus on forensic tracing of cryptocurrency because, for example, dark web forums are becoming more popular, giving cybercriminals more significant opportunity to build their networks and create clandestine markets that accept cryptocurrency payments. Therefore, it is crucial to create up to date practical training programs for law enforcement agents for them to be in pace with the evolution of technology.²⁹⁰

Additionally, it is crucial that law enforcement creates clear channels for children or any person to report any events or worries they may have regarding a child's online safety. For instance, several countries have set up hotlines to help with OCSEA reports.²⁹¹

Also, policymakers must maintain international coordination amongst law enforcement authorities worldwide since it is a global threat. This would shorten the duration of formal processes and enable the agents to respond faster. In fact, on April 17 of 2018, two legislative proposals were presented by the European Commission regarding cross-border gathering of electronic evidence (e-evidence), a Regulation on European Production and Preservation Orders for electronic evidence in criminal matters²⁹² and a Directive on the appointment of legal representatives for the purpose of gathering evidence in criminal proceedings²⁹³. The proposed Regulation on European Production and Preservation Orders for electronic evidence in criminal matters establishes rules that apply to the whole EU and allow law enforcement agencies in the EU to demand that a service provider that

²⁸⁸ Choi, K. and Lee, H. (2023). *The Trend of Online Child Abuse and Exploitations: A Profile of Online Sexual Offenders and Criminal Justice Response*, Journal of Child Sexual Abuse. Page 14.

²⁸⁹ Report Congressional Requesters. (2022). *Online Exploitation of Children: Department of Justice Leadership and Updated National Strategy Needed to Address Challenges*. United States Government Accountability Office. Page 24.

²⁹⁰ Choi, K. and Lee, H. (2023). *The Trend of Online Child Abuse and Exploitations: A Profile of Online Sexual Offenders and Criminal Justice Response*, Journal of Child Sexual Abuse. Page 14.

²⁹¹ International Telecommunication Union. (2020). *Guidelines for policy-makers on Child Online Protection*, International Telecommunication Union, Development Sector. Page 23.

²⁹² European Commission. (2018) Proposal for a Regulation of the European Parliament and of the Council on European Production and Preservation Orders for electronic evidence in criminal matters, Strasbourg, 17 of April 2018, COM(2018) 225 final, 2018/0108(COD).

²⁹³ European Commission. (2018). Proposal for a Directive of the European Parliament and of the Council laying down harmonized rules on the appointment of legal representatives for the purpose of gathering evidence in criminal proceedings, Strasbourg, 17 of April 2018, COM(2018) 226 final, 2018/0107(COD).

offers services within the Union provides or preserves e-evidence in cross-border circumstances. The key benefit is that demands may be made directly to private companies, regardless of where the data is stored or where it is located, and without first contacting foreign state agencies. This would transform the pace of investigations cross-borders because the access to e-evidence, such as IP addresses, documents in clouds and e-mails would be much faster than if they need to go through the traditional means of Mutual Legal Assistance²⁹⁴ (MLA) which are much slower.²⁹⁵ In fact, this Regulation would oblige service providers to provide the requested e-evidence to the law enforcement agency that had asked for it in 10 days maximum and, in case of emergency, in 6 hours.

The proposed Directive aims to overcome the current disparities between how EU Member States approach requiring service providers to comply with obligations in criminal proceedings, depending on whether they operate nationally, across EU borders, or from outside the EU. Because of this, the Directive requires service providers to designate a legal person in the EU who may accept, carry out, and execute orders for the collection of e-evidence. However, business, and civil society organizations criticized the proposed directive due to the fact that they don't agree that private companies should be responsible for determining the appropriate balance between law enforcement and the citizens fundamental rights.²⁹⁶

5. Technology

A number of actions are being taken to stop *online* CSEA. These actions include projects that aim to improve online reporting systems, to use AI to spot abuse, to design products and services to make children safer online and to do research to inspire new best practices. Integration with the pertinent elements of a country's child protection system is necessary for the usage and eventual success of such technological efforts.²⁹⁷ Online safety technologies have made great progress in recent years, such as, grooming detection tools

²⁹⁴ Council of Europe (1959) Council of Europe Convention on Mutual Assistance in Criminal Matters, CETS No.30, Strasbourg, 20.IV.1959.

²⁹⁵ Wahl, T. (2018). *Commission proposes legislative framework for E-evidence*, eurocrim. Available at: <https://eucrim.eu/news/commission-proposes-legislative-framework-e-evidence/>

²⁹⁶ Wahl, T. (2018). *Commission proposes legislative framework for E-evidence*, eurocrim. Available at: <https://eucrim.eu/news/commission-proposes-legislative-framework-e-evidence/>

²⁹⁷ Gawn, A. (2021). *Rebooting child protection systems: 5 ways to address child sexual abuse online*. WeProtect Global Alliance. Available at: <https://www.weprotect.org/blog/rebooting-child-protection-systems-five-ways-to-address-child-sexual-abuse-online/>

and “Safety by Design” elements that lessen the possibility for criminal activity and encourage safe online conduct.²⁹⁸ Online safety technologies offer the ability to strengthen the international response to *online* CSEA by limiting the possibilities for offenders and strengthening the protections provided to children. Internet service providers are required to adopt a “Safety by Design” strategy, which entails that a child should have access to age-appropriate, child-friendly software, apps, and systems in order to keep them as safe as possible and that involves evaluating all assets from the standpoint of children’s rights. One of the most crucial ways that the private sector, particularly technology businesses, can support the protection of children online is by ensuring that software, web applications, apps, and websites comply with these standards.²⁹⁹

Also, there are safety technologies and methods currently under development, such as enhanced face recognition tools that might expedite the identification of child victims³⁰⁰, predictive analytics that some authorities are already using to identify children who are at high risk of abuse and allow early action³⁰¹, and systems that can collect metadata of CSAM.³⁰² These technologies heavily rely on AI, because given the quantity of data created each day online, real-time protection and pattern-spotting based on existing trends would be impossible without it. Nonetheless, leading AI experts and social scientists³⁰³ have cautioned that many algorithms include bias. Additionally, they may mislead consumers into believing there is a link between two occurrences when there is actually none since they do not adequately check for correlation vs causation. The fact that some dangers that impact children depend on context and that these algorithms are unable to comprehend context, presents another difficulty with fully automated solutions.³⁰⁴ This may result in decisions that discriminate against minorities and other historically marginalized groups. Considering these technological limitations, human inspection and

²⁹⁸ Setter, C, et al. (2021) *Global Threat Assessment 2021*, WeProtect Global Alliance. Page 29.

²⁹⁹ Perrino, J. (2022). *Using ‘safety by design’ to address online harms*, Brookings. Available at: <https://www.brookings.edu/articles/using-safety-by-design-to-address-online-harms/>

³⁰⁰ Broadband Commission for Sustainable Development’s Working Group on Child Online Safety. (2019). *Child Online Safety: Minimizing the Risk of Violence, Abuse and Exploitation Online*. BroadBand Commission for Sustainable Development. Page 24.

³⁰¹ Broadband Commission for Sustainable Development’s Working Group on Child Online Safety. (2019). *Child Online Safety: Minimizing the Risk of Violence, Abuse and Exploitation Online*. BroadBand Commission for Sustainable Development. Page 38.

³⁰² Pereira, M., Dodhia, R., Anderson, H., Brown, R. (2020). *Metadata-based detection of child sexual abuse material*, arXiv.org. Page 2.

³⁰³ Courtland, R. (2019). *Bias detectives: the researchers striving to make algorithms fair*. Nature.com. Vol. 558.

³⁰⁴ Broadband Commission for Sustainable Development’s Working Group on Child Online Safety. (2019). *Child Online Safety: Minimizing the Risk of Violence, Abuse and Exploitation Online*. BroadBand Commission for Sustainable Development. Page 25.

action and regulations to guarantee data accuracy continue to be a crucial component of online child safety.

Law enforcement is also facing difficulties as a result of new technology that enables the livestreaming and sharing of content including CSAM. The expansion of 4G and most recently 5G in many regions of the world has aided in the rise of LSCSA. With such easy access to technology and to the Internet, offenders may now network easily and take advantage of children's usage of SNSs.³⁰⁵ It is challenging to proactively prevent the creation and dissemination of CSAM using apps that enable livestreaming and E2EE, and it is even more challenging for law enforcement to apprehend perpetrators. This is due to the fact that livestreaming events and photograph sharing are rarely supported by any proof. To combat this, several law enforcement organizations are working to create technology that enables undercover agents to determine the language being used in recordings and conversations by translating and analyzing audio in videos using machine learning and natural language processing³⁰⁶, which considerably makes the investigations more productive by transforming the audio content in something easily examined and analyzed.³⁰⁷

Also, in 2020 the LIBRA initiative, developed by the Dutch software company Web-IQ, was launched in Europe as a way to fight child sexual abuse by searching CSAM on the Internet so that it can be deleted and blocked. Between 2020 and 2021 the LIBRA program identified and deleted from the Internet dozens of thousands of CSAM and found new server hosts and tracked movement of the content. The benefit of the LIBRA program is that it has made possible to search for CSAM without downloading or saving the content itself.³⁰⁸ This is revolutionary because it enables unbiased insights that can be utilized to rapidly identify and remove CSAM from the Internet. In this program, officials may also get a fast understanding of how severe CSAM is spreading in their country, which would improve the accuracy of data regarding this issue. Also, because a significant

³⁰⁵ Information Exchange Working Group. (2020). *Combating Online Child Sexual Abuse and Exploitation Through Financial Intelligence – Public Bulletin*. Egmont Group of Financial Intelligence Units Page 6.

³⁰⁶ Department of Homeland Security. (2022). *Feature Article: S&T Tech leads to children rescued and traffickers arrested*. DHS. Gov. Available at: <https://www.dhs.gov/science-and-technology/news/2022/05/09/feature-article-st-tech-leads-children-rescued-and-traffickers-arrested>

³⁰⁷ Report Congressional Requesters. (2022). *Online Exploitation of Children: Department of Justice Leadership and Updated National Strategy Needed to Address Challenges*. United States Government Accountability Office. Page 26.

³⁰⁸ Bennstrom, C. (2022). *Advancing technology to stop child sexual abuse*. World Childhood Foundation. Available at: <https://childhood.org/news/advancing-technology-to-stop-child-sexual-abuse/>

amount of content is eliminated using the automated processes that constitute this initiative, victims may be found faster, and re-victimization can be avoided.³⁰⁹

These are the kind of initiatives that have to take place in order to achieve an effective prevention and combat of *online* CSEA. With technology being the enabler of this horrendous crimes and because the human action by itself is uncappable of keeping up with the pace of evolving technology, it is necessary that new programs and initiatives are created so that technology itself is used to combat these crimes.

6. Civil society

Governments and technology companies won't make children safer by themselves. It's possible for a business or service to use the most advanced child safety tools available. However, children won't be completely safe if public awareness, education, policy, product design, and operations do not place as a priority to children's safety.³¹⁰

Children should be aware of their rights from the earliest age possible as it would give them the ability to detect when a certain conduct is harmful, notify a responsible adult, and report when their rights have been violated. However, in a world where digital change is occurring quickly, according to a UNICEF study, in 2019, 43% of children in South Africa said they almost never seek their parents for help concerning events that happen online.³¹¹ Also, in European countries this percentage is worrying, for example, in 2018, the percentage of children who did not choose their parents to talk to about negative online experiences was 62% in Italy and 67% in Portugal.³¹² Some of the reasons mentioned by child victims for not speaking out about their personal experience include not knowing where or how to report or who to talk too, feeling a sense of guilt, believing

³⁰⁹ WEB IQ HQ. (2022). *Web-IQ libra to get objective global insights in CSAM distribution*. Web-IQ.com. Available at: <https://web-iq.com/solutions/libra>.

³¹⁰ Broadband Commission for Sustainable Development's Working Group on Child Online Safety. (2019). *Child Online Safety: Minimizing the Risk of Violence, Abuse and Exploitation Online*. BroadBand Commission for Sustainable Development. Page 24.

³¹¹ Byrne, J. and Burton, P. (2019). *Children as Internet users: how can evidence better inform policy debate?* Taylor & Francis. Page 45.

³¹² Ponte, C. (2019). *Challenging online situations reported by Italian and Portuguese Children in 2018*. Revista Mediterránea de Comunicación. Page 5.

that no one would understand them, being worried about being punished, feeling ashamed and embarrassed, and being concerned about it upsetting the family.³¹³

The adults who spend most time with children are parents, care givers, and teachers. Those should receive training in digital literacy so that they can comprehend the internet world, safeguard children, and instruct them about the ways they can avoid situations of risk online. Whether children use the Internet at home, schools, or elsewhere, schools have a special duty to educate them on how to remain safe online, and policymakers should incorporate digital literacy into school's curriculum from a very young age. As a result, children would be able to defend themselves, understand their rights, and utilize the Internet to further their education.³¹⁴ It is important that the scope of these programs is not limited to children and teachers and also reach parents, caregivers and social services, because all of them are crucial to identify and tackle online and offline CSEA.³¹⁵ Nonetheless, educating parents and care givers about this matter shouldn't simply be done through schools and industry should play a big part in assisting its users or clients on how to prevent and combat *online* CSEA. This can be done if industry creates parental control settings according to the content available, if they inform clients on how to handle any concern related to the use of the content available, and explain the steps they need to take to voice their concerns about improper content, if they, for example, give parents the possibility of reviewing privacy settings and age verification settings, and if they collaborate with other organizations and the government to improve parents capabilities to talk to their children about responsible usage of the Internet.³¹⁶ With the appropriate digital literacy parents and caregivers, may decide to control their children's access to online activity, communicate with the child about appropriate technology use and behavior, and be aware of what the child is doing online so that offline and online experiences are discussed as one.³¹⁷ Additionally, parents and care givers should set a

³¹³ UNICEF Indonesia. (2022). *Up to 56 per cent of online child sexual exploitation and abuse in Indonesia goes undisclosed and unreported, according to new survey*. UNICEF. Available at: <https://www.unicef.org/indonesia/press-releases/56-cent-online-child-sexual-exploitation-and-abuse-indonesia-goes-undisclosed-and>

³¹⁴ Choi, K. and Lee, H. (2023). *The Trend of Online Child Abuse and Exploitations: A Profile of Online Sexual Offenders and Criminal Justice Response*, Journal of Child Sexual Abuse. Page 15.

³¹⁵ United Nations Children's Fund. (2021). *Ending online child sexual exploitation and abuse: Lessons learned and promising practices in low- and middle-income countries*, UNICEF, New York. Page 72.

³¹⁶ UNICEF. (2015). *Guidelines for Industry on Child Online Protection*. Itu.int/cop. Page 13. Available at: <https://www.unicef.org/media/66616/file/Industry-Guidelines-for-Online-ChildProtection.pdf>

³¹⁷ Choi, K. and Lee, H. (2023). *The Trend of Online Child Abuse and Exploitations: A Profile of Online Sexual Offenders and Criminal Justice Response*, Journal of Child Sexual Abuse. Page 15.

positive example for their children by using technology responsibly and acting appropriately online. At last, policymakers can create public awareness initiatives, including those for parents, care givers, and educators, in collaboration with public organizations. The presentation of online safety and digital literacy material could be held in public libraries, health care facilities and even large retail locations.³¹⁸ Governments should make sure the advice provided is impartial and uninfluenced by any special interests and covers a wide range of concerns in the digital sphere while carrying out this responsibility.

To promote the benefits and dangers of children's digital involvement, change is required at all levels, including with children themselves, parents, and the general community. Everyone should get the appropriate education on how to behave properly online so that everyone who interacts with people online is aware of the signs of abuse, how to spot them, and the social obligation to report it.³¹⁹

7. Support for and Empowerment of the Victims

Most children who experienced sexual exploitation and abuse online suffer from fear, trauma and anxiety, they socially isolate themselves and feel there is a lack of assistance, a lack of information and a lack of services that could help them.³²⁰ There is no doubt that there should be resources available to support any child who suffers or has suffered from sexual exploitation or abuse, whether online or offline. Although every frontline worker should have a certain amount of knowledge in this area, particularly qualified specialists should work in this field.³²¹ Frontline respondents have rated the governments initiatives to raise awareness, to train law enforcement and frontline workers, and to advocate about this issue, as “poor” or “none”.³²² For that reason, and to make sure that the process of ensuring that children reach the right helpers is easy and fast, there needs to be an

³¹⁸ International Telecommunication Union. (2020). *Guidelines for policy-makers on Child Online Protection*, International Telecommunication Union, Development Sector. Page 21.

³¹⁹ Gawn, A. (2021). *Rebooting child protection systems: 5 ways to address child sexual abuse online*. WeProtect Global Alliance. Available at: <https://www.weprotect.org/blog/rebooting-child-protection-systems-five-ways-to-address-child-sexual-abuse-online/>

³²⁰ ECPAT International and Fundación Renacer. (2021). *Child Sexual Exploitation and Abuse Online: Survivors' Perspective in Colombia*, WeProtect Global Alliance. Page 31.

³²¹ ECPAT International and Fundación Renacer. (2021). *Child Sexual Exploitation and Abuse Online: Survivors' Perspective in Colombia*, WeProtect Global Alliance. Page 38.

³²² ECPAT International and WeProtect Global Alliance. (2022). *Child Sexual Abuse and Exploitation Online: Survivors Perspectives*, WeProtect Global Alliance. Page 61.

improvement in the collaboration between support services, law enforcement authorities and governments, so that they can work together on preventing, combating, and psychologically supporting children that suffered from the abuse. It would also be important to create centers that would help children in need of this support, with the goal to lessen the possibility of revictimization and to ensure that the victim can heal from the trauma.

Another significant barrier is the shame attached to seeking counseling and visiting a mental health specialist.³²³ Therefore, it is important to disseminate the importance of getting help when regarding mental health, starting by teaching children at school or even at home that there is no problem in getting help, and spread the word about the benefits that can be taken from the action of support services. For a victim to feel safe in talking with a mental health specialist it is essential that the privacy of the victim is protected. For that, States should implement the prohibition of distributing the victim's personal details or any information that could invade their private life and there should be no public or press access to court during court proceedings that involve cases of CSEA.³²⁴

8. Research and Insight

Research must be funded by governments, civil society organizations, and internet service providers to improve knowledge of the paths leading to criminal activity and, consequently, the efficiency of preventive measures, self-help, and offender management programs; to improve knowledge on the factors contributing to the rise in self-generated sexual content, as well as the sexual and social development of children; to recognize the risk and protective variables, particularly those unique to marginalized groups, that may raise or lower a child's exposure to victimization; and to provide a better understanding of the extent to which CSEA is enabled by technology.

It is mostly unclear how many children have been subjected to or have survived *online* CSEA. Prevalence statistics seem to have taken priority over a serious comprehension of

³²³ECPAT International and WeProtect Global Alliance. (2022). *Child Sexual Abuse and Exploitation Online: Survivors Perspectives*, WeProtect Global Alliance. Page 64.

³²⁴ ECPAT International and WeProtect Global Alliance. (2022). *Child Sexual Abuse and Exploitation Online: Survivors Perspectives*, WeProtect Global Alliance. Page 82.

risk. It is, therefore, required a deeper and more thorough knowledge of risk. Although the online behaviors of children and adults who abuse them might be concealed and possible concerns can be hard to pinpoint, the need of risk studies cannot be overstated. There is no doubt that any child who uses the Internet might become a victim of abuse, and that children who already have vulnerabilities are particularly vulnerable online. Less is known about particular dangers, particular weaknesses, and the consequences for child victims. The relevance of the information acquired for effective preventive and response practices depends critically on the analysis of the dangers faced by groups of children with various characteristics throughout the world.³²⁵

There are almost certainly a variety of academics and researchers with a direct interest in an in-depth understanding of the social and technological impacts of the Internet. They are a highly useful tool for assisting national governments and policymakers in formulating policies that are based on verifiable facts³²⁶, and, therefore, there should be infinite support from the governments, ESPs and even from the general public for the development of accurate and up to date research on the matter.

³²⁵ Gawn, A. (2021). *Rebooting child protection systems: 5 ways to address child sexual abuse online*. WeProtect Global Alliance. Available at: <https://www.weprotect.org/blog/rebooting-child-protection-systems-five-ways-to-address-child-sexual-abuse-online/>

³²⁶ International Telecommunication Union. (2020). *Guidelines for policy-makers on Child Online Protection*, International Telecommunication Union, Development Sector. Page 22.

Conclusion

The aim of this Dissertation is to give a comprehensive analysis of the different typologies of *online* CSEA, understand how they have evolved over the years and in what ways could different legal frameworks address this issue.

By creating ways for physical exploitation and abuse of children to be transferred into the online world, the Internet has given *online* CSEA a global scope. Now, offenders can easily hide behind false identities and remain somewhat anonymous which makes it simpler for them to approach children in order to satisfy their sexual desires or to get any other form of gain. Even though there might be no physical contact between the child victim and the sexual offender, the trauma and damage that is done to a child as a consequence of *online* CSEA is no less than those left from offline abuse. However, for law enforcement, locating and identifying these criminals has become a harder task.³²⁷

In order for action to be taken to combat *online* CSEA effectively, governments must know the dangers posed by it. The conviction rates for the offenders of CSEA are low when comparing to the number of reports that law enforcement agencies receive every day, which means that some offenders are escaping justice. Therefore, there needs to be a cooperation between states to harmonize the definitions of different typologies of *online* CSEA and the different ways of combatting these crimes.

The lack of harmonization in the way each State implements international and European legal instruments in their domestic law is a major source of instability and one of the biggest reasons for these crimes to keep growing. As analyzed along this Dissertation, at the international, European, and national levels, there have been relevant legal instruments and initiatives addressing the issue of *online* CSEA. Therefore, nation legislation that implements international and European standards is essential for an effective protection of children. Moreover, EU legal binding instruments, such as the Budapest Convention, the Lanzarote Convention or the Directive 93/2011/EU are great starting points for the alignment between national legislation and international standards. Nonetheless, with the evolution of technology and with offenders constantly finding new ways of abusing a child through ICTs, it is essential that new legal frameworks and

³²⁷ Taylor, J. (2011). *Policing Social Networking Sites and Online Grooming*. In Davidson, J. and Gottschalk, P. eds (2011) *Internet and Child Abuse: Current Research and Policy*, Routledge. Page 131.

indicatives are created to stop *online* CSEA. However, it is crucial to address these offenses not only from the criminal law perspective but also with the objective of protecting the victims by prioritizing human rights legislation and principles.

Also, it is essential that law enforcement agencies continue to adapt their investigation tools and methods to the reality of *online* CSEA. However, there is not sufficient financial resources and technical expertise to develop such tools, and the ones available, such as the Google's AI classifier tool, are not available to all law enforcement agencies and small companies.³²⁸

To provide readers with relevant findings regarding *online* CSEA is not easy. The rapid evolution of ICTs makes the research of *online* CSEA and the recommendations on appropriate strategies very difficult. To address the difficulties encountered, there is an adaptation of already existing recommendations to the new technological advancements that are witnessed every day and a constant sense of adaptability of the information found to the current days.

The theoretical part of this Dissertation aims to encourage scholars to investigate the unique traits of every type of *online* CSEA and provides some recommendations on how to stop these crimes, while encouraging safe Internet usage. In doing so it highlights the most dangerous features of the Internet, the different ways governments and civil society have found to combat *online* CSEA and how these initiatives can be improved. Although this fight is far from being over, it is important to continue facing the challenges and finding innovative solutions to combat the immense world of *online* CSEA.

³²⁸ Dorotic, M., and Johnsen, J. W. (2023). *Child Sexual Abuse on the Internet: Report on the analysis of technological factors of child sexual abuse material on the Internet*, Norwegian Business School. Page 53.

Bibliography

Legal Instruments

Constitution of the Portuguese Republic [Portugal], 25 April 1976.

Council of Europe (1959) Council of Europe Convention on Mutual Assistance in Criminal Matters, CETS No.30, Strasbourg, 20.IV.1959.

Council of Europe (2007) Council of Europe Convention on the Protection of children against sexual exploitation and sexual abuse (Lanzarote Convention), 12 July 2007, CETS No.:201.

Council of Europe Convention on Cybercrime, CETS No.185, Budapest, 23.XI.2001.

Council of Europe (2001) *Explanatory Report to the Convention on Cybercrime*, European Threat Series – No.185, Budapest.

Council of Europe (2007) *Explanatory Report to the Council of Europe Convention on the Protection of Children against Sexual Exploitation and Abuse*, European Threat Series – No.201, Lanzarote.

European Commission. (2018). Proposal for a Directive of the European Parliament and of the Council laying down harmonized rules on the appointment of legal representatives for the purpose of gathering evidence in criminal proceedings, Strasbourg, 17 of April 2018, COM(2018) 226 final, 2018/0107(COD).

European Commission. (2018). Proposal for a Regulation of the European Parliament and of the Council on European Production and Preservation Orders for electronic evidence in criminal matters, Strasbourg, 17 of April 2018, COM(2018) 225 final, 2018/0108(COD).

European Commission. (2022). Proposal for a Regulation on the European Parliament and of the Council laying down rules to prevent and combat child sexual abuse, Brussels, 11 May 2022, COM(2022) 209 final, 2022/0155(COD).

European Union. (2002). Council of the European Union, *Council Framework Decision 2002/584 on the European Arrest Warrant and the Surrender Procedures between Member States*, 13 June 2002, -002/584/JHA.

European Union. (2011). Directive 2011/93/EU of the European Parliament and of the Council of 13 December 2011 on Combating the sexual abuse and sexual exploitation of children and child pornography and replacing Council Framework Decision 2004/68/JHA.

European Union. (2012). *Charter of Fundamental Rights of the European Union*, 26 October 2012, 2012/C 326/02.

European Union. (2014). Directive 2014/41/EU of the European Parliament and of the Council of 3 April 2014 regarding the European Investigation Order in criminal matters.

General comment No.13 (2011) on children's rights in relation to the digital environment.

Joint Opinion 4/2022 on the Proposal for a Regulation of the European Parliament and of the Council laying down rules to prevent and combat child sexual abuse, European Data Protection Board and European Data Protection Supervisor, July 2022.

Ministry of Justice, Decree Law nº 48/95, 15 of March (Portuguese Penal Code), Republic Diary No.63/1995, Serie 1 of 1995-03-15.

UN Committee on the Rights of the Child (2021) *General comment No.25 on children's rights in relation to the digital environment*. CRC/C/GC/25.

UN Committee on the Rights of the Child (CRC) *UN Committee on the Rights of the Child: Concluding Observations, Morocco*, 17 March 2006, CRC/C/OPSC/MAR/1.

UN General Assembly, *Convention on the Rights of the Child*, 20 November 1989, United Nations, Treaty Series, vol. 1577.

UN General Assembly, *Optional Protocol to the Convention on the Rights of the Child on the Sale of Children, Child Prostitution and Child Pornography*, 16 March 2001, A/RES/54/263.

United Nations (2019) *Guidelines regarding the implementation of the Optional Protocol to the Convention on the Rights of the Child on the sale of children, child prostitution and child pornography*. CRC/C/156.

Books, Articles and Book Chapters

Arkadas-Thibert, A. (2022). *Article 36: The Right to Protection from Other Forms of Exploitation*. In: Vaghri, Z., Zermatten, J., Lansdown, G., Ruggiero, R. (eds) *Monitoring State Compliance with the UN Convention on the Rights of the Child*. Children's Well-Being: Indicators and Research, vol 25, Springer, Cham.

Arkadas-Thibert, A. (2022). *Article 34: The Right to Protection from All Forms of Sexual Exploitation and Sexual Abuse*. In: Vaghri, Z., Zermatten, J., Landsdow, G., Ruggiero, R. (eds) *Monitoring State Compliance with the UN Convention on the Rights of the Child*. Children's Well-Being: Indicators and Research, vol 25. Springer, Cham.

Balfe, M. et al. (2014) *Internet Child Sex Offenders' Concerns about Online Security and their Use of Identity Protection Technologies: A Review*, Wiley Online Library.

Balfe, M., Gallagher, B., Masson, H., Balfe, S., Brugha, R., and Hackett, S. (2015). *Internet Child Sex Offenders' Concerns about Online Security and their Use of Identity Protection Technologies: A Review*. Child Abuse Rev., 24.

Beech, A., et al. (2008). *The Internet and Child Sexual Offending: A Criminological Review*. Aggression and Violent Behavior, 13(3).

Bennstrom, C. (2022). *Advancing technology to stop child sexual abuse*. World Childhood Foundation. Available at: <https://childhood.org/news/advancing-technology-to-stop-child-sexual-abuse/>.

Bigman, Y. E. and Gray, K. (2018). *People are averse to machines making moral decisions*, Cognition, Vol.181.

Bowles, N. and Keller, M.H. (2019). *Video games and online chats are 'hunting grounds' for sexual predators*. *The New York Times*.

Brink, T. van den et al. (2022). *Flexible Implementation and the EU Sexual Abuse Directive – Working Paper*. Cadmus – European University Institute Research Repository. Available at: https://cadmus.eui.eu/bitstream/handle/1814/74736/RSC_WP_2022_35.pdf?sequence=1&isAllowed=y

Broadband Commission for Sustainable Development's Working Group on Child Online Safety. (2019). *Child Online Safety: Minimizing the Risk of Violence, Abuse and Exploitation Online*. BroadBand Commission for Sustainable Development.

Brown, R., Napier, S., Smith, R. (2020). *Australians who view: An analysis of financial transactions*, Australian Institute of Criminology, *Trends & Issues in Crime and Criminal Justice* No. 589.

Brown, S. (2020). *Key messages from research on Child sexual exploitation perpetrated by adults*, Centre of expertise on child sexual abuse.

Byrne, J. and Burton, P. (2019). *Children as Internet users: how can evidence better inform policy debate?* Taylor & Francis.

Calo, M. R. (2011). *The Boundaries of Privacy Harm*. *Indiana Law Journal*, 86(3), Article 8.

Cambridge Advanced Learner's Dictionary. (2003). Cambridge University Press.

Carr, J. (2010). *The Internet Dimension of Sexual Violence Against Children*. In: *Protecting Children from Sexual Violence: A Comprehensive Approach*, Council of Europe.

Casino, F. and others. (2022). *SoK: cross-border criminal investigations and digital evidence*, Journal of Cybersecurity, Volume 8, Issue 1.

Choi, K. and Lee, H. (2023). *The Trend of Online Child Abuse and Exploitations: A Profile of Online Sexual Offenders and Criminal Justice Response*, Journal of Child Sexual Abuse.

CIAF Portugal and ECPAT International. (2018). *Sexual Exploitation of Children in Portugal*, Submission for the Universal Periodic Review of the human rights situation in Portugal.

Clough, J. (2015). Cybercrime. In *Principles of Cybercrime* (pp.33-28). Cambridge: Cambridge University Press.

Cornell Law School. (2020). *Beyond a reasonable doubt*. Legal Information Institute. Available at: https://www.law.cornell.edu/wex/beyond_a_reasonable_doubt#:~:text=In%20a%20criminal%20case%2C%20the,the%20evidence%20presented%20at%20trial.

Courtland, R. (2019). *Bias detectives: the researchers striving to make algorithms fair*. Nature.com. Vol. 558.

Crofts T., Lee M. (2013). *Sexting, Children and Child pornography*, Sydney Law Review, 35(5).

Csonka, P. (2006). *The council of europe's convention on cyber-crime and other European initiatives*. Érès. Volume 77.

Cubitt, T., Napier, S., Brown, R. (2021). *Predicting prolific live streaming of child sexual abuse*, Australian Institute of Criminology, *Trends & Issues in Crime and Criminal Justice* No. 634.

Cullen, O., Ernst, K. Z., Dawes, N., Binford, W. and Dimitropoulos, G. (2020). *Our Laws Have Not Caught up with the Technology: Understanding Challenges and Facilitators in Investigating and Prosecuting Child Sexual Abuse Materials in the United States*, Laws and Emerging Technologies.

D. Frange. et al. (2015). *The Importance of Terminology Related to Child Sexual Exploitation*, *Journal of Criminal Investigation and Criminology*, 66(4).

Da Silva Eleurico, P.M., de Castro Polastro, M., Police, B. F. (2012). *An adaptive sampling strategy for automatic detection of child pornographic videos*. Proceedings of the Seventh International Conference on Forensic Computer Science, Brasilia, DF, Brazil.

DeMarco, J. et al. (2018). *Behaviour and Characteristics of Perpetrators of Online-facilitated Child Sexual Abuse and Exploitation - A Rapid Evidence Assessment - Final Report*. London: NatCen.

Department of Homeland Security. (2022). *Feature Article: S&T Tech leads to children rescued and traffickers arrested*. DHS. Gov. Available at: <https://www.dhs.gov/science-and-technology/news/2022/05/09/feature-article-st-tech-leads-children-rescued-and-traffickers-arrested>

Dorotic, M., and Johnsen, J. W. (2023). *Child Sexual Abuse on the Internet: Report on the analysis of technological factors of child sexual abuse material on the Internet*, Norwegian Business School.

Drejer, C., Riegler, M. A., Halvorsen, P., Johnson, M. S., and Baugerud, G. A. (2023). *Live Streaming Technology and Online Child Sexual Exploitation and Abuse: A Scoping Review*. Trauma, Violence, & Abuse.

Dushi, D. (2019). *The Phenomenon of Online Live-Streaming of Child Sexual Abuse: Challenges and Legal Responses*. dissertation. University of Bologna.

ECPAT International and Fundación Renacer. (2021). *Child Sexual Exploitation and Abuse Online: Survivors' Perspective in Colombia*, WeProtect Global Alliance.

ECPAT International and WeProtect Global Alliance. (2022). *Child Sexual Abuse and Exploitation Online: Survivors Perspectives*, WeProtect Global Alliance.

ECPAT International. (2018). *Trends in online child sexual abuse material*.

ECPAT International. (2021). *Global Report: Offenders on the Move*.

ECPAT International. (2022). *Extraterritoriality: Preventing sexual exploitation of children by nationals and companies abroad*.

ECPAT International. (2022). *Legislation Addressing Online Child Sexual Exploitation and Abuse*. Disrupting Harm Data Insight 4. Global Partnership and End Violence Against Children.

Edwards, L. (2009). *Pornography, Censorship and the Internet*. In I. Edwards, & C. Waelde (Eds.), *Law and the Internet*. 3rd ed. Oxford.

Erevik EK, Landrø H, Mattson ÅL, Kristensen JH, Kaur P, Pallesen S. (2022). *Problem gaming and suicidality: A systematic literature review*. Addict Behav Rep.

ETNO. (2022). *ETNO Position Paper: European Commission's proposal for a regulation laying down rules to prevent and combat child sexual abuse*, ETNO Association. Page 4.

European Parliamentary Research Service. (2023). *Proposal for a regulation laying down the rules to prevent and combat child sexual abuse: Complementary Impact Assessment*.

Feingold, S. (2023). *The European Union's Artificial Intelligence Act – explained*. World Economic Forum. Available at: <https://www.weforum.org/agenda/2023/06/european-union-ai-act-explained/>

Finkelhor, D., Mitchell, K. J., Wolak, J. (2005). *Online Victimization: What Youth Tell Us*. In Cooper, S. W., et al. *Medical, Legal, and Social Science Aspects of Child Sexual Exploitation: A Comprehensive Review of Pornography, Prostitution, and Internet Crimes*.

Freeman, M. (2020). *The Convention on the Rights of the Child and Its Principles*. In: *A Magna Carta for Children: Rethinking Children's Rights (The Hamlyn Lectures, pp.85-130)*. Cambridge: Cambridge University Press.

Gagnier C., Collin-Vézina D. (2016). *The disclosure experiences of male child sexual abuse survivors*. *Journal of Child Sexual Abuse*, 25(2).

Gawn, A. (2021). *Rebooting child protection systems: 5 ways to address child sexual abuse online*. WeProtect Global Alliance. Available at: <https://www.weprotect.org/blog/rebooting-child-protection-systems-five-ways-to-address-child-sexual-abuse-online/>

Goetze, Z. (2022). *The role of artificial intelligence in protecting children in the digital space*. ECPAT. Available at: <https://ecpat.org/ai-digitalspace/>

Hanson, E., (2016) *Exploring the relationship between neglect and child sexual exploitation: Evidence Scope 1*. Research in practice. Page 2. Available at: https://www.basw.co.uk/system/files/resources/basw_54643-4_0.pdf

Hasebrink, U., Livingstone, S., Haddon, L. and Ólafsson, K. (2009). *Comparing children's online opportunities and risks across Europe: Cross-national comparisons for EU Kids Online*. LSE, London: EU Kids Online.

Hasija, N. (2021). *Photodna: Detecting child abuse*. Medium.com. Available at: <https://medium.com/@nedheesh.hasija/photodna-detecting-child-abuse-b490128a9d49>

Houtepen, J., Sijtsema, J. and Bogaerts, S. (2014). *From child pornography offending to child sexual abuse: a review of child pornography offender characteristics and risks for cross-over*. Aggression and Violent Behavior.

Independent Inquiry Child Sexual Abuse. (2021). *Child Sexual Abuse in contemporary institutional context: An analysis of Disclosure and Barring Service*. Chapter 5.4.3.

Independent Inquiry Child Sexual Abuse. (2022). *The Report of the Independent Inquiry into Child Sexual Abuse*. iicsa.org.uk.

Information Exchange Working Group. (2020). *Combating Online Child Sexual Abuse and Exploitation Through Financial Intelligence – Public Bulletin*. Egmont Group of Financial Intelligence Units.

INHOPE. (2020). *Artificial Intelligence in the fight against child sexual abuse material – part 2*. INHOPE Article. Available at: <https://www.inhope.org/EN/articles/artificial-intelligence-in-the-fight-against-child-sexual-abuse-material>

Instituto Nacional de Estadística (2022) *Survey on Information and Communication Technologies usage in Households and by Individuals*.

Interagency Working Group. (2016). *Terminology Guidelines for the Protection of Children from Sexual Exploitation and Sexual Abuse*. Luxembourg: Publications Office of the European Union.

International Centre for Missing and Exploited Children. (2016). *Child Pornography: Model Legislation and Global Review*, 8th Edition.

International Telecommunication Union. (2012). *Understanding cybercrime: Phenomena, Challenges and Legal Responses*.

International Telecommunication Union. (2020). *Guidelines for policy-makers on Child Online Protection*, International Telecommunication Union, Development Sector.

Internet Watch Foundation (2023) *IWF 2022 CSAM Annual Report*, Iwf.org.uk.
Available at: <https://annualreport2022.iwf.org.uk>

Jepkins, P. (2001). *Beyond Tolerance: Child Pornography on the Internet*. New York and London: New York University Press.

Kara Özçalık, C. and Atakoğlu, R. (2020) *Online child sexual abuse: prevalence, victims and offenders features*, Journal of Psychiatric Nursing.

Koçtürk N, Yüksel F. (2018) *A modern danger for adolescents: From online flirtation to sexual abuse*. Dusunen Adam The Journal of Psychiatry and Neurological Sciences.

Kolodner, H. (2021). *A study of recidivism among online sexual predators*. International Social Science Review, 97(2).

Lee, A. F., Li, N.-C., Lamade, R., Schuler, A., & Prentky, R. A. (2012). *Predicting hands-on child sexual offenses among possessors of Internet child pornography*. Psychology, Public Policy, and Law, 18(4).

Lee, H., Ermakova, T., Ververis, V. and Fabian, B. (2020). *Detecting Child Sexual Abuse Material: A comprehensive survey*. Forensic Science International: Digital Investigation, Volume 34.

Martellozzo, E. (2011). *Understanding the Perpetrators' Online Behavior*. In Davidson, J. and Gottschalk, P. *Internet Child Abuse: Current Research and Policy*. Routledge.

McLean, C. (2007). *The Uncertain Fate of Virtual Child Pornography Legislation*, Cornell Journal of Law and Public Policy, 17(1), Article 6.

Mercier, M. (2022). *What is a deep neural network? Learn more about deep neural networks and how Deep Learning Works*. Botpress Blog. Available at: <https://botpress.com/blog/deep-neural-network#:~:text=Deep%20neural%20networks%20are%20composed,more%20neurons%20in%20the%20network>

Mol, C. (2022). *The Child's Right to Participate in the UN Convention on the Rights of the Child*. In: *The Child's Right to Participate in Family Law Proceedings: Represented, Heard or Silenced?* (European Family Law, pp.19.86). Intersentia.

Napier, S., Teunissen, C., Boxall, H. (2021). *How do child sexual abuse live streaming offenders access victims?*, Australian Institute of Criminology, *Trends & Issues in Crime and Criminal Justice* No. 642.

Napier, S., Teunissen, C., Boxall, H. (2021). *Live streaming of child sexual abuse: An analysis of offender chat logs*, Australian Institute of Criminology, *Trends & Issues in Crime and Criminal Justice* No. 639.

National Center for Missing and Exploited Children. (2022). *2021 Annual Report*.

National Centre for Missing & Exploited Children. (2023). *Cybertipline 2022 Report*. Available at: <https://www.missingkids.org/cybertiplinedata>

Negreiro, M. (2023). *Combating child sexual abuse online*. European Parliament Research Service. Available at: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/738224/EPRS_BRI\(2022\)738224_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/738224/EPRS_BRI(2022)738224_EN.pdf)

NetClean. (2023). *Technologies to stop child sexual abuse material: Artificial Intelligence*. NetClean Knowledge Hub. Available at: <https://www.netclean.com/knowledge/tech-for-good/technologies-to-stop-csam-artificial-intelligence>

Neutze, J., Grundmann, D., Sxherner, G., Beier KM. (2012). *Undetected and detected child sexual abuse and child pornography offenders*. *Int'l J L & Psychiatry*.

Noll JG, Shenk CE, Barnes JE, Haralson KJ. (2013) *Association of maltreatment with high-risk internet behaviors and offline encounters*. *Pediatrics* 2013.

O'Connell, T. (2018). The Evolution of International Water Law. In M. Fitzmaurice, A. Ong & P. Merjouis (Eds.), *Research Handbook on International Water Law*.

Oxford English Dictionary Online. (2019). Oxford University Press.

Parti, K., & Marin, L. (2013). *Ensuring freedoms and protecting rights in the governance of the internet: a comparative analysis of blocking measures and internet providers' removal of illegal internet content*, *Journal of Contemporary European Research*, 9(1).

Pedersen, W., Bakken, A., Stefansen, K., & Soest, T. V. (2023). *Sexual Victimization in the Digital Age: A Population-Based Study of Physical and Image-Based Sexual Abuse Among Adolescents*. *Archives of Sexual Behavior*, 52(1).

Pereira, M., Dodhia, R., Anderson, H., Brown, R. (2020). *Metadata-based detection of child sexual abuse material*, arXiv.org.

Perrino, J. (2022). *Using 'safety by design' to address online harms*, Brookings. Available at: <https://www.brookings.edu/articles/using-safety-by-design-to-address-online-harms/>

Ponte, C. (2019). *Challenging online situations reported by Italian and Portuguese Children in 2018*. *Revista Mediterránea de Comunicación*.

Popadic, D., Pavlovic, Z., Petrovic, D. and Kuzmanovic, D. (2016). *Balancing between Opportunities and Risks: Results from the Pilot Study*, Global Kids Online. Available at: http://globalkidsonline.net/wp-content/uploads/2016/05/Country-report_Serbia-final-26-Oct-2016.pdf

Quayle, E. (2008). *The COPINE Project*, *Irish Probation Journal*, vol. 5.

Quayle, E. (2020) *Prevention, disruption and deterrence of online child sexual exploitation and abuse*. ERA Forum 21.

Quayle, E. and Jones, T. (2011) *Sexualized images of children on the Internet*. *Sexual Abuse*, 23(1).

Raposo, V. L. (2022). *Ex machina: preliminary critical assessment of the European Draft Act on artificial intelligence*. International Journal of Law and Information Technology, 30(1), Spring 2022.

Report Congressional Requesters. (2022). *Online Exploitation of Children: Department of Justice Leadership and Updated National Strategy Needed to Address Challenges*. United States Government Accountability Office.

Rodford, L., Allnock, D. and Hynes P. (2020). *Promising Programmes to Prevent and Respond to Child Sexual Abuse and Exploitation*. UNICEF.

Schuetz, P. N. K. (2021). *Fly in the Face of Bias: Algorithmic Bias in Law Enforcement's Facial Recognition Technology and the Need for an Adaptive Legal Framework*, Iawineq, 39(1).

Seger, A. (2016). *The Budapest Convention on Cybercrime: A Framework for Capacity Building, Global Forum on Cyber Expertise*. Available at: <https://thegfce.org/the-budapest-convention-on-cybercrime-a-framework-for-capacity-building/#:~:text=The%20Budapest%20Convention%20is%20a,more%20effective%20and%20subject%20to>

Seto, M.C., Hanson, R. K., & Babchishin, K. M. (2011). *Contact sexual offending by men with online sexual offenses*. Sexual Abuse: A Journal of Research and Treatment.

Setter, C, et al. (2021) *Global Threat Assessment 2021*, WeProtect Global Alliance.

Simons, D. A. (2015). *Adult sex offender typologies – office of justice programs*, Office of Justice Programs.

Simons, D. A., Wurtele, S. K., Durham, R. L. (2008). *Developmental experiences of child sexual abusers and rapists*, Child Abuse and Neglect, 32(5).

Sistema de Segurança Interna (2022) *Relatório Anual de Segurança Interna 2022*.

Skidmore, M., Aitkenhead, B. and Muir, R. (2022). *Turning the Tide Against Online Child Sexual Abuse*. The Police Foundation.

Smallbone, S. and Wortley, R. (2001). *Child Sexual Abuse: Offender Characteristics and Modus Operandi*. Trends and issues in Crime and Criminal Justice. No.193.

Special Representative of the Secretary-General on Violence against Children. (2014). *Releasing children's potential and minimizing risks: ICTs, the Internet and Violence against Children*, New York: United Nations.

Steel C. M. (2009). *Child pornography in peer-to-peer networks*, Child Abuse & Neglect, 33(8).

Taylor, J. (2011). *Policing Social Networking Sites and Online Grooming*. In Davidson, J. and Gottschalk, P. eds (2011) *Internet and Child Abuse: Current Research and Policy*, Routledge.

Terre des Hommes Netherlands. (2013). *Full screen on view: An exploratory study on the background and psychosocial consequences of webcam child sex tourism in the Philippines*.

Tobin, J. (2019). *The Optional Protocol on the Sale of Children, Child Prostitution, and Child Pornography*, in J.Tobin (ed.), *The UN Convention on the Rights of the Child: A Commentary*. Oxford: Oxford Commentaries on International Law.

Todorovic, N. (2018). *Using AI to help organizations detect and report Child sexual abuse material online*. Google. Available at: <https://blog.google/around-the-globe/google-europe/using-ai-help-organizations-detect-and-report-child-sexual-abuse-material-online/>

Todres, J. (2018). *Violence, Exploitation, and the Rights of the Child*, in U. Kilkelly and T. Liefwaard (eds.), *International Human Rights of Children*.

UNICEF. (2015). *Guidelines for Industry on Child Online Protection*. Itu.int/cop. Available at: <https://www.unicef.org/media/66616/file/Industry-Guidelines-for-Online-ChildProtection.pdf>

UNICEF. (2017). *The State of the World's Children 2017: Children in a Digital World*, UNICEF Division of Communication.

UNICEF. (2020). *Handbook on the optional protocol on the sale of children, child prostitution and child pornography*. UNICEF Innocenti Research Centre. Available at: <https://www.unicef.org/media/66806/file/Handbook-Optional-Protocol.pdf>

United Nations Children's Fund. (2021). *Ending online child sexual exploitation and abuse: Lessons learned and promising practices in low- and middle-income countries*, UNICEF, New York.

United Nations Children's Fund. (2022). *Legislation for the digital age: Global guide on improving legislative framework to protect children from online child sexual exploitation and abuse*. UNICEF, New York.

United Nations Office on Drugs and Crime (2015) *Study on the Effects of New Information Technologies on the Abuse and Exploitation of Children*. rep. New York.

Van Gijn-Grosvenor, E. and Lamb, M. (2016). *Behavioural differences between online sexual groomers approaching boys and girls*. Journal of Child Sexual Abuse.

Vizard E. (2013). *Practitioner Review: The victims and juvenile perpetrators of child sexual abuse – assessment and intervention*. Journal of Child Psychology and Psychiatry.

Wahl, T. (2018). *Commission proposes legislative framework for E-evidence*, eurocrim. Available at: <https://eucrim.eu/news/commission-proposes-legislative-framework-e-evidence/>

Westlake, B. G. and Guerra, E. (2021). *Detecting child sexual abuse images: Traits of child sexual exploitation hosting and displaying websites*, Child Abuse & Neglect, Volume 122.

Westlake, B., Bouchard, M., Frank, R. (2012). *Comparing methods for detecting child exploitation content online*. Proceedings of the 2012 European Intelligence and Security Informatic Conference. IEEE, Odense, Denmark.

Winder, D. (2021). *Stamping out CSAM with machine learning?* Infosecurity Magazine. Available at: <https://www.infosecurity-magazine.com/magazine-features/csam-machine-learning/>

Witting, S. K. (2021). Transnational by Default: Online Child Sexual Abuse Respects No Borders. *The International Journal of Children's Rights* 29(3).

Websites

Council of Europe Portal (no date) *Mapping out the Lanzarote Convention – Children's Rights*. Coe.int. Available at: <https://www.coe.int/en/web/children/mapping-out-the-lanzarote-convention>

Council of Europe. *Parties/observers to the Budapest Convention and Observer Organisations to the T-CY* – www.coe.int. Available at: <https://www.coe.int/en/web/cybercrime/parties-observers>.

Directorate-General for Migration and Home Affairs. (2022). *Fighting child sexual abuse: Commission proposes new rules to protect children*, European Commission – Press release, Brussels. Available at: https://home-affairs.ec.europa.eu/news/eu-proposes-new-rules-fight-child-sexual-abuse-2022-05-11_en

European Parliament News. (2023). *EU AI Act: first regulation on artificial intelligence*. Available at: <https://www.europarl.europa.eu/news/en/headlines/society/20230601STO93804/eu-ai->

[act-firstregulation-onartificialintelligence?&at_campaign=20226Digital&at_medium=Google_Ads&at_platform=Search&at_creation=RSA&at_goal=TR_G&at_advertiser=Webcomm&at_audience=artificial%20intelligence%20act&at_topic=Artificial_intelligence_Act&at_location=PT&gclid=Cj0KCQjwgNanBhDUARIsAAeIcAuGb3sDdSq4hzZskTsQhOWAH0Q-R_uDfil6ccj7tQKA3XfNIHT1ZGIaAuGsEALw_wcB.](#)

Europol. (2016). *Internet Organized Crime Threat Assessment (IOCTA) 2016*, Publications Office of the European Union. Available at: <https://www.europol.europa.eu/iocta/2016/online-child-exploit.html>

Grzegorczyk, M. (2022). *New! How AI is leading the fight against online child abuse*. UNICRI. Available at: <https://unicri.it/News/AI-for-Safer-Children-%20article-Emerging-Europe>

Independent Commissioner for Child Sexual Abuse Issues (no date) *International and European Law*, UBSKM. Available at: <https://beauftragte-missbrauch.de/en/themen/recht/international-and-european-law>

INTERPOL. (2022). *INTERPOL Secretary General: Online child sexual abuse at record levels*. Available at: <https://www.interpol.int/News-and-Events/News/2022/INTERPOL-Secretary-General-Online-child-sexual-abuse-at-record-levels>

INTERPOL. (2023). *International Child Sexual Exploitation Database*. Available at: <https://www.interpol.int/en/Crimes/Crimes-against-children/International-Child-Sexual-Exploitation-database>

McNamara, R. (2006). *OSCE Ministers Urge Concerted Action to Combat Sexual Exploitation of Children*, Commission on Security and Cooperation in Europe. Available at: <https://www.csce.gov/international-impact/osce-ministers-urge-concerted-action-combat-sexual-exploitation-children?page=1>

Michael Hill. (2021). *Interpol: International police coordination required to combat cyberthreats*. Available at: <https://www.csoononline.com/article/571015/interpol-international-police-coordination-required-to-combat-global-cyberthreats.html>

Microsoft (no date) *Photodna*. Available at: <https://www.microsoft.com/en-us/photodna>

Nikolovska, H. (2023). *Online predator statistics [2023 Update]*, Screen and Reveal. Available at: https://screenandreveal.com/online-predators-statistics/?utm_content=cmp-true

Status of Ratification Interactive Dashboard, United Nations, Office of the High Commissioner of Human Rights. Available at <https://indicators.ohchr.org>.

UK Safer Internet Centre. (2021). *Safer internet day press release 2021*. Available at: <https://saferinternet.org.uk/safer-internet-day/safer-internet-day-2021/press-release>

UNICEF Indonesia. (2022). *Up to 56 per cent of online child sexual exploitation and abuse in Indonesia goes undisclosed and unreported, according to new survey*. UNICEF. Available at: <https://www.unicef.org/indonesia/press-releases/56-cent-online-child-sexual-exploitation-and-abuse-indonesia-goes-undisclosed-and>

United Nations Interregional Crime and Justice Research Institute. (2021). *250 Law enforcement representatives and experts from more than 60 countries joined the stakeholder meeting of the 'AI for safer children initiative*. Available at: <https://unicri.it/News-First-Stakeholder-Meeting-AI-Safer-Children-Initiative>

UNODC. (2020). *Online Child Sexual Exploitation and Abuse*, Teaching Module Series: Cybercrime. Module 12: Interpersonal Cybercrime. Available at: <https://www.unodc.org/e4j/en/cybercrime/module-12/key-issues/online-child-sexual-exploitation-and-abuse.html>

WEB IQ HQ. (2022). *Web-IQ libra to get objective global insights in CSAM distribution*. Web-IQ.com. Available at: <https://web-iq.com/solutions/libra>

World Population Review (2023) *Age of Consent by Country 2023*. Available at: <https://worldpopulationreview.com/country-rankings/age-of-consent-by-country>