

Disinformation during Covid-19 from a European Perspective

Disinformation campaigns deliberately spread seeds of distrust, confusion, and deception. As a hybrid threat, disinformation is meticulously designed to enhance social division and undermine faith in political institutions. Since the outbreak of the Covid-19 pandemic, an unprecedented surge of disinformation was detected by European institutions, which was recently labelled an “infodemic” by the World Health Organisation¹ and led to the first-time use of the EU’s Rapid Alert System for monitoring disinformation.² The global virus outbreak revealed an invisible layer beyond the physical health crisis, which lies in its growing potential to virtually affect people’s lives through transmitting false information. In this regard, the European Union and its Member States have increased their efforts to detect, categorise, and mitigate harmful disinformation linked to Covid-19, in order to safeguard the stability of their democratic foundations and protect their citizens.

An introduction to disinformation

Disinformation is characterised as the intentional creation and dissemination of verifiably false or misleading content, causing confusion and distrust.³ It leads to distorting public opinion and perception, aims to amplify social tension and division, and undermines trust in institutions and governments.⁴ The harmful motive of the provoker and its disguised presentation are central parameters of disinformation – in opposition to satire, news or ads labelled partisan, and errors in reporting, which are not included in the definition. Systematic disinformation campaigns by state or non-state actors (aggressors) can therefore be identified as a subversive means of hybrid threats, aimed at destabilising political and social systems by combining coordinated conventional and unconventional acts of hostility.⁵ To cover up their traces, these actors employ proxies and so-called web brigades and troll farms to orchestrate and disseminate disinformation on their behalf, making

the attribution and condemnation very difficult. When confronted with accusations, the aggressor tends to harshly deny responsibility and accountability, calling the allegations a hoax and propaganda. On the receiving end, the targeted society may be confronted with the harmful content directly originating from the proxies. In most cases though, celebrities, influencers and other users act as multipliers, by failing to critically assess contents and sources and carelessly sharing disinformation with their followers and networks.

To a large extent, disinformation is spread on social media platforms, which serve as fertile ground to plant seeds of deception and to unsettle the public. Since today’s technological means have enabled an extraordinary speed of producing and distributing (dis)information, social media sites became powerful echo chambers for disinformation and conspiracy theories. However, while modern technology behind online media enables the rapid propagation and concentration of deceptive information, disinformation is not a new phenomenon. In fact, deliberately deceiving opponents by creating lies, rumours, and misinformation is a common method throughout the history of warfare, even mentioned as a useful disruptive tactic in Sun Tzu’s “The Art of War”. Consequently, disinformation poses an intangible but omnipresent threat to political and social stability. It is endangering democratic values and human life, or as EU High Representative and Vice President Josep Borrell stated: “Spreading disinformation is playing with people’s lives. Disinformation can kill!”⁶

Covid-19 disinformation targeting the EU

Borrell’s statement gains in significance as cases of disinformation have rocketed since the outbreak of the Covid-19 pandemic. Although the European Union and its Member States have already been confronted with the harmful circulation of false information in the past, notably during

the Brexit referendum in 2016, the “Yellow Vest” Movement in France in 2018, and the European Parliament election in 2019, the amount and intensity of disinformation related to Covid-19 is unprecedented. The first disinformation incidents related to Covid-19 were detected in January 2020, claiming that the new virus emerged from a NATO bio laboratory.⁷ By mid-April, over 20% of all new cases reported in the last four months were linked to Covid-19.⁸ Additional investigation reveals that on average, every single analysed Covid-19 related disinformation article generated between 1,000 and 2,000 interactions through likes, comments, and shares – meaning that with a few hundred articles, hundreds of thousands if not millions of people can be directly reached and potentially deceived.⁹

The manipulative and false content published on social media ranges from reports that Covid-19 was created artificially and is being weaponised, dangerous claims about curing the virus with saline, alcohol or bleach, to various narratives that the EU is failing due to inadequate responses and lacking solidarity. The evolution of Covid-19 related disinformation in Europe seems to resemble the extent of the physical transmission of the virus. While at the beginning, the reported disinformation narratives focussed on conspiracies regarding the Covid-19 outbreak in Wuhan, the storyline shifted to a global level, spreading the notion of panic and fear, once first cases were confirmed internationally. When Europe got affected and quarantine measures were introduced, the disinformation discourse was transferred to match with local contexts and pre-existing emotionally loaded narratives.¹⁰ This reflects the fast pace, fluidity, and adaptability of disinformation.

The Covid-19 disinformation cases directly targeting the European Union, its Member States, and citizens follow certain narrative patterns,^{11,12} that can be summed up into five clusters.

1. The EU fails to cope with the Covid-19 crisis: This prominent cluster of misleading information claims that the EU is disintegrating and collapsing, as it fails to adequately respond to the pandemic. Fabricated reports include rumours of Member States planning on leaving the EU, the breakdown of the Schengen Zone, and the re-establishment of national borders. Such messages aim to create the impression that, due to its principles of democracy and freedom, the EU is ineffective and incapable.

2. The EU acts selfishly and lacks solidarity: While the first narrative emphasises on the inability of the EU to deal with the crisis, this branch of disinformation focusses on illustrating the Union's unwillingness to act. The content suggests that the EU is abandoning its Member States and allies, refraining from solidarity and responsibility. It further unjustly blames the EU for not delivering services that fall under the national competences of Member States. These claims echoed in the Member States and beyond, causing widespread distrust in the Western Balkans and the Eastern Partnership countries.

3. The Member States fail to cope with the Covid-19 crisis: Instead of accusing the EU and its institutions of failing to respond to the pandemic, this disinformation cluster targets the Member States and accuses them of responding insufficiently and incompetently. False claims range from chaos and hysteria, to government failure due to the economic impact of the crisis, and the massive lack of medical supplies and personnel. By forging narratives on the national level, disinformation campaigns aim to distort public opinion and cause the loss of faith in governmental institutions.

4. Russia and China show more solidarity towards Member States than the EU: Building on the first and second cluster, several deceiving cases present the image that the Russian and Chinese governments are better equipped and more willing to assist the EU Member States than the European Union or the respective national

governments. The content is proclaiming that authoritarian systems and their strategies are superior when tackling the Covid-19 pandemic, while Europe fails. By positively portraying and excessively praising the Russian and Chinese aid, the sources carefully craft the image of solidarity and responsibility for the international audience, while generating the notion of stability domestically.

5. Miscellaneous: In addition, there is a vast amount of various false narratives related to how the virus is spread or treated. These include disinformation about linkages between Covid-19 and 5G network testing, anti-vaccination contexts connected to natural remedies, and claims that the outbreak in Europe was caused by migrants. Such messages build on highly emotionalised and politicalised pre-existing discourses and aim to amplify social tensions within and across Member States.

Detecting these reoccurring patterns of narratives is a vital step towards mitigating the harmful impact disinformation has on the EU and its members. Their analysis provides valuable insight into the realm of hybrid threats and serves as a basis for awareness raising campaigns and meaningful countermeasures. However, the exposure and study of disinformation does not provide enough evidence for tracing the false reports back to their origins or linking them to their creators. Due to the deployment of proxies and the entangled fluctuation of social media, aggressors easily cover up their tracks, leaving hardly any traces behind. Although the exact original entity (state, non-state, group or individual) can thus scarcely be determined, the geographic location and the indented motive give insight about the creator's affiliation. While it is critical to stress that a significant number of Covid-19 disinformation targeting European stability was identified to arise from within Member States,¹³ investigations discovered that the majority originates from Russia and China.

Disinformation linked to Russian and Chinese sources

The methods of disinformation applied by Russian stakeholders are concentrated on spreading confusion, not on conveying one concrete pro-Kremlin message. By overflowing the European target audience with a multitude of conflicting and contradicting theories covered up in "sensational revelations" and "secrete leaks", general trust is being diminished to a point of indifference.¹⁴ Thus, aside from propagating harmful and deceiving messages, the general public is presented with the notion that impartiality and objectivity is impossible and no information is to be trusted in general. Gaslighting, a form of psychological manipulation aimed at blurring the victim's sense of judgement, trust and perception, ultimately delegitimising personal beliefs and values by constantly sowing seeds of insecurity and doubt, is an appropriate term to describe this method.

Russian troll farms and online brigades play a key role in disseminating and designing disinformation through social media. The Internet Research Agency (IRA), operating since 2013 from Saint Petersburg, is the most infamous institutionalised Russian organisation spreading disinformation. With a monthly budget estimated around one million Euros and between 80 and 100 employees ("trolls"), the institution sets up fake social media accounts to upload fabricated content online and fuel emotionalised and politicised discussions.^{15,16} Further research suggests that there is an overlap between IRA activities and the capabilities of the Russian military foreign-intelligence agency known as GRU.¹⁷ Certain parts of the GRU are assigned to directly engage in the execution of disinformation campaigns, while the Kremlin is ambitious to legitimise the deployment of military capacities by calling it engaging in an "information warfare".¹⁸ Such statements openly declare disinformation a militarised act of aggression.

While these proxies engage in online interaction through social media platforms, the Russian media enterprise "Rossiya

Segodnya" (Russia Today) spreads falsified information through their broadcasting services and news networks. The state-owned corporation consists of TV and radio stations, as well as print and online media broadcasting in 30 languages. Sputnik and RT are two of the most prominent news portals under the "Rossiya Segodnya" umbrella, which was created by Presidential decree aiming to report Russian state policies abroad.¹⁹ Against this background, the conclusion arises that the reported news prioritise the Russian political agenda over the ambition to report unbiased and factual information.

The European Union's initiative *EUvsDisinfo* has identified the first Covid-19 related cases of disinformation linked to Russian sources end of January 2020 – until mid-April, over 300 cases were recorded. In general, the forged messages can be divided into narratives created for the domestic Russian audience, defining the virus as a form of foreign (Western) aggression, and stories targeting international audiences.²⁰ The latter aim to discredit scientific experts and undermine trust in the European authorities and national institutions. The created and disseminated false narratives include, amongst others, reports that the virus was spread to Lithuania by a US military officer;²¹ a Sputnik story implying that Covid-19 might help Greta Thunberg to endorse her environmental agenda,²² claims linking Covid-19 to homosexuality,²³ or news suggesting that migrants are responsible for the outbreak and spread of the virus within the EU.²⁴ The common trend that emerges from these fabricated narratives shows that the intended social polarisation is being induced by building upon pre-existing discourses. Associating Covid-19 with predefined emotionalised and politicised contexts such as refugees, gay marriage or debates concerning environmental activism, amplifies already existing tensions.

With regards to Chinese disinformation tactics, Beijing's information operations traditionally target the domestic population, focussing on maintaining one single constant narrative that sheds a positive light on the Communist Par-

ty.²⁵ However, China's activities over the last years indicate a shift in its strategy. Chinese diplomats and officials increasingly interact on social media platforms that are banned in China, such as Twitter, Facebook or YouTube, aiming to communicate to a foreign international audience – more often in an undiplomatic manner.²⁶ The surge of orchestrated online engagement and the rise of confrontational behaviour demonstrate China's aggressive approach to shape and promote its image internationally. Instrumentalising official diplomatic social media profiles is an effective means to achieve this end. With regards to Covid-19, Chinese official sources overemphasise on the displays of gratitude by European leaders, whilst endorsing unconfirmed and false theories about the virus.²⁷ Chinese embassies and verified governmental Twitter accounts, as well as large Chinese media outlets, have repeatedly claimed that the virus originates from a US military lab or that it first appeared in Italy before being transmitted to Wuhan. This new tactic of constructing several conflicting theories, amplifying conspiracies, and coordinating narratives that are spread via state-backed accounts, shows resemblance to Russian disinformation strategies.²⁸

Another increasingly concerning method of spreading pro-Chinese contents and disinformation is hacking. Investigations have detected over 10,000 Twitter accounts from around the world that have been hacked and transformed into fake "zombie" profiles, involved in distributing Chinese propaganda and disinformation.²⁹ These accounts are being used to spread forged information also regarding Covid-19. Since it is unclear which authority or institution is behind operating the hacked accounts, sound attributions and accusations become practically impossible. Furthermore, influential Twitter users have been offered money for favourable Chinese posts, thus functioning as disguised multipliers of disinformation. It is not unusual that professional private companies are being hired by government institutions to widen the Chinese outreach and disseminate pro-Chinese narratives online.³⁰

The disinformation investigations and analyses by the European External Action Service (EEAS) concluded that China is running a global disinformation campaign through overt and covert tactics to deflect blame for the outbreak, as stated in an internal paper and the special report on disinformation narratives related to Covid-19.^{31,32} However, when confronted with these accusations, China responded harshly. After the disinformation reports were publicised, Beijing warned the EU at least three times that bilateral relations would be harmed if the EU accuses China of distributing false information, threatening that it would be pushed back just as the US had been for criticising China.³³ This reaction illustrates the Chinese intolerance towards any type of outspoken critique and the continuous efforts of deflecting any type of information that contradicts the official Chinese narrative.

European countermeasures

Already prior to the surge of false reports related to Covid-19, the European Union has understood that efficient and strategic countermeasures against disinformation are a long-term necessity. Since 2015, several mechanisms to detect, prevent, and mitigate disinformation have been developed and implemented by the European institutions. Under the current circumstances, these instruments are now being put to the test, unveiling their strengths and weaknesses in the face of the crisis. This opens up new ways of evaluating and adapting the effectiveness of preventative measures to further improve European information security.

The first European milestone in the development of countermeasures was the formation of the EU East StratCom Task Force in 2015. Administrated by the EEAS, the Task Force focusses proactively on communicating EU policies and activities to the Eastern Partnership countries. *EUvsDisinfo* represents the Task Force's flagship project, designed to detect, forecast, and expose disinformation, particularly with pro-Kremlin ties, and to raise public awareness. Compared to the previous year, the amount of disinformation discovered in

2019 has doubled.³⁴ Alongside the EU Code of Practice on Disinformation, which was implemented in late 2018, the EU launched an independent network of fact-checkers as well as measures aiming to enhance online media literacy. The Code of Practice consists of a voluntary framework to contain and reduce the spread of false information online by increasing transparency of political communications.³⁵ Platform providers such as Twitter, Google, and Facebook are amongst the signatories, who achieved improvements in ad placements and labeling, as well as in the integrity of their services in the months leading up to the European elections in May 2019. During the first quarter of 2019, these platforms have taken further action to remove (fake) accounts spreading disinformation: Google deleted 3.4 million YouTube channels, Twitter disabled almost 77 million accounts linked to spams, and Facebook banned 2.2 billion groups and profiles engaging in inauthentic behaviour.³⁶ These quick and efficient improvements showcase that the EU has political leverage over online media platforms to hold them accountable for the digital space they offer. Provider's excuses of the past, that no or hardly any measures against disinformation can be taken due to technical difficulties, are not valid any longer.

Thus, the European Union's measures to tackle disinformation have become more proficient and effective, resulting in significant achievements safeguarding its democratic processes during the EU elections in 2019 and a rapid response to tackling harmful disinformation linked to the Covid-19 pandemic. The EU has to continue to develop its preventative and proactive coordinated actions through forging EU-wide alliances against disinformation, further strengthening independent fact-checkers and media, and closely coordinating with social media platforms. The Union's implemented standards and regulations have the potential to be translated into globally accepted terms and conditions for providers and users of social media. The detection of disinformation will remain a critical cornerstone of European countermeasures, hence it is

crucial that the EU will endure to publicly and transparently report identified cases of disinformation despite foreign warnings or threats. This way, awareness will be raised amongst the European citizens and trust in the European institutions will be strengthened, giving less power to the malicious intentions behind the spread of disinformation.

Notes

- 1) World Health Organization, 2020: "Novel Coronavirus(2019-nCoV) Situation Report – 13", 02.02.2020, <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>
- 2) Euractiv, 2020: "EU Rapid Alert System used amid coronavirus disinformation campaign", 03.03.2020, <https://www.euractiv.com/section/digital/news/eu-alert-triggered-after-coronavirus-disinformation-campaign/>
- 3) European Commission, 2018: "Tackling online disinformation: a European Approach", COM(2018) 236, 26.04.2018, <https://ec.europa.eu/transparency/regdoc/rep/1/2018/EN/COM-2018-236-F1-EN-MAIN-PART-1.PDF>
- 4) European Commission, 2019: "Report on the implementation of the Action Plan Against Disinformation" JOIN(2019) 12, 14.06.2019, <https://euvsdisinfo.eu/eeas-special-report-update-short-assessment-of-narratives-and-disinformation-around-the-covid-19-pandemic/>
- 5) European Commission, 2016: "Joint Framework on countering hybrid threats", JOIN(2016) 18, 06.04.2016, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016JC0018&from=EN>
- 6) Josep Borrell, 2020: "Video conference of Foreign Affairs Ministers: Remarks by the High Representative Josep Borrell at the press conference", European External Action Service, 23.03.2020, https://eeas.europa.eu/headquarters/headquarters-homepage/76381/video-conference-foreign-affairs-ministers-remarks-high-representative-josep-borrell-press_en
- 7) EUvsDisinfo, 2020, "Disinfo: A new Chinese Coronavirus was likely elaborated in NATO biolabs", 22.01.2020, <https://euvsdisinfo.eu/report/a-new-chinese-coronavirus-was-likely-elaborated-in-nato-biolabs/>
- 8) EUvsDisinfo, 2020: "Figure of the Week: 8000", 07.04.2020, <https://euvsdisinfo.eu/figure-of-the-week-8000-2/>
- 9) EUvsDisinfo, 2020: "Throwing Coronavirus Disinfo at the wall to see what sticks", 04.02.2020, <https://euvsdisinfo.eu/throwing-coronavirus-disinfo-at-the-wall-to-see-what-sticks/>
- 10) EU Disinfo Lab, 2020: "Covid-19 Disinformation: Narratives, Trends, and Strategies in Europe", 02.04.2020, <https://www.disinfo.eu/publications/covid-19-disinformation-narratives-trends-and-strategies-in-europe>
- 11) EUvsDisinfo, 2020: "EEAS Special Report Update: Short Assessment of Narratives and Disinformation around the Covid-19 Pandemic", 01.04.2020,
- 12) EUvsDisinfo, 2020: "Throwing Coronavirus Disinfo at the wall to see what sticks/t the wall to see what sticks", 04.02.2020, <https://euvsdisinfo.eu/throwing-coronavirus-disinfo-at-the-wall-to-see-what-sticks/t-the-wall-to-see-what-sticks/>
- 13) EU Disinfo Lab, 2020: "Being cautious with Attribution: Foreign Interference & Covid-19 Disinformation", 10.04.2020, <https://www.disinfo.eu/publications/being-cautious-with-attribution-foreign-interference-covid-19-disinformation>

bution-foreign-interference-covid-19-disinformation

14) EUvsDisinfo, 2020: "The Kremlin and Disinformation about Coronavirus", 16.03.2020, <https://euvsdisinfo.eu/the-kremlin-and-disinformation-about-coronavirus/>

15) Carnegie Europe, 2020: "Russia's Long-Term Campaign of Disinformation in Europe", 19.03.2020, <https://carnegieeurope.eu/strategieurope/81322>

16) National Review, 2019: "Countering Foreign Disinformation on Social Media", 16.05.2019, <https://www.nationalreview.com/2019/05/countering-foreign-disinformation-social-media-russian-campaign/>

17) Diresta Renée and Grossman Shelby, 2019: "Potemkin Pages & Personas: Assessing GRU Online Operations, 2014-2019", Stanford Internet Observatory Cyber Policy Center, <https://fsi-live.s3.us-west-1.amazonaws.com/s3fs-public/potemkin-pages-personas-sio-wp.pdf>

18) EUvsDisinfo, 2019: "Information War' is a Term used by the Kremlin to justify Disinformation", 22.10.2019, <https://euvsdisinfo.eu/information-war-is-a-term-used-by-the-kremlin-to-justify-disinformation/>

19) EUvsDisinfo, 2020: "Sputnik: Coronavirus could be designed to kill elderly Italians", 25.03.2020, <https://euvsdisinfo.eu/sputnik-coronavirus-could-be-designed-to-kill-elderly-italians/>

20) EUvsDisinfo, 2020: "EEAS Special Report: Disinformation on the Coronavirus – Short Assessment of the Information Environment", 01.04.2020, <https://euvsdisinfo.eu/eeas-special-report-disinformation-on-the-coronavirus-short-assessment-of-the-information-environment/>

21) Lithuanian National Radio and Television (LRT English), 2020: "Coronavirus weaponised by Russian disinformation", 19.03.2020, <https://www.lrt.lt/en/news-in-english/19/1152947/coronavirus-weaponised-by-russian-disinformation-eu-document>

22) EUvsDisinfo, 2020: "Sputnik: Coronavirus could be designed to kill elderly Italians", 25.03.2020, <https://euvsdisinfo.eu/sputnik-coronavirus-could-be-designed-to-kill-elderly-italians/>

23) EUvsDisinfo, 2020: "Disinfo: One Cause of Coronavirus: Gay Marriage", 28.03.2020, <https://euvsdisinfo.eu/report/one-cause-of-coronavirus-gay-marriage/>

24) EUvsDisinfo, 2020: "EEAS Special Report: Disinformation on the Coronavirus – Short Assessment of the Information Environment", 01.04.2020, <https://euvsdisinfo.eu/eeas-special-report-disinformation-on-the-coronavirus-short-assessment-of-the-information-environment/>

25) Axios, 2020: "China takes a page from Russia's disinformation playbook", 25.03.2020, <https://www.axios.com/coronavirus-china-russia-disinformation-playbook-c49b6f3b-2a9a-47c1-9065-240121c9ceb2.html>

26) BBC, 2020: "China and Twitter: The year China got louder on social media", 29.12.2019, <https://www.bbc.com/news/world-asia-china-50832915>

27) EUvsDisinfo, 2020: "EEAS Special Report Update: Short Assessment of Narratives and Disinformation around the Covid-19 Pandemic", 01.04.2020, <https://euvsdisinfo.eu/eeas-special-report-update-short-assessment-of-narratives-and-disinformation-around-the-covid-19-pandemic/>

28) Axios, 2020: "China takes a page from Russia's disinformation playbook", 25.03.2020, <https://www.axios.com/coronavirus-china-russia-disinformation-playbook-c49b6f3b-2a9a-47c1-9065-240121c9ceb2.html>

29) ProPublica, 2020: "How China Built a Twitter Propaganda Machine Then Let It Loose on Coronavirus", 26.03.2020, <https://www.propublica.org/article/how-china-built-a-twitter-propaganda-machine-then-let-it-loose-on-coronavirus>

www.propublica.org/article/how-china-built-a-twitter-propaganda-machine-then-let-it-loose-on-coronavirus

30) PISM, 2020: "Disinformation from China and Russia during the COVID-19 Pandemic", 21.04.2020, https://pism.pl/publications/Disinformation_from_China_and_Russia_during_the_COVID19_Pandemic

31) POLITICO, 2020: "POLITICO Brussels Playbook: Disinfo warning — Money talks — Europe's new tracking apps", 21.04.2020, <https://www.politico.eu/newsletter/brussels-playbook/politico-brussels-playbook-disinfo-warning-money-talks-europes-new-tracking-apps/>

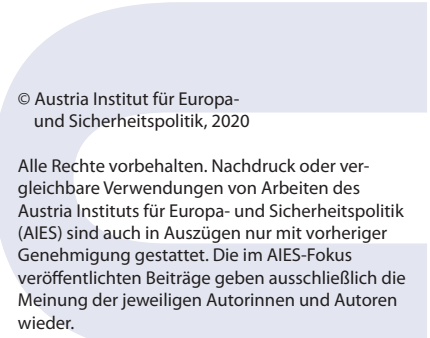
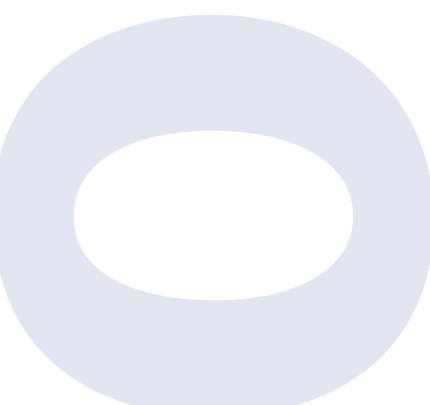
32) EUvsDisinfo, 2020: "EEAS Special Report: Short Assessment of Narratives and Disinformation around Covid-19/Coronavirus Pandemic (Update 2 – 22 April)", 24.04.2020, <https://euvsdisinfo.eu/eeas-special-report-update-2-22-april/>

33) Financial Times, 2020: "China warned EU 3 times over virus propaganda report", 26.04.2020, <https://www.ft.com/content/a2f66f6a-50cb-46fe-a160-3854e4702f1c>

34) European Commission, 2019: "Report on the implementation of the Action Plan Against Disinformation" JOIN(2019) 12, 14.06.2019, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019JC0012&from=EN>

35) European Commission, 2019: "Report on the implementation of the Action Plan Against Disinformation" JOIN(2019) 12, 14.06.2019, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019JC0012&from=EN>

36) European Commission, 2019: "Report on the implementation of the Action Plan Against Disinformation" JOIN(2019) 12, 14.06.2019, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019JC0012&from=EN>



© Austria Institut für Europa- und Sicherheitspolitik, 2020

Alle Rechte vorbehalten. Nachdruck oder vergleichbare Verwendungen von Arbeiten des Austria Instituts für Europa- und Sicherheitspolitik (AIES) sind auch in Auszügen nur mit vorheriger Genehmigung gestattet. Die im AIES-Fokus veröffentlichten Beiträge geben ausschließlich die Meinung der jeweiligen Autorinnen und Autoren wieder.

Dr. Langweg 3, 2410 Hainburg/Donau
Tel. +43 (1) 3583080
E-Mail: office@aies.at
Website: www.aies.at

Layout: Medienbüro Meyer