



EU Member States' use of new technologies in enforced disappearances

**Input for the thematic study by the UN Working Group on Enforced
or Involuntary Disappearances on "new technologies and enforced
disappearances"**



**Border Violence
Monitoring Network**

2nd February 2023

I. Reporting Organisation

1. The Border Violence Monitoring Network (BVMN) is a coalition of organisations working to document illegal pushbacks, collective expulsions and police violence along the European Union’s external borders in the Western Balkans, Greece and Turkey since the formal closure of the route in 2016. The collection of data on illegal pushbacks, police violence and detention is done by a consortium of independent voluntary field-experts who are part of or cooperate with humanitarian support groups united through the Border Violence Monitoring Network.

II. Pushbacks of migrants at external EU borders as a form of enforced disappearance

2. BVMN asserts that incidents of arbitrary detention and pushbacks¹ of migrants recorded by our partners across the Western Balkans, Greece and Turkey, and multiple other monitoring bodies,² demonstrate that EU Member States are conducting widespread and systematic enforced disappearances at external borders, in accordance with the definition set out in the International Convention for the Protection of All Persons from Enforced Disappearances (ICPPED).³ Since 2017, BVMN has documented over 1,500 testimonies reporting the arrest, detention and forcible removal of 24,990 migrants by persons or groups acting with the authorisation, support or acquiescence of EU Member States, frequently in conditions which conceal the whereabouts of migrants and place them outside the protection of the law.⁴
3. BVMN is highly concerned at reports received of the use of new technologies by EU Member States and the EU that contribute to incidents of enforced disappearances at external EU borders and target human rights defenders (HRDs) who are engaged in monitoring these crimes. BVMN has recorded incidents of pushbacks conducted by representatives of a total of 15 different countries, 10 of which are EU Member States. Those countries are: Austria, Italy, France, Slovenia, Croatia, Poland, Hungary, Romania, Bulgaria, and Greece.⁵

¹ ‘Pushback’ is a common term denoting the action of State representatives forcibly returning individuals seeking protection to another country, thereby preventing or restricting their access to international protection mechanisms. Pushbacks encompass the legal concept of collective expulsion, prohibited in Article 4, Protocol 4 of the European Convention of Human Rights (ECHR). Furthermore, collective expulsion is prohibited within Article 3 of the ECHR, which prohibits torture and ‘inhuman or degrading treatment or punishment’ and obliges signatory countries to consider the risk of refoulement.

² See, for example: Oxfam, Joint Agency Briefing Paper. 2017. “‘A Dangerous ‘Game’: The Pushback of Migrants, Including Refugees, at Europe’s Borders’”. Available at: https://www-cdn.oxfam.org/s3fs-public/file_attachments/bp-dangerous-game-pushback-migrants-refugees-060417-en_0.pdf [Accessed 01/02/2023]

³ Article 2 of the ICPPED reads: ‘For the purposes of this Convention, “enforced disappearance” is considered to be the arrest, detention, abduction or any other form of deprivation of liberty by agents of the State or by persons or groups of persons acting with the authorization, support or acquiescence of the State, followed by a refusal to acknowledge the deprivation of liberty or by concealment of the fate or whereabouts of the disappeared person, which place such a person outside the protection of the law.’ Available at: <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-convention-protection-all-persons-enforced> [Accessed 01/02/2023]

⁴ These testimonies are publicly accessible on our online database: <https://www.borderviolence.eu>

⁵ Border Violence Monitoring Network (BVMN). 2022. ‘The Black Book of Pushbacks: Expanded and Updated Edition’. December, 2022. Available at: <https://left.eu/issues/publications/black-book-of-pushbacks-2022/> [Accessed 01/02/2023]



III. Use of new technologies in enforced disappearances through pushback operations

4. BVMN notes the growing importance of surveillance and AI technologies, including drones and biometric identification systems, which are being used to automate processes of identifying and tracking the movement of migrants, including in pushback operations amounting to enforced disappearances at external EU borders. ⁶
5. BVMN has documented reports of the utilisation of surveillance technologies in the apprehension and subsequent pushback of asylum seekers and migrants at the Greek-Turkish border, Croatian-Bosnian border, Serbian-Hungarian border, and Bulgarian-Turkish border. The technologies identified in testimonies collected by BVMN include drones, cameras, thermal imaging sensors, night-vision goggles, specialised sensors for detecting mobile phone emissions, tracking devices and aerial surveillance towers. ⁷
6. Since 2017, BVMN has recorded 33 testimonies recording the use of drones to locate and apprehend migrants and asylum seekers during pushback operations affecting an estimated 1,004 persons. ⁸ Although the data collected by drones may not always directly contribute to pushbacks, they often make a significant contribution to the commission of enforced disappearances by states. ⁹ For instance, data collected by EU surveillance drones at sea is sometimes not shared with Search and Rescue (SAR) teams closest to the migrants in distress, thus hindering rescue operations and potentially endangering life. ¹⁰

IV. EU legislation on artificial intelligence and new technologies

7. The EU's Artificial Intelligence Act (AIA) is a pioneering proposal for a regulatory framework on AI that is currently being negotiated in the European Parliament. The AIA seeks to establish a legal framework for the development and use of new technologies within EU Member States in a way that ensures full compliance with international and EU human rights legislation. ¹¹
8. BVMN asserts that the current formulation of the AIA fails to establish minimum standards and meaningful safeguards against detrimental uses of new technologies. The risk-based approach of the draft legislation has additionally been critiqued by members of the AI-

⁶ BVMN. 2022. 'Submission to EU Commission Feedback Mechanism on Data Protection.' Available at: <https://www.borderviolence.eu/submission-to-eu-commission-feedback-mechanism-on-data-protection/> [Accessed 19/01/2023]

⁷ See Annex for a list of testimonies collected by BVMN and its partners documenting the use of new technologies during pushback operations at external EU borders.

⁸ See Annex.

⁹ UN. 2001. 'Draft articles on Responsibility of States for Internationally Wrongful Acts.' 2001. Available at: https://legal.un.org/ilc/texts/instruments/english/commentaries/9_6_2001.pdf [Accessed 19/01/2023]

¹⁰ Nielsen, N. 2020.. 'NGO rescue boats do not receive Frontex alerts.' Available at: <https://euobserver.com/migration/147331> [Accessed 19/01/2023]; Creta, S., Deeb, B., van Dijken, K., Freundenthal, E., Lüdke, S., and Popp, M. 2021. 'Back Channel Cooperation: How Frontex Helps Haul Migrants Back To Libyan Torture Camps.'. Available at: <https://www.spiegel.de/international/europe/libya-how-frontex-helps-haul-migrants-back-to-libyan-torture-camps-a-d62c3960-ece2-499b-8a3f-1ede2eaefb83>[Accessed 19/01/2023]

¹¹ European Commission. 2021. 'Proposal for a Regulation of the European Parliament and of the Council - Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts.' Available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52021PC0206> [Accessed 19/01/2023]



Migration coalition, led by European Digital Rights (EDRi), Access Now, Platform for International Cooperation on Undocumented Migrants (PICUM) and Refugee Law Lab.¹²

9. BVMN is concerned that risk-based assessments risk exploiting the vulnerabilities of individuals based on biased and discriminatory datasets fed into machine-learning systems. This can result in biometric miscategorisation of specific subgroups based on their race, ethnicity, religion, or other characteristics, potentially leading to profiling which violates principles of non-discrimination defined in Article 2 of the Universal Declaration of Human Rights¹³ and Articles 1, 2 and 5 of the International Convention on the Elimination of All Forms of Racial Discrimination.¹⁴ In the field of migration management these systems may lead to catastrophic impacts.

V. Examples of the misuse of technologies in relation to the work of human rights defenders (HRDs)

A. Illegal surveillance of HRDs and CSOs by EU Member States

10. BVMN is deeply concerned by reports from its partner organisations, civil society groups,¹⁵ and the media, regarding the use of illegal surveillance spyware against civil society organisations (CSOs) and human rights defenders (HRDs). This includes instances of the illegal spyware Pegasus and Predator employed by European governments to monitor the communications and activities of HRDs involved in documenting enforced disappearances due to state violence against migrants at EU external borders.
11. BVMN echoes concerns raised by EU and UN bodies regarding the growing use of mercenary spyware by Member States, which violates privacy rights, silences civil society opposition, and undermines press freedom. Following multiple surveillance scandals involving states including Hungary, Poland and Greece monitoring journalists, activists and lawyers through spyware, MEPs have called for tougher EU legislation¹⁶ and established a European Parliamentary Committee, PEGA,¹⁷ specifically mandated to investigate the use of illegal spyware by Member States.¹⁸ The issue of cyber surveillance and online harassment of HRDs defending migrants'

¹² Access Now. 2022. 'Joint Statement: The EU AI Act must protect people on the move.' Available at: <https://www.accessnow.org/joint-statement-ai-act-people-on-the-move/> [Accessed 19/01/2023].

¹³ UN. 1948. 'Universal Declaration of Human Rights.' Available at: <https://www.un.org/en/about-us/universal-declaration-of-human-rights> [Accessed 19/01/2023].

¹⁴ UN. 1965. 'International Convention on the Elimination of All Forms of Racial Discrimination.' Available at: <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-convention-elimination-all-forms-racial> [Accessed 19/01/2023].

¹⁵ Access Now. 2021. 'Strengthening Civil Society's Defences.' Available at: <https://www.accessnow.org/cms/assets/uploads/2021/06/Hotline-10000-cases-report.pdf> [Accessed 30/01/2023]

¹⁶ European Parliament. 2022. 'Europe's PegasusGate: Countering spyware abuse.' Available at: [https://www.europarl.europa.eu/RegData/etudes/STUD/2022/729397/EPRS_STU\(2022\)729397_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2022/729397/EPRS_STU(2022)729397_EN.pdf) [Accessed 30/01/2023]

¹⁷ European Parliament. 2020. 'About PEGA.' Available at: <https://www.europarl.europa.eu/committees/en/pega/about> [Accessed 30/01/2023]

¹⁸ Socialists and Democrats (EU). 2022. 'S&Ds call for EU rules on the development, sale and use of spyware technologies in order to protect citizens.' Available at: <https://www.socialistsanddemocrats.eu/newsroom/sds-call-eu-rules-development-sale-and-use-spyware-technologies-order-protect-citizens> [Accessed 30/01/2023]



rights was additionally highlighted by the UN Special Rapporteur on Human Rights Defenders ahead of her visit to Greece in June 2022.¹⁹

12. BVMN has observed increasing instances of HRDs and members of CSOs being depicted as ‘smugglers’ of migrants in the media and by politicians in countries such as Greece. We assert that this portrayal serves as a pretext for the use of surveillance technologies against HRDs. BVMN has also observed a concerning rise in self-censoring among its network of NGO partners across Europe, in reaction to public defamation and smear campaigns, including in the relation to speaking out or delivering evidence to UN treaty bodies or special procedures against State parties.
13. In 2020, BVMN received reports of cyber surveillance by Greek authorities from two of its member organisations at the time. The surveillance occurred in the context of a large-scale smear campaign in the Greek media, following the leaking of details by the Greek State regarding a case in which some of the NGOs’ members were accused of criminal activities, including espionage, violation of state secrets and the facilitation of illegal entry of people into Greece.²⁰ BVMN strongly condemns the use of cyber surveillance as a tool to silence CSOs and distract from scrutiny of states’ involvement in enforced disappearances through pushback operations.

B. Use of illegal spyware Pegasus and equivalent technologies by EU Member States

14. BVMN is particularly concerned at the dangers of illegal spyware software used by EU Member States to monitor HRDs and CSOs,²¹ particularly when it is used by states perpetuating enforced disappearances of asylum seekers and migrants through pushbacks and arbitrary detention. The software Pegasus, which is currently being used by at least 12 EU Member States,²² is a highly invasive tool used to infiltrate an individual’s mobile device (without their knowledge or any actions on their part)²³ or through a malicious app or website link, and leaves very few traces on the device.²⁴ Once installed, it allows the invader to conduct real-time

¹⁹ UN Special Rapporteur on Human Rights Defenders. 2021. ‘Hearing with migrants rights defenders in Greece.’ Available at: <https://srdefenders.org/information/hearing-with-migrants-rights-defenders-in-greece/> [Accessed 30/01/2023]; OHCHR. 2022. ‘UN human rights expert to visit Greece to assess situation of human rights defenders.’ Available at: <https://www.ohchr.org/en/media-advisories/2022/06/un-human-rights-expert-visit-greece-assess-situation-human-rights> [Accessed 30/01/2023]

²⁰ Ekathimerini. 2020. ‘Thirty-three NGO members face charges of illegally smuggling migrants into Greece.’ Available at: <https://www.ekathimerini.com/news/257462/thirty-three-ngo-members-face-charges-of-illegally-smuggling-migrants-into-greece/> [Accessed 30/01/2023]

²¹ Reports of use of illegal spyware in Greece were heard by the PEGA committee in September 2022: https://multimedia.europarl.europa.eu/en/webstreaming/committee-of-inquiry-to-investigate-use-of-pegasus-and-equivalent-surveillance-spyware_20220908-0900-COMMITTEE-PEGA

²² NDTV. 2022. ‘Pegasus Spyware Maker NSO Group Has Contracts In 12 EU Countries: Report.’ Available at: <https://www.ndtv.com/world-news/pegasus-spyware-maker-nso-group-has-contracts-in-12-eu-countries-report-3244072#:~:text=The%20EU%20legislators%20were%20tasked.interception%20of%20mobile%20calls%2C%20as> [Accessed 30/01/2023]

²³ Socialists and Democrats. ND. ‘Committee of inquiry to investigate the use of the Pegasus and equivalent surveillance spyware.’ Available at: <https://www.socialistsanddemocrats.eu/committees/committee-inquiry-investigate-use-pegasus-and-equivalent-surveillance-spyware> [Accessed 30/01/2023]

²⁴ Euro News. 2022. ‘EU democracy is under attack by mercenary spyware, claims new report.’ Available at: <https://www.euronews.com/my-europe/2022/11/08/eu-democracy-is-under-attack-by-mercenary-spyware->



surveillance, find passwords and sensitive files, track locations and plant fabricated evidence. The software Predator, which has been used by the Greek State, is a slightly less sophisticated version of Pegasus with similar capabilities.

15. BVMN notes that the monitoring of communications of individuals without their knowledge is illegal, and constitutes severe breaches in privacy as well as a clear interference with the freedom of press and expression, which is protected under Article 10 of the ECHR.²⁵

VI. Technology as a tool to document enforced disappearances and facilitate SAR operations

16. BVMN asserts that new technologies currently used in the context of border control by EU States could be utilised in aid of documenting pushback incidents and evidencing crimes of enforced disappearance by states, as well as in facilitating the search for forcibly disappeared persons, including in the context of SAR efforts.

The following types of new technology may be used to prove the crime of enforced disappearances through pushback operations:

A. Surveillance technologies used by EUROSUR

17. The European Border Surveillance System (EUROSUR) encompasses a wide range of border management practices, including the surveillance of land, air and maritime borders through the employment of advanced technologies such as maritime domain awareness, surveillance towers, and small autonomous unmanned aerial systems.²⁶ The information collected by EUROSUR's surveillance systems covers extensive areas of often inaccessible border regions and may assist in the identification of individuals in distress and facilitate SAR operations. According to BVMN, instances of enforced disappearances in the form of pushbacks typically occur in areas with high concentrations of smart surveillance systems. Consequently, it is likely that these surveillance technologies, designed to secure borders, are capturing evidence of enforced disappearances of asylum seekers and migrants.

B. Real-time use of information and communication technology (ICT) by migrants and CSOs

18. The use of social media and video footage to document pushbacks and detention conditions may be used to hold states accountable for enforced disappearances of migrants. Asylum seekers and migrants at risk of being pushed back have utilised the social media hashtag #stoppushbacks to share video footage of their location and live geo-coordinates to evidence

[claims-new-report](#) [Accessed 30/01/2023]

²⁵ ECHR. 'Guide on Article 10 of the European Convention of Human Rights.' Available at: https://www.echr.coe.int/documents/guide_art_10_eng.pdf [Accessed 30/01/2023]

²⁶ European Parliament. 2021. 'Artificial Intelligence at European Borders. Overview of application and key issues.' Available at:

[https://www.europarl.europa.eu/RegData/etudes/IDAN/2021/690706/EPRS_IDA\(2021\)690706_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/IDAN/2021/690706/EPRS_IDA(2021)690706_EN.pdf) [Accessed 19/01/2023]; European Commission. 'European Border Surveillance System.' Available at: https://home-affairs.ec.europa.eu/networks/european-migration-network-emn/emn-asylum-and-migration-glossary/glossary/european-border-surveillance-system-eurosur_en [Accessed 19/01/2023]



their presence in the territory of a state and intention to apply for asylum.²⁷ This data collected can be used to ascertain the facts of their case if they are subjected to pushbacks.

19. Asylum seekers and migrants have also made use of mobile technologies to alert legal bodies and CSOs of their imminent risk of being a victim of enforced disappearance. This allowed groups to apply for interim measures at the European Court of Human Rights (ECtHR) under Rule 39, resulting in the Court communicating with states and mandating them to perform SAR operations for stranded groups. This is increasingly the case for groups trapped on small islets in the Evros river at the Turkish-Greek land border.²⁸
20. BVMN collects supporting evidence from victims of enforced disappearances in the testimony collection framework. This evidence takes the form of photographs, videos and geolocation data. Once verified, this visual data provides accompanying evidence of the incident. Other technologies, like satellite imagery and digital mapping, provide information to draw a comprehensive picture and verify evidence of specific incidents of enforced disappearance.
21. BVMN has recently utilised these techniques for a visual investigation of two enforced disappearances from North Macedonia to Greece. By examining videos taken by the victims while in detention, in conjunction with satellite imagery, the precise location was identified. Furthermore, the video footage enabled the verification of the time of the pushback by using the sun position combined with satellite imagery.²⁹
22. However, BVMN and its partner organisations have documented the destruction and confiscation of mobile phones in 585 reports which indicate perpetrating states intention to destroy this potential method of self-documentation and provision of evidence.

C. Body cameras

23. BVMN believes body cameras could be utilised as a means to gather additional evidence of enforced disappearances and associated violations to reinforce witness testimonies. For instance, testimonies collected by BVMN typically include reference to persons resembling police or military officers who subject asylum seekers and migrants to violence during pushbacks. In light of recent debates surrounding increased police violence, including the murder of George Floyd in the United States, several studies have been conducted to examine the impact of video and audio technology, such as CCTV and body cameras, on police behaviour. A report by Sander Flight in 2019 found a decrease in complaints and use of force by police when body cameras were enforced, as well as a positive effect of the use of recordings as evidence.³⁰

²⁷ Azade Lice.Tweet. <https://twitter.com/AzadeLice/status/1617406743025446912>
See also: https://twitter.com/search?q=%23stoppushbacks&src=recent_search_click

²⁸ BVMN. 2022. 'Islets, Interim Measures and Illegal Pushbacks.' Available at: <https://www.borderviolence.eu/20548-2/> [Accessed 19/01/2023]

²⁹ BVMN. 2022. 'Pushback from North Macedonia: Visual Analysis.' Available at: <https://www.borderviolence.eu/pushback-from-north-macedonia-visual-analysis/> [Accessed 19/01/2023]

³⁰ Flight, Sander. 2019. 'Opening Up the Black Box: Understanding the Impact of Bodycams on Policing.' Available at: <https://bulletin.cepol.europa.eu/index.php/bulletin/article/view/32> [Accessed 19/01/2023]



The following types of new technology may be used to facilitate the search for forcibly disappeared persons:

D. Drones

24. BVMN asserts that drones which are currently used to facilitate enforced disappearances through pushbacks may be used to save lives in the context of SAR operations.
25. BVMN notes several positive examples of the use of drones to save lives at sea. For instance, in 2014, operations of the independent SAR organisation Migrant Aid Off Shore (MOAS) used drones to assist their efforts to cover vast areas of ocean and conduct nighttime SAR operations.³¹ Further, the non-profit organisation SearchWing is developing and building drones for organisations conducting SAR operations. In 2021, SearchWing did test flights on SeaWatch 4, one of the vessels of SeaWatch e.V.³²
26. For the use of drones at sea borders, parallels can be drawn with the UN Convention on the Law of the Sea (UNCLOS), which calls for the requirement of a procedural duty of assistance on operators of drones. The Convention obliges the operator of drones collecting data on boats in distress to share this information with any actor who is best placed to offer assistance (UNCLOS, Art. 98).³³ This is particularly important given reports that NGO rescue boats do not receive data on boats in distress from Frontex.³⁴
27. BVMN asserts that the creation of special permission for CSOs would complement the above, alongside state agencies or private contractors, to use drones in maritime surveillance and land border areas. This would not only ensure effective deployment of SAR operations, which preserve life, but also act as a check and balance on the actions of EU Member States, making it more difficult for data to be shared to facilitate pushbacks.

³¹ MOAS. 2015. 'Humanitarian Drones: Bots without Borders.' Available at:

<https://www.moas.eu/humanitarian-drones-bots-without-borders/> [Accessed 19/01/2023].

³² Search Wing. 2021. 'Test mission on Sea-Watch 4.' Available at: <https://www.hs-augsburg.de/searchwing/seawatch-tests-2021-en/> [Accessed 19/01/2023]

; Sea Watch. ND. 'SearchWing.org - A model aircraft to safe [sic] lives.' Available at: <https://seawatch.org/en/searchwing-org-a-model-aircraft-to-safe-lives/> [Accessed 19/01/2023]

³³ UN. 1982. 'United Nations Convention on the Law of the Sea.' Available at: https://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf [Accessed 19/01/2023]

³⁴ Nielsen, N. 2020. 'NGO rescue boats do not receive Frontex alerts.' Available at:

<https://euobserver.com/migration/147331> Nielsen, N. (2020.20, February, 2). 'NGO rescue boats do not receive Frontex alerts.' Euobserver. <https://euobserver.com/migration/147331>; Creta, S.,; Deeb, B.,; van Dijken, K.,; Freundenthal, E.,; Lüdke, S.,; and Popp, M. (2021., April 29). 'Back Channel Cooperation: How Frontex

Helps Haul Migrants Back To Libyan Torture Camps.' ps. Available at: Der Spiegel. <https://www.spiegel.de/international/europe/libya-how-frontex-helps-haul-migrants-back-to-libyan-torture-camps-a-d62c3960-ece2-499b-8a3f-1ede2eaefb83> [Accessed 19/01/2023]

; Creta, S., Deeb, B., van Dijken, K., Freundenthal, E., Lüdke, S., and Popp, M. 2021. 'Back Channel Cooperation: How Frontex Helps Haul Migrants Back To Libyan Torture Camps.' Available at:

<https://www.spiegel.de/international/europe/libya-how-frontex-helps-haul-migrants-back-to-libyan-torture-camps-a-d62c3960-ece2-499b-8a3f-1ede2eaefb83> [Accessed 19/01/2023]



E. Artificial intelligence (AI) and digital advertising technology

28. AI technologies have been positively employed in the search for missing persons, and missing children in particular. The International Centre for Missing and Exploited Children (ICMEC) exemplifies this. They launched a global platform in 2018 which combined AI and digital advertising technologies to help locate missing children vulnerable to exploitation, sexual abuse and trafficking.

VII. Concluding remarks and recommendations

29. Enforced disappearances are a serious human rights violation that has devastating impacts on migrant individuals and families. New technologies have the potential to be used to prevent and investigate enforced disappearances, but they also raise important human rights concerns.

30. BVMN calls on the Working Group on Enforced or Involuntary Disappearances to highlight the following issues in its thematic study on the use of new technologies:

- a. The risks associated with automated profiling and risk assessment systems in the field of migration, predictive analytic systems used to interdict, curtail and prevent migration, and emotion recognition and biometric categorisation systems.
- b. The need for coherent safeguard mechanisms that ensure respect for fundamental rights in the use of drones, particularly when deployed for border surveillance purposes, applicable not only to governmental actors but also private companies.
- c. The dangers of States employing illegal surveillance spyware to monitor the activities and communications of HRDs and CSOs engaged in vital documentation work relating to enforced disappearances, pushbacks and arbitrary detention of migrants at external EU borders.

31. In addition BVMN suggests that the Working Group issues the following recommendations for follow-up action to the Office for the High Commissioner for Human Rights (OHCHR):

- a. A further inquiry into how new technologies are being utilised to facilitate fundamental rights violations in border regions.
- b. The development of clear guidelines by the OHCHR on the usage of new technologies, based on best practices of documentation and with extensive consultation of CSOs and asylum seekers and migrants self-documenting enforced disappearances.



VIII. Annex

Testimonies collected by BVMN reporting the use of technologies during pushback operations at external EU borders:

Location	Date	Tech mentioned	Source
Serbia	October 1, 2022	drone	https://www.borderviolence.eu/violence-reports/october-1-2022-0130-horgos-serbia/
Croatia	July 30, 2022	camera, binoculars	https://www.borderviolence.eu/violence-reports/july-30-2022-0500-near-velika-kladusa/
Greece-Turkey border	June 11, 2022	drone	https://www.borderviolence.eu/violence-reports/june-11-2022-0500-palli-greece-to-uyuklutatarturkey/
Croatia	May 6, 2022	“cameras and sensors”	https://www.borderviolence.eu/violence-reports/may-6-2022-1900-somewhere-close-to-e65-road-in-close-proximity-with-the-slovenian-border/
Greece	May 2, 2022	drone	https://www.borderviolence.eu/violence-reports/may-2-2022-0000-orestiada/
Croatia	April 27, 2022	camera (+photo)	https://www.borderviolence.eu/violence-reports/april-27-2022-0800-close-to-gradina-velika-kladusa/
Greece	April 26, 2022	drone	https://www.borderviolence.eu/violence-reports/april-26-2022-0000-mikrochori-gr-



			to-kiremitcisolih-tr/
Turkey	April 9, 2022	drone	https://www.borderviolence.eu/violence-reports/april-9-2022-0000-valcha-polynahamzabeyli/
Greece	March 22, 2022	drone	https://www.borderviolence.eu/violence-reports/march-22-2022-0000-nea-vyssagr-to-bosna-tr/
Bulgaria	March 10, 2022	drone	https://www.borderviolence.eu/violence-reports/march-10-2022-0300-from-malko-tarnovo-bg-to-sukrupasa-tr/
Croatia	March 9, 2022	drone	https://www.borderviolence.eu/violence-reports/march-9-2022-1100-croatia-close-to-cuic-brdo/
Croatia	February 13, 2022	drone	https://www.borderviolence.eu/violence-reports/february-13-2022-0300-bosnian-croatian-one-hour-van-drive-from-staroselo-near-m201/
Croatia	February 9, 2022	handheld “infrared camera”	https://www.borderviolence.eu/violence-reports/february-9-2022-0900-durinpotok-croatia/
Croatia	September 7, 2021	camera in woods	https://www.borderviolence.eu/violence-reports/september-7-2021-1000-at-the-unction-between-e71-



			and-23-road-closed-to-a-small-pond/
Croatia	September 28, 2020	surveillance van, cameras, other equipment	https://www.borderviolence.eu/violence-reports/september-29-2020-0000-north-of-buzim-bih/
Croatia	November 12, 2019	camera in woods	https://www.borderviolence.eu/violence-reports/november-12-2019-1800-vojnovic-brdo-croatia/
Croatia	July 24, 2019	“officer holding camera emitting red light”	https://www.borderviolence.eu/violence-reports/july-24-2019-2200-near-velika-gata-bosnia-herzegovina/
Croatia	March 8, 2019	drone, camera	https://www.borderviolence.eu/violence-reports/march-8-2019-0900-near-komesarac-croatia/
North Macedonia	June 27, 2022	personal data collected	https://www.borderviolence.eu/violence-reports/april-24-2022-0000-gevgelija-north-macedonia/
North Macedonia	June 26, 2022	personal data collected	https://www.borderviolence.eu/violence-reports/june-26-2022-0000-gevgelija/
North Macedonia	April 24, 2022	personal data collected	https://www.borderviolence.eu/violence-reports/april-24-2022-0000-gevgelija-north-macedonia/
North Macedonia	April 23, 2022	personal data collected	https://www.borderviolence.eu/violence-reports/april-23-2022-0000-gevgelija-north-macedonia-2/



North Macedonia	April 23, 2022	personal data collected	https://www.borderviolence.eu/violence-reports/april-23-2022-0000-gevgelija-north-macedonia/
North Macedonia	April 19, 2022	personal data collected	https://www.borderviolence.eu/violence-reports/april-19-2022-0000-gevgelija-north-macedonia/
North Macedonia	January 25, 2022	personal data taken	https://www.borderviolence.eu/violence-reports/january-25-2022-0000-gevgelija-north-macedonia/
Croatia	November 3, 2022	drones	https://www.borderviolence.eu/violence-reports/november-3-2022-0300-near-sturlic-bosnia/
Croatia	November 27, 2022	drones	https://www.borderviolence.eu/violence-reports/november-27-2022-0500-near-sturlic-bosnia-and-herzegovina-croatia/
Croatia	October 26, 2022	drones	https://www.borderviolence.eu/violence-reports/october-26-2022-0200-horgos-serbia/
Serbia/Hungarian border	October 1, 2022	drones	https://www.borderviolence.eu/violence-reports/october-1-2022-0130-horgos-serbia/
Greece (Evros)	September 16, 2022	drone	https://www.borderviolence.eu/violence-reports/pushback-from-greece-to-turkey/



Greece (Evros)	June 11, 2022	drone	https://www.borderviolence.eu/violence-reports/june-11-2022-0500-palli-greece-to-uyuklutatarturkey/
Greece (Evros)	May 2, 2022	drone	https://www.borderviolence.eu/violence-reports/may-2-2022-0000-orestiada/
Greece (Evros)	April 26, 2022	drone	https://www.borderviolence.eu/violence-reports/april-26-2022-0000-mikrochori-gr-to-kiremitcisalih-tr/
Bulgaria	April 9, 2022	drone	https://www.borderviolence.eu/violence-reports/april-9-2022-0000-valcha-polynahamzabeyli/
Greece (Evros)	March 22, 2022	drone	https://www.borderviolence.eu/violence-reports/march-22-2022-0000-nea-vyssagr-to-bosna-tr/
Bulgaria	March 10, 2022	drone	https://www.borderviolence.eu/violence-reports/march-10-2022-0300-from-malko-tarnovo-bg-to-sukrupasa-tr/
Croatia	March 9, 2022	drone	https://www.borderviolence.eu/violence-reports/march-9-2022-1100-croatia-close-to-cuic-brdo/
Croatia	February 13, 2022	drone	https://www.borderviolence.eu/violence-reports/february-13-2022-0300-bosnian-croatian-one-hour-van-drive-from-staroselo-near-m201/



Greece (Evros)	October 6, 2022	drone	https://www.borderviolence.eu/violence-reports/october-6-2021-0900-mandra-greece-to-alibey-turkey/
Croatia	September 4, 2021	drone	https://www.borderviolence.eu/violence-reports/september-4-2021-0600-gornja-mocila-rakovica-croatia/
Serbian/hungarian border	August 30, 2021	drone	https://www.borderviolence.eu/violence-reports/august-30-2021-0800-near-road-55-hungary/
Serbian/hungarian border	July 10, 2021	drone	https://www.borderviolence.eu/violence-reports/july-10-2021-0200-roszke-horgos-border-crossing/
Serbian/hungarian border	June 14, 2021	drone	https://www.borderviolence.eu/violence-reports/june-14-2021-1300-horgos-border-crossing/
serbian/hungarian border	April 18, 2021	drone	https://www.borderviolence.eu/violence-reports/april-18-2021-1430-roszke-horgos-border-crossing/
Croatia	March 9, 2021	drone/helicopter (?)	https://www.borderviolence.eu/violence-reports/march-9-2021-0000-road-e71-in-croatia/
Romania	March 4, 2021	drone	https://www.borderviolence.eu/violence-reports/march-4-2021-0008-near-comlosu-mare-romania/



Serbian/hungarian border	February 27, 2021	drone	https://www.borderviolence.eu/violence-reports/february-27-2021-0005-near-kelebija-serbia/
Greece (evros)	August 27, 2020	drone	https://www.borderviolence.eu/violence-reports/august-27-2020-0900-thessaloniki-greece/

