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RUSSIAN OCCUPATION IN UKRAINE

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The Donbas Dilemma: Examining Russia's Path to Full-Scale Intervention

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Abstract

This article delves into the complex evolution of the Russian–Ukrainian conflict, focusing on the dynamics of the political, economic and institutional situation in the Russian-occupied territories during the Donbas War (2014–2022) and their far-reaching implications for Russia and Ukraine. All attempts to reintegrate those territories with Ukraine through the Minsk Process failed. By 2022, the occupied Donbas territories were de-facto economically, politically, culturally, and institutionally integrated with Russia. As a result, Russia found itself trapped in a perplexing predicament. It could not de-jure integrate the Donbas territories without significant reputational and economic losses. Yet it was equally unable to relinquish them, even as it became clear that they would not help to establish Russian control over Ukraine. As a result, Russia found itself in a situation in which attacking seemed like a viable option to overcome a deadlock.

Introduction

The path leading to the current Russian war against Ukraine is still not clearly understood. Various explanations have been proposed for Russia's full-scale invasion in 2022, including the potential positive effects of wars for authoritarian leaders (Kendall-Taylor/Frantz 2023), the personalistic nature of Putin's dictatorship (Gomza 2022), the decline in Putin's popularity domestically (Treisman 2022) and growing concerns about external threats (Mearsheimer 2014; McFaul et al. 2014). While these factors undoubtedly played a role in the overall course of events, it is crucial to consider another significant, and often overlooked, aspect of this process: the dynamics of the Donbas War (2014–2022) and its consequences for Russia and Ukraine.

I argue that Russia's move to take total control over the unrecognized Donetsk and Luhansk People's Republic (DPR and LPR) led to Putin's own (self-)deception, eventually trapping him within the reality he had constructed. By 2022, the occupied territories had evolved into an independent concern, further exacerbating the impasse in terms of Russia's broader goals in Ukraine. Failing in its attempt to use the Donbas War to manipulate Ukraine, Russia found itself in a situation in which full-scale invasion seemed like the only viable option.

From Chaos to Russian Domination

Many experts and scholars believe there was a "Putin's Plan" from the beginning of the Donbas War to fight the war against Ukraine and occupy as much Ukrainian territory as possible (Mitrokhin 2015; Umland 2014, 2016). Recent studies point to clear signs that Russia was caught by surprise by the rapid evolution of the situation in Donetsk and Luhansk Oblasts (Arel & Driscoll 2023; Arutunyan 2022). However, even though Russia seemed to have been initially unprepared to take full

advantage of the rapid development of the situation in Ukraine, it cemented control over these Ukrainian territories within the first year of the conflict.

The first Minsk Agreements and the law on creating the L/DPR armed forces were signed in September. The coercive integration of the non-state armed groups, which appeared in spring 2014, into the joint military structure of L/DPR, the Ministry of State Security, began. Some militiamen, both locals and those from Russia, who joined the fight in the spring and summer of 2014 gradually abandoned the new military structures. Those who did not want to be subject to the new rules were pushed out or killed. On 30 March 2015, separatist authorities ordered those not belonging to the formal armed structures to forfeit all their weaponry or face criminal charges (UN OHCHR 2015). However, in practice it took several years to eliminate all armed groups who did not wish to be controlled by the L/DPR. Most of the warlords who started the fight in 2014 were either assassinated (usually through bombings) or otherwise died in "accidents" (usually car crashes). Removing the most visible and devoted combatants and leaders of independent armed groups, including Russians, was a crucial step toward establishing Russian domination in the region.

Economic Deadlock

Regarding the economic dimension, the war had detrimental effects on the Donbas region: the destruction of infrastructure, the decline of industries, the displacement of populations, and a general decline in economic activity (Mykhnenko 2020, Crisis Group 2020).

Before 2014, Donbas was wealthy compared to other Ukrainian regions but, at the same time, was in economic decline. The region was both subsidized by Ukraine's government and profit-making (Mykhnenko 2020). While in 2011 the gross regional products of Donetsk and Luhansk accounted for roughly 12% and 4% of national GDP, respectively, they received 27% and 11% of all central government subsidies and transfers to regions (Novosti Donbassa 2012).

Before the conflict, the Donetsk region was above the national average on all major economic indicators (such as Gross Regional Product, Gross Added Value, turnover, export/import balance, investments, and household income). The Luhansk region was level with the national average for Ukraine. By 2015, the Donetsk region (both government-controlled and non-government-controlled parts) was below the national average on all indicators, while the Luhansk region had fallen even further and now counted among Ukraine's poorest regions. Between 2013 and 2015, the population living below the minimum subsistence level increased from 22% to 66% in the Donetsk region and 20% to 74% in the Luhansk region. The Donetsk region saw a 72% reduction in the export of goods and a 73% reduction in imports, while the Luhansk region experienced 88% and 81% reductions, respectively (FS-Cluster 2017).

The war has generally resulted in rapid and severe deindustrialization in the area. At the beginning of 2015, mines and factories in the LPR and DPR still functioned on the investments made in peacetime. After those investments were exhausted, it was the turn of a new DPR and LPR leadership to subsidize these enterprises. This did not happen. From 2014 to 2022, many coal mines were closed, resulting in the loss of 63,200 jobs and a tenfold salary decline in dollar equivalent compared to the pre-war period in the coal sector (VPG 2020). In 2020, most factories in the region produced only 15–20% of their pre-war volume. Many industrial enterprises were closed with no possibility of restarting in the near future.

This economic decline and the illegal practices that dried out industrial facilities and budgets made the unrecognized People's Republics utterly dependent on Russia. Since 2017, when Ukraine cut all economic connections with the territories of the unrecognized republics, Russia became the only significant economic partner for the unrecognized territories. Already in 2016–2017, a large part of the LPR and DPR budgets came from Russia, a tendency which persisted through at least 2022. According to Ukrainian government sources and nongovernment experts, as of 2020, Russia spent (excluding military expenditures) roughly \$1.5–2 billion a year, or about 0.1% of its GDP, on the de facto republics (Zn. ua 2020, de Waal/von Twickel 2020).

The LPR and DPR economies have over the past years become a huge money-laundering scheme. While Russian money filled the budgets of the unrecognized republics, from which they paid pensions and state workers, most local enterprises' income went to private individuals. Despite sanctions, much of the coal from the breakaway territories was sold to outside markets—India, Belarus, and, apparently, Ukraine—after being reclassified as Russian, enriching the intermediaries involved in this process (Shpak 2021). Russia significantly increased coal exports from its own territory to capture markets formerly served by the recently seized mines. Absurdly, Ukraine had doubled imports of Russian anthracite since the start of the blockade—in 2018, 91% of Ukraine's imports of this valuable coal (valued at \$70 million) were from Russia (Milakovsky 2018).

Political and Cultural Integration of the Unrecognized Republics

By autumn 2014, all important political decisions in the unrecognized republics were made without considering local leaders' official procedures or opinions. By 2022, the local political scene in the republics was wholly controlled by Russia. All political competition had been annihilated. None of the separatist officials in Donbas were freely elected, and their de facto governments operated with extreme opacity, making it difficult to discern how much autonomy they had in practice vis-à-vis the Russian government (FH 2021). During the last elections in 2018, Moscow-approved leaders-Denis Pushilin in the DPR and Leonid Pasechnik in the LPR—won virtually uncontested elections, while only ruling and spoiler parties were allowed to participate in local legislative elections. Party lists were composed of local people loyal to the Republics, while the locally registered Communist Party was not even allowed to participate in the elections. The only real opposition to the republics' leadership came from influential separatist veterans. Still, the authorities thwarted their political aspirations: the Donbas Republican Party, created by one of the DPR's founding fathers and former head of the legislature, Andrei Purgin, was denied registration (Skorkin 2021). In 2021, the leaders of both republics publicly joined United Russia, the powerful Russian political party that the Kremlin uses to control political appointees and regional politics. Those voicing pro-Ukrainian views were detained; protests provoked by the worsening economic situation were suppressed (HRMMU 2021). Supporters of the People's Republics who were critical of their politics and the worsening social situation also faced repressions.

Both the DPR and LPR abolished Ukrainian as a state language in 2020. Russia acknowledged local schools and university diplomas; in 2021, the most prominent university in Donetsk received Russian accreditation. In addition, due to COVID restrictions traveling to Ukrainian-controlled territories was limited, and the number of "contact line" crossings was

dramatically reduced. In 2019, Vladimir Putin signed a decree allowing DPR and LPR territory residents to obtain a Russian passport through a simplified procedure. As of January 2022, more than 720,000 Donbas residents had obtained Russian passports. This "passportisation" not only obstructed the negotiation process and implementation of the Minsk Accords and undermined Ukrainian sovereignty; it also contributed to the region's socio-demographic upheaval by incentivizing working-age professionals and those who had relatives in Russia to immigrate there (Bescotti et al. 2022; Burkhardt 2020).

In essence, before February 2022, the occupied Ukrainian territories had already been de facto economically and politically, as well as culturally and institutionally, integrated with Russia. They were depopulated and impoverished as well.

War as Politics by Other Means

By providing the LPR and DPR with military and economic support, without which the republics could not resist Ukraine's armed forces, Russia totally subjugated the territories of the unrecognized republics and, later, fully integrated them to a level not seen in Russia's other de facto client states. Even though Russia had used some similar strategies before, for example issuing Russian passports (in Abkhazia) or even lobbying for special status within a parent state (for Transdniestria), its goal in the case of the DPR and LPR was not gaining loyalty and control over the territory, but rather manipulation of the parent-state, Ukraine. Total Russian domination in the unrecognized territories served a specific objective: to regain control over Ukraine through their reintegration (Sushko 2017) or, failing that, to keep the conflict simmering under Moscow's control (Charnap 2020; Malyarenko & Wolff 2018). The process of peace talks and the evolution of the Minsk Accords was especially telling in this respect.

In August 2014, the favorable developments on the battlefield allowed Russia to insert several clauses into Minsk-I, signed on September 15, including the adoption of a "law on special status" that would temporarily decentralize power to occupied Donbas (Duncan 2022). This favored the prolongation of the abnormal situation. However, there was no mention of changing the Ukrainian constitution in Minsk-I (Sandra 2019). This only appeared in Minsk-II, a new document signed on 2 February 2015, after another intensification of fighting involving the Russian army. The political sections

of Minsk-II provided the DPR and LPR with "special status" within Ukraine, letting Ukraine resume its control over the border only after local elections were held; strengthened Russian presence in the region through assistance from the central authorities to support "transnational cooperation" between the occupied regions and regions of the Russian Federation; and provided rights for local parliaments to create "people's militia units," i.e., to have a local army (see also Åtland 2020). These gradually escalating demands reflected Russia's commitment to averting the emergence of an unfriendly government in Ukraine.

Russia pursued and succeeded in obtaining more explicit requirements for constitutional changes securing long-term influence in Ukraine through its proxy regimes in Donbas (Malyarenko & Wolff 2018). Leaked emails suggested that Vladislav Surkov's³ office appeared to be focused on changing Ukraine's Constitution, starting with the mechanism for introducing constitutional amendments (Sandra 2019). Surkov coordinated the drafting of extra demands published on 13 May, 2015 as proposals from the D/LPR. Essentially, these proposed amendments to Ukraine's Constitution would have allowed unrecognized republics to act as separate states which would be reincorporated into Ukraine not as regions with a certain amount of autonomy, but as distinct political, economic, and legal entities tied to Russia and able to influence Ukrainian domestic and foreign policy (Duncan 2022). Those proposals were rejected by Ukraine, where even the careful introduction of the "special status" law incited strong reactions from Ukrainian civil society and a number of political blocs, as well as harsh criticism of Poroshenko's (and later Zelenskyy's) policies (Medium 2017).

Thus, Ukraine encountered resistance to granting the breakaway territories a special status, and the associated economic costs made the prospect virtually unattainable. As a result, Russia found itself in possession of impoverished lands that it could not de jure integrate without exacerbating its already complex international situation and incurring substantial future expenses for reconstruction.

Furthermore, these territories no longer held the promise of fulfilling Russia's initial goal: restoring control over Ukraine. The occupation of Crimea and part of the Donbas prevented roughly 12 percent of Ukrainian voters disproportionately sympathetic to candidates and parties that supported closer ties with Russia from participating in elections (D'Anieri 2019). Eight years

¹ Because the "contact line" remains largely closed, residents of areas beyond government control are forced to enter government-controlled areas through Russia (OCHA Ukraine 2021).

² This equated to no more than 40% of the population of the breakaway territories. According to separate estimates, as of 2022 the DPR and LPR territories retain only 45–70% of their four-million-plus 2014 population.

³ Between 2013 and 2020, Vladislav Surkov was a personal adviser of Vladimir Putin on relationships with Abkhazia, South Ossetia and Ukraine.

of war also changed Ukrainian public opinion. Ukrainian attitudes toward Russia and economic integration with it became much more negative after the invasion of Crimea, while attitudes toward joining NATO and the European Union experienced the opposite trend (KIIS 2021; Onuch 2022; Haran & Burkovskyi 2022). The weakening of pro-Russian parties and attitudes caused by Russia's invasion in 2014 helped create conditions in which Russia could not achieve its goals without an allout invasion (D'Anieri 2022). At the same time, relinquishing control over occupied territories would have significantly damaged the Russian government's domestic public perception. For eight years, the Russian population had been indoctrinated with the idea of the necessity of protecting the people who lived in the unrecog-

nized republics from Ukrainian nationalists and fascists, and abandoning these territories could have been interpreted as a sign of weakness, both internally and abroad.

Thus, Russia found itself in a predicament—unable to hold onto these territories and unable to let them go, while the main goal of the eight-year venture seemed even more unattainable than before. The decision to launch a full-scale invasion in Ukraine, perhaps with the hope of a swift and triumphant outcome as anticipated by many in Russia, seemed like a way to break free from this deadlock without inflicting much pain on Russia. However, this war has unfolded neither briefly nor victoriously, further raising the stakes for the Russian regime. It transformed the issue of control over Ukraine into a high-stakes, zero-sum game.

About the Author

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Filtration: System, Process, and Goals

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Abstract

The term "filtration" in the context of the current Russian aggression against Ukraine is attracting international attention and concern. Since Ukraine and Russia use and contextualise the term differently, there is much space for different interpretations of the process and what it means in practice. The following is an attempt to describe and classify the system of "filtration." The article focuses on "filtration facilities" in the Ukrainian territories currently occupied by Russia as well as in Russia itself, where people can be registered, interrogated, detained, and imprisoned.

Interpretation Patterns of Filtration in Ukraine and in Russia

The term "filtration" already appeared in the Ukrainian media in mid-March 2022 in connection with the "evacuation measures" announced by Russia for the Ukrainian population of the city of Mariupol. The Ukrainian side considers such (sometimes also forced) transfers of people from occupied Ukrainian territories to Russia as deportations deliberately undertaken by Russia. The term "filtration" is used in this context to describe the screening of Ukrainian citizens before they are allowed to enter Russian territory. Any screening processes in Russian-occupied territories are also subsumed under this term.

According to Ukraine's interpretation, this form of "filtration" is the forcing of Ukrainian citizens to undergo a humiliating verification procedure. In this view, individuals are required to submit to searches and potential psychological or physical mistreatment, as well as isolation from external contact, at the hands of the aggressor. An analysis of Ukrainian media statements in 2022 and 2023 reveals that the term "filtration" therefore has extremely negative connotations and is emotionalised in Ukrainian discourse. "Filtration camps" are often associated with Nazi Germany's camp system (of which there were several hundred facilities in Ukraine between 1941 and 1944). Ukraine is calling for international organisations to have access to these facilities to investigate acts by Russia which it considers to be war crimes, citing Articles 42 (Conditions of Internment) and 49 (Prohibition of Forced Displacement) of the Geneva Convention IV, as well as Article 147 of the First Additional Protocol (Protection of Persons in Times of War).

The Russian side disputes the Ukrainian interpretation of the facts. Russia's ambassador to the United Nations, Vasily Nebenzya, rejected Ukrainian accusations of "inhumane filtration measures," asserting that the term "filtration camps" was invented by Ukraine and that these facilities are merely "reception centers for Ukrainian refugees." Russia officially claims that it does not engage in any deportations or forced relo-

cations of the Ukrainian population, but rather implements "evacuation measures" through which individuals are only "registered" and not "filtered." Despite official Russian efforts to distance themselves from the term "filtration," an examination of Russia's state media coverage (RIA, Radio Sputnik, TASS) reveals that "filtration" is used as a neutral bureaucratic term. According to the Russian state-controlled press, it is characterized as a routine security check, primarily aimed at identifying "Ukrainian military personnel," "intelligence agents," and "members of nationalist associations." Moreover, one gets the impression that in 2023, this issue no longer resonates significantly for the Russian side, as Russia's state media no longer addresses Ukraine's accusations and the term "filtration" is scarcely mentioned in their press coverage.

The reporting on "filtration" by the independent Russian media, most of whose editorial offices are currently located abroad and access to which is blocked within Russia, is closer in its content to reporting of Ukrainian media on this topic. In contrast to state-controlled Russian media, the term "filtration" is used only with a strongly negative connotation by such independent Russian media as "Meduza" and "Mediazona."

The term "filtration" as a "screening procedure" in the context of the current Russian invasion of Ukraine has not appeared in either Russian or Ukrainian laws since February 2022. The distancing from this term at the Russian official political level can be explained by an attempt to downplay these measures and attract less attention to this issue. In Ukrainian official discourse, "filtration" is certainly a subject of discussion, but much more attention is paid to the aspect of forced resettlements and deportations. This is also reflected in the Verkhovna Rada's official appeals to international organisations and foreign governments (for instance, this one).

The Filtration System

With regard to the full scope of the Russian filtration system, it currently seems impossible to determine exact numbers of affected individuals and precise

functions of facilities due to the lack of access possibilities. In addition to reports from human rights organizations such as Human Rights Watch and Amnesty International, a report from the Yale School of Public Health's Humanitarian Research Lab (Yale HRL) from August 2022 attempts an inventory of filtration facilities in the Donetsk region based on eyewitness accounts and image analysis. According to this report, at least 21 facilities were at that time operated for filtration purposes in Russian-controlled territory in Donetsk Oblast and neighbouring regions. Yale HRL distinguishes four types of these facilities based on their respective functions: (1) registration, (2) holding and temporary accommodation, (3) (repeated) interrogation, and (4) detention. The authors of the report note that each facility can be utilized for multiple purposes at any given time, and their functions may change over time.

Furthermore, for this analysis, eyewitness interviews were conducted in October/November 2022 with individuals from the areas of Kherson, Melitopol and Mariupol, some of whom are still present in those locations, while others have since left the occupied territories.

From the analysis of openly accessible sources, images, and these eyewitness reports, a general picture of the filtration process emerges. The first location upon arrival (often a hall or a tent) serves only to register the individuals presenting themselves for filtration. Subsequently, there is a waiting period before the bureaucratic process begins. This waiting period can vary significantly in terms of time and conditions, ranging from several hours in what eyewitnesses describe as a barred "cage" to temporary accommodation for several days, weeks or even months in a camp-like facility.

While details in the narratives of eyewitnesses who have undergone filtration may differ, they essentially describe a consistent pattern of the filtration process. Two types of "filtrations" can be distinguished: 1) "On-Site Filtration" in areas occupied after February 2022 and 2) "Border Crossing Filtration" as a means of border control before entering or leaving either the Ukrainian territory controlled by Russia, or Russia itself.

On-Site Filtration

This type of filtration has been established for Ukrainian territories annexed by Russia in 2022. It simultaneously serves as a form of census and acts as a prerequisite for travel within the territories occupied by Russia. In Mariupol, the remaining population was informed by the newly established local administration that a "filtration certificate" was necessary, even if they did not intend to leave. According to an eyewitness, such documentation is required to move freely within the city. Residents encountered by Russian militias without such papers may be forcibly taken to one of several "filtra-

tion facilities" for examination. At least five facilities in the Mariupol area have been identified as carrying out "On-Site Filtrations," where filtration certificates are issued. These certificates include names, birthdates, issue dates, information about the issuing filtration facility; fingerprints are also collected during this process. Subsequently, individuals must approach the commandant's office in Mariupol with this certificate to obtain further documentation, allowing them to move within the occupied Donetsk Oblast and the city of Mariupol.

This "On-Site Filtration" appears to serve various purposes beneficial to the occupying forces. Occupation authorities gain a comprehensive overview of the local population and can capture complete personal data (fingerprints, photos, passports and private information obtained from temporarily confiscated devices). It is conceivable that the collection of such data also served as a basis for gathering census information for the sham referendums in September 2022 and the sham regional elections in September 2023.

Such data collection, especially through the compelled extraction of data from mobile digital devices, simultaneously makes it possible to assess the population's level of discontent and its potential for protest. Additionally, it enables the direct internment of individuals appearing suspicious or disloyal to the Russian occupation authorities. Simultaneously, the methods of "filtration" include an intimidating effect on the local population. For those perceived as suspicious or disloyal, the conventional tools of Russian intelligence services, including physical and psychological violence, torture, and detention can be used at any time.

Another goal of the "On-Site Filtration" for the Russian occupiers appears to be the necessity to persuade individuals who were employed in the public service of Ukraine to collaborate. Some eyewitnesses report that the interrogations for people in these professional groups (e.g., teachers, doctors, public administrative staff) last significantly longer than for others. A refusal to cooperate can have immediate consequences and even lead to the murder of the person concerned, as illustrated by the case of conductor Yuri Kerpantenko, who was shot dead on October 13, 2022 in Kherson.

The refusal of residents of Russian-annexed areas to accept Russian citizenship can be now also interpreted as a rejection of cooperation. Individuals who have successfully passed an "On-Site Filtration" and received a filtration certificate are still considered suspect by the occupation authorities if they do not apply for a Russian passport. This has become a new prong of the "On-Site Filtration" in 2023, targeting the passportization of the population in the annexed territories of Ukraine.

On April 27, 2023, Vladimir Putin signed a <u>new</u> decree regulating the residency status of inhabitants of

the Ukrainian territories annexed by Russia. According to this decree, the inhabitants of the former "People's Republics" of Donetsk and Luhansk, as well as the regions of Kherson and Zaporizhzhia, without Russian citizenship are classified as "foreigners." The decree stipulates that these "foreign citizens" with passports issued by Ukraine or the "People's Republics" are permitted to reside permanently in the above-mentioned areas until July 1, 2024.

For "foreign citizens" who reject Russian citizenship, the decree poses the risk of deportation if, according to the interpretation of the occupation authorities, they pose a threat to the "national security of the Russian Federation." The seriousness of the risk of deportation and the internment of "foreign citizens" is further confirmed by another decree signed by Denis Pushilin, then "Provisional Head of the Donetsk People's Republic," on June 20, 2023. This decree establishes a working group tasked with creating "temporary accommodation facilities for foreign citizens and stateless persons in the territory of the Donetsk People's Republic, who are subject to expulsion, deportation from the Russian Federation, or re-admission."

The latest regulations make it evident that permanent residency in the annexed territory should feel as uncomfortable and unpredictable as possible for individuals without Russian passports. Therefore, passport controls serve as an additional mechanism for exerting pressure on the local population, aiming to persuade them to apply for Russian citizenship.

Border Crossing Filtration

The term "filtration" is also used to describe a process of scrutiny similar to border control applied to individuals attempting to leave the occupied territories towards Russia, annexed Crimea, or Ukraine. The "filtration" process for those intending to travel to Crimea or Russia appears to be stricter and more intensive in its examination procedure. The process of "Border Crossing Filtration" for entering Ukraine is carried out at specific checkpoints with a streamlined procedure.

"Border Crossing Filtration" mainly involves people attempting to leave the areas occupied by Russia in private vehicles or group buses who are unable to depart through the front line. This type of "filtration" is also required for individuals who do not leave independently, rather being transported to Russia or other territories under Russian occupation as part of the "evacuation" organized by Russia.

At the same time, the "Border Crossing Filtration" seems also to be used by Ukrainians from non-occupied territories as a way for leaving the country through the border not controlled by Ukraine. Until late summer 2022, mostly men of conscription age (from 18 to 60 years old), who according to Ukrainian law are not

allowed to leave the country during the war, went to the territories occupied by Russia and then travelled on in order to avoid Ukrainian mobilization. However, they were permitted to depart to the occupied territories if they had a registered address there. Eyewitness reports suggest that bus connections through the "grey zone" between the front lines, particularly between Zaporizhzhia and Kherson, were commonplace during this period. Initially, these were controlled by the Ukrainian police and security services, police escorting travellers to the edge of the combat zone. Since this escape route was also noticed by the Ukrainian government, entries into the occupied territories have been more strictly monitored since August 2022. Now, those leaving require a certificate from the conscription office confirming that the person is not subject to conscription. Witnesses confirm that having a registered address in one of the occupied territories without such certification is no longer sufficient for departure.

The "Border Crossing Filtration" includes all elements of the process described for the "On-Site Filtration", including registration, data collection, information gathering and intimidation. While the search for potential collaborators seems to be less relevant in this context, the primary purpose of the controls nonetheless appears to be the prevention of security threats to the regime in Russia. Entrants who do not successfully pass the security screening can be interned, detained or rejected at any time. Upon positive outcome of the "filtration" process, an individual "ticket" is sometimes issued, although not in all cases, e.g., when individuals depart with an "evacuation bus."

Procedure of Filtration Processes

Upon arrival at a "filtration" facility, the first step is the registration process, during which passports and/or other identification documents are checked. Incoming individuals are required to fill out a migration card, using the same format as at regular Russian border controls. This migration card captures personal information such as name, surname, patronymic, date of birth, nationality, type of identification document, purpose of entry, and duration of stay, as well as details about any hosts in Russia and their place of residence. Reports from some eyewitnesses indicate that their biometric data (fingerprints and photos) were collected during this registration process, although this does not occur in all documented cases.

Following this initial registration, incoming individuals must submit their passports and luggage for inspection. As can be observed from the reports of eyewitnesses and the openly accessible sources on the filtration (media reports and reports of YHR, HRW and Amnesty International), the subsequent process varies depending on the type and location of the "filtration sta-

tion," waiting times ranging from several hours to several months. The spatial arrangement also varies widely, from open-air queues to waiting rooms. Additionally, the use of wire cages has been noticed at several transition points from areas recently occupied by Russia to Russian-occupied Crimea.

The process is illustrated by the eyewitness report of a departure to Crimea in August 2022. As reported by the departing individual, approximately 60 people waited for their "filtration" in such a cage, anticipating a "summons for a conversation" without further information on what to expect:

"There was no reaction to our inquiries, they were completely ignored. We asked questions like: where, what, how long, what comes next. They answered us like robots: 'There will be a conversation, it will take some time.' That was it. I will probably remember this sentence until the end of my life."

After a considerable waiting period, Russian security officials started with their interrogation and inspection of electronics. The structure of the interrogation by uniformed interrogators can be summarized and generalized based on available eyewitness reports as follows:

- Questions about the individual (name, age, residence, profession, military training, service in the Ukrainian Army)
- Questions about the personal contacts (family, friends, etc.)
- Questions regarding contacts with the Ukrainian Army and "Nazis"
- Questions about further travel destination and residence plans
- Questions about attitudes towards Volodymyr Zelensky, Vladimir Putin and the "Special Operation."

The content of the interrogation appears to vary depending on the personality and interests of the interrogator. For example, not all interrogated individuals were questioned about their attitudes towards Putin and the "Special Operation." The interrogators, at least at the Crimea border crossing, appeared in uniforms of the Russian Border Service without distinctive insignia and possess equipment for capturing film and photo material.

The most effective strategy to "pass" the interrogation as smoothly as possible seems to be maintaining a strictly neutral attitude towards all sides of the conflict. Expressions of dislike and anger towards the interrogators can be a pretext for arrest. Conversely, displaying too much loyalty to Russia may lead to collaboration offers or even increased suspicion, especially if indications of a contrary attitude are discovered in personal belongings. Eyewitnesses unanimously assessed that presenting oneself as apolitical was the most promising strategy. They also confirm that in some cases, a physical examination takes place, requiring individuals to

undress. However, this does not appear to be standard procedure. It is seemingly conducted when a person admits to having tattoos, which are then checked by the Russian security officials for "Nazi ideological content." Another reason for a body examination, especially for men, is the search for traces of weapons usage.

The report of Amnesty International dated 10 November 2022 also describes cases of interrogations involving the use of violence in the "filtration" process. Men of conscription age are particularly at risk. When suspected of disloyalty to Russia, they are forced through application of established Federal Security Service (FSB) methods, including violence and torture, to confess to alleged crimes and to document their confession in writing. From the interviews conducted by Amnesty International in 2022, it becomes evident that, in some cases, such confessions are made even when the accusations do not correspond to reality, in the simple hope that the torture will then end. However, they ultimately end up being imprisoned and cut off from access to any legal help to protect their rights.

As a part of the standard interrogation procedure, an examination of all mobile storage devices (smartphones, laptops, tablets) is conducted, and all access data must be handed over to the interrogators. Contacts, photos, apps, postings and chats in all social networks and messengers are checked. As reported by one eyewitness, his phone, after providing all passwords, was silently searched by an "officer" in his presence for approximately 30-40 minutes. He was then escorted out of the room and brought back to the "cage," where he had to wait for another two hours. During this time, his digital devices were apparently screened by software which, according to the interrogators, was supposed to reveal what had recently been deleted from his mobile phone. According to the report of an eyewitness from Mariupol, completely "empty" mobile phones without photos and social media apps are considered extremely suspicious, leading to speculation about previously deleted content.

The interviewed eyewitnesses unanimously confirmed that before "filtration," their smartphones contained content critical of Russia and supportive of Ukraine, such as likes on Russia-critical posts, blueand-yellow symbolism or memes mocking Putin. However, this content had been deleted in preparation for the "filtration" and could not be restored. This fact suggests that the threat of being able to see deleted content is used mostly as a tool for psychological pressure during the interrogation. It seems to be an attempt to intimidate the interrogated person into revealing any hidden facts and opinions willingly. Gaining access to previously deleted data is still possible in some cases, for instance by restoring the operating system to an earlier version. However, even in such cases, there is no need for the threatened use of "special software."

After Filtration

If the "filtration" has been passed successfully, the "filtrated" individuals receive their passports and personal belongings back and can leave the filtration facility using the transport method of their choice. However, if something during the "filtration process" arouses suspicion, this may lead to internment or return to the occupied territory of Ukraine. An eyewitness reports about the case of an acquaintance who left for Russia via Crimea:

"(...) he was detained for two days in Crimea. He spent two days in this filtration facility because he had a contact in his phone book named either 'Vasya' or 'Kolya Pentagon.' We have such a district in Mariupol. And we all call it like this. We had a district named 'CIA' and a district named 'Pentagon.' And so, he had 'Kolya Pentagon' or 'Vasya Pentagon' in his contacts. And they put him in prison for two days (...) to check (...) In Mariupol, this is Kurchatovo district and somehow (...) I don't even know what it's called normally. Kurchatovo has always been 'CIA,' I lived in the 'CIA.' And here is this district. I don't even know what it's normally called. It's in the minds of all Mariupol residents as 'Pentagon.' (...) No, they didn't beat him, he just spent the whole time in a cage, well, in a prison, there are some solitary cells there. He just sat there."

Eyewitnesses report that after successfully passing a "filtration," the behaviour of officials becomes more humane and approachable. Those who passed "filtration" in order to enter the territory of Russia describe volunteers providing them with water, food and Russian SIM cards upon leaving the "filtration facility." People are informed there that they "can receive help in Russia and also apply for Russian passports." Entry to stay in Russia or to leave for other countries becomes possible at this point.

People from conflict areas entering Russia in an "evacuation bus" without specifying a fixed destination in Russia are distributed to Russian "refugee shelters." The refugees are often informed of their destination only after arrival, so it remains uncertain where they are being taken until they arrive on site. The Ukrainian side interprets this as the deportation of Ukrainian citizens. Similar to the internment of civilians (Art. 42, Geneva Convention IV), the Ukrainian government refers to the Geneva Convention, specifically Article 49 of IV, which states that "individual or mass forcible transfers, as well as deportations of protected persons from occupied territory to the territory of the occupying power or to that of any other country, occupied or not, are prohibited, regardless of their motive."

Without registering and undergoing identification procedures (collection of biometric data), Ukrainian citizens are currently allowed to stay in Russia for up to 90 days per year. In order to receive social assistance and a work permit in Russia, Ukrainian citizens must apply for "temporary protection" or a "temporary residence per-

mit." The crucial condition in this procedure is the submission of the Ukrainian passport to the Russian migration authorities, where it is retained until the "temporary protection" expires. Thus, obtaining this "temporary protection" in Russia means that further travel to other countries during the validity of the residence permit is not possible.

Conclusions

The primary observation is that the "filtration" system primarily serves as an instrument for Russia to fulfill its own security needs. The two described forms of "filtration" evidently serve multiple purposes. Specifically, "On-Site Filtration" proves to be a useful tool as both a census and a control mechanism to obtain a comprehensive overview of the local population and to identify potential collaborators among the remaining inhabitants. At the same time, it operates as an instrument of intimidation, targeting those perceived as insufficiently loyal to the occupying power. The intention seems to be the early identification of protest potentials within the population and the implementation of measures to counteract them, ensuring a smooth integration of the areas and their remaining population.

The "Border-Crossing Filtration" appears to be driven primarily by Russian concerns about acts of sabotage within Russia itself or in occupied Crimea. The behaviour of Russian security forces seemingly aims to generate significant internal tension and fear among those undergoing the "filtration" and to demonstrate to them the established power dynamics within Russia. Concurrently, individuals suspected of hostile attitudes are identified and detained through the filtration process. Their subsequent fate remains largely unclear and falls outside the norms of international law. As the exact number of individuals processed through "filtration" cannot be reliably ascertained, it cannot be accurately cited in the text.

The "filtration process" appears in general to lack a coordinated approach in its system and implementation. The conduct of interrogators and security officers operates outside the legal framework and is not subject to any visible control mechanisms. It appears to be largely arbitrary and dependent on the interrogators' own conscience and attitudes. This can be seen in various details of the descriptions of "filtration," some individuals experiencing a relatively smooth process, while others face critical and life-threatening situations. In all cases, the course and outcome of the process are marked by arbitrariness and absolute unpredictability. The fact that Ukrainian Telegram channels disseminate advice on locations where "filtration" appears to be less problematic and which locations to avoid (e.g., filtration points in the now-annexed "Donetsk People's Republic" are described as particularly difficult) supports this perspective.

The legally unprotected status of the fleeing individuals, who are compelled to feign loyalty in order to pass the "filtration," is further exploited by the Russian regime for self-promotional purposes. Individuals are interviewed and filmed by Russian state media before or after "filtration" in order to present a narrative of gratitude towards Russia for an alleged "rescue." The fixation on tracking down "Ukrainian Nazis" through questioning about connections to such organizations and the search for explicit symbols (e.g., tattoos) suggests a distorted and propaganda-influenced image of Ukraine among Russian security forces.

However, despite the documented use of violence and arbitrary internment and detention of those undergoing filtration, there is no indication of an ideological framing of the "filtration process" that goes beyond the general narratives of Russian propaganda. At the forefront of the process are the security concerns of the Russian regime, which is willing to detain potential suspects at the slightest suspicion, disregarding all legal norms. Moreover, the use of torture and violence in order to extract confessions, followed by imprisonment, reflects not only these heightened security concerns, but also the desire of the Russian security forces to report their productive work "upwards." This would also explain why the accused are forced to confess to their alleged crimes in writing.

The situation of those who do not pass "filtration" and are subsequently detained is considered particularly precarious. The complete isolation of detainees in filtration facilities and prisons makes it impossible for them to receive any legal or humanitarian assistance. A further complicating factor is that these individuals are not considered prisoners of war, and are therefore not eligible for the regular exchanges of prisoners of war between Russia and Ukraine. As a result, the subsequent actions of the Russian security services towards these individuals are difficult to predict.

Also problematic is the situation of many Ukrainian civilians who must wait for a "filtration process" before crossing the border. The unpredictable duration of their stay, partly outdoors without access to water, food, and sanitation facilities, constitutes a humanitarian problem that urgently requires access for international humanitarian organizations.

According to the Geneva Convention, the unlawful detention and torture of civilians are considered war crimes. However, the prosecution of any human rights violations occurring during "filtration" is practically impossible under the current circumstances. The black-box nature of "filtration" makes future investigations challenging, as those responsible often operate anonymously, the entire "filtration process" unfolding largely undocumented and unobserved.

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The Four Modi of Russia's Forced Naturalization of Ukrainians: "Passportization" and its Implications for Transitional Justice

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Abstract

"Passportization" is an extraterritorial coercive state practice and a form of forced "naturalization by application." Forced naturalization in annexed territories is essentially territorial, as Russia claims the annexed territories as its own and automatically considers all residents as Russian citizens ("automatic naturalization"). Distinguishing between the two different institutional frameworks of occupation and annexation and the degree of coercion, this analysis identifies four modi of passportization and forced naturalization of Ukrainians for the period 2014–2023 in which individuals' potential for agency and choice in acquiring or rejecting Russian citizenship—and thus their responsibility and, by extension, potential criminal liability—has differed markedly. Ukrainian political debates among elites and the views of the population show that it remains controversial how to respond to Russia's policy of forced naturalization. This analysis argues that the starting point for tailoring transitional justice measures in the area of citizenship should be these different degrees of agency.

Passportization: Is There a Russian Playbook?

It took Russia two days to send first aid to occupied territories of the left bank of the Dnipro River after it destroyed the Kakhovka Dam on June 6, 2023. When Russian emergency services finally arrived, they refused to evacuate residents from rooftops and denied the right to leave the flooded areas in the town of Oleshky in the Kherson region to those Ukrainians who did not possess Russian citizenship (General Staff of the Armed Forces of Ukraine 2023; Vazhnye Istorii 2023). This refusal to help Ukrainians in need is one of the most egregious examples of the life-threatening pressure Russia exerts to coerce residents of occupied Ukrainian territory to accept Russian citizenship.

Twenty months into the full-scale invasion of Ukraine, it has become evident that at the most basic level, the forced naturalization of Ukrainians (prymusova pasportyzatsiia is the official Ukrainian term) is part and parcel of Russia's neoimperial ambition to coerce Ukraine into submission by destroying its sovereignty. This "passportization"—as the practice that Russia has also deployed in other territorial conflicts in Moldova and Georgia is usually called—can be considered a "personal" annexation (Peters 2010, p. 658), a figurative "annexation" of people that often, but not always, goes hand in hand with the annexation of territory. My definition is more restrictive, as "passportization" should be understood as an extraterritorial practice that applies only to non-annexed occupied territories, while "forced naturalization" is a better general term for non-voluntary, en masse fast-track naturalization.

A closer look at this "weaponization of citizenship" (Jain and Bauböck 2023) raises many questions: Is there a Russian playbook for the post-Soviet space with a lin-

ear development from the distribution of Russian passports in areas beyond Russia's borders to inevitable annexation of this territory? Do individual persons have agency, and do their preferences actually matter, or are they mere pawns in a geopolitical power play, i.e., can they actively resist passportization and choose to refuse Russian citizenship while remaining on occupied or annexed territory? And finally, what should Ukrainian policy towards passportized residents in occupied territories that are unlikely to be liberated in the foreseeable future look like, taking into consideration that they nonetheless remain Ukrainian citizens? Moreover, what should transitional justice measures look like for passportized persons residing on liberated territory?

In this analysis, I argue that in order to tailor a Ukrainian policy towards passportized Ukrainians, a differentiated approach to Russia's forced naturalization is necessary that distinguishes the institutional framework on the one hand, and the level of coercion and the threat to national identity on the other. These two dimensions allow for determining the theoretically possible degree of agency of local residents facing the threat of forced naturalization, which should be the starting point for tailoring transitional justice measures in the sphere of citizenship.

The Four Modi of the Forced Naturalization and Passportization of Ukrainian Citizens

I define passportization as an en masse securitized fasttrack extraterritorial naturalization of citizens residing in contested territories of another country (Peters 2019; Bescotti et al. 2022). This definition is more restrictive than other understandings of the phenomenon; therefore, each of its elements requires further elaboration.

The basic principle of the definition is territoriality, as distinguished from temporality. In other words, it does not imply a specific sequence of events, as suggested by statements that passportization occurs before territorial conflict or that it is the first step in a playbook ending with military intervention (for an explanation how Russia used passports as a pretext for invasion see: Burkhardt 2022). Rather, it is directed at a specific type of territory, namely areas with already existing secessionist movements or territories in which Russia artificially stokes contestation and protects separatist actors in order to exert pressure on a parent state. This intent distinguishes it from practices of other countries, such as Hungary or Romania facilitating the naturalization of kin beyond national borders, because the effect of those practices is precisely *not* to create breakaway territories. While such transnational policies encroach on the sovereignty of other states but ultimately reify existing national borders, passportization's aim is to effectively undermine (and eventually change) national borders.

The concept of "extraterritoriality" needs to be disentangled as well to prepare the ground for the distinction between forced naturalization of residents of occupied and annexed territories. The targeted territory may range in terms of sovereignty anywhere from completely sovereign to formally annexed. The gradations between these extreme poles are:

- 1) A NATO member state (there have so far been no attempts by Russia to passportize citizens of a NATO member);
- 2) States of the so-called "Near Abroad," which Russia considers less-than-fully sovereign (apart from the well-known cases of Georgia, Moldova, and Ukraine, Russia also had plans to use passportization as a coercive instrument against Belarus (Myroniuk 2023));
- 3) Territories Russia covertly controls and de facto occupies, but does not recognize as independent states which are used as bargaining chips with regard to the parent state (such as the "DPR" and "LPR" before February 2022 in the context of the Minsk Process);
- 4) Overt occupation and recognition of the breakaway territory as an independent state (the "DPR" and "LPR" after 21 February 2022); and finally,
- 5) The formal (attempted) annexation into Russian state territory (Crimea 2014, and Donetsk, Luhansk, Zaporizhania and Kherson regions after September 2022). Even though the annexation clearly contradicts international law and is not recognized by most states, it has real-life consequences for residents living on annexed territories, with the institutional context of citizenship and the incentive system for opposing or acquiescing to forced naturalization changing suddenly.

"Fast-track" means that the naturalization process is sped up considerably as compared to the standard naturalization procedure and other forms of preferential naturalization such as Russia's compatriot program (Myhre 2017). In contrast to other motivations to offer fast-track preferential naturalization based on kinship or sizable investments ("golden passports"), the relevant criterion for passportization is territoriality, i.e., residence in a specific area of geopolitical interest to Russia (irrespective of ethnicity or being a Russian speaker).

Finally, "en masse" means that the number of naturalized persons, both in absolute terms and relative to the total population of the parent state, has to be significant and supported by a coordinated effort of the Russian state bureaucracy. This implies that the naturalization of tens of thousands of Donbas and Crimea residents before 2014 does not meet the criterion of scale. Moreover, the demand from below was fairly limited, and in the case of Crimea it was only a category of "Politicized Russians" (Knott 2022, Chap. 5) who actively sought Russian citizenship.

Bearing in mind this conceptualization of Russia's forced naturalization and passportization in the post-Soviet space (and, more specifically, in Ukraine), I suggest that the possible degree of agency of Ukrainians facing the threat of being forced into Russian citizenship can be conceived of as being determined along two main dimensions within each modus operandi: 1) the institutional framework and 2) the level of coercion and threat to national identity.

Institutional Framework: Why Occupation is Different from Annexation

For at least three reasons, there are substantial differences between occupation and annexation. First, the type of naturalization differs: "naturalization by application" under occupation, and "automatic naturalization" after annexation. In the former case, residents of occupied territories apply for Russian citizenship according to a fast-track procedure laid down in presidential decrees. In the latter, the Russian state automatically considered local residents as Russian citizens after a one-month opt-out period, as stipulated in the respective annexation treaties. Rather than applying for citizenship, those who do not opt out and choose to remain a foreigner on annexed territory simply apply for a Russian domestic passport, and are obliged to take the Russian oath upon receiving it.

This distinction is also reflected in Russia's official migration statistics (see Appendix 1). Figure 1 shows the total number of naturalized persons per year in the period 1992–2022, and Figure 2 shows monthly data between 2016 and 2023. Peaks for forced naturalizations in the wake of the annexation of Crimea in 2014 and parts of four Ukrainian regions in September 2022 are notably absent. This is precisely because of "automatic naturalization" after annexation, which Russia accounts for in its general passport issuance statistics (Figure 5). In Crimea, Russia issued 1,865,000 domestic passports

in 2014, 182,300 in 2015, 126,700 in 2016, and 108,900 in 2017, while in those respective years, only 67, 1,200, 3,500, and 4,400 persons were officially naturalized (Chudinovskikh 2018, p. 14). As illustrated in Figure 4, it was particularly the Russian region of Rostov that facilitated the forced naturalization of residents of the Donetsk and Luhansk regions (see Burkhardt 2020 for a visualization of the cross-border infrastructure). In 2022, Crimea shortly became a second hub, particularly for the adjacent Ukrainian regions of Kherson and Zaporizhzhia, up until September 2022.

After annexation and the ensuing automatic naturalization, Russia accounted for its naturalized citizens from annexed territories in its database on newly issued domestic passports (Figure 5). That this is not just a formality, but rather indicates a major institutional difference, is also corroborated by statements from Ukrainian officials such as Parliamentary Commissioner for Human Rights Dmytro Lubinets (Lubinets 2023) or Deputy Minister of Justice Valeriia Kolomiiets, who has been quoted as saying: "If someone is forced to do this [to get a Russian passport] or if someone is 'automatically' naturalized, then this person is not responsible in any way" (Bezruk 2023).

The second reason why occupation and annexation constitute distinct institutional contexts is because the quality of Russian citizenship awarded to persons in these two categories differs. This is because many notable rights and duties are tied to residence on Russian state territory (both internationally recognized and annexed). While newly naturalized persons residing on annexed territory obtain full membership in the Russian state (with the notable exception that since October 2023, naturalized persons can be deprived of Russian citizenship for committing certain crimes), which since September 2022 has applied to all Ukrainian territories occupied by Russia, those residing on merely occupied territories gained less-than-full membership with a "diminished citizenship" (Burkhardt et al. 2022). With passportization, Russia thus in the pre-annexation period artificially created an extraterritorial diaspora which possessed Russian citizenship without formal residence on Russian territory, residents of the "DPR" and "LPR" being forced to use either Ukrainian passports or "DPR"/"LPR" IDs to document their place of residence.

Among others, voting rights were restricted in this 2014–2022 period: passportized Donbas residents had to travel to the neighboring Rostov region to cast their votes during the 2020 constitutional referendum. In the 2021 Duma elections, they were only allowed to vote for candidates on the party lists, and even though both voting in the Rostov region and via the internet were technically allowed, Donbas residents first had to make an additional application for a social security

number (SNILS) and access to the e-government platform Gosuslugi to be able to vote electronically, services normally restricted to those with residence permits tied to addresses on Russian soil.

Donbas residents also could not receive Russian pensions before September 2022, as well as many social benefits such as family and mothers' benefits and oneoff payments related to the pandemic. They were barred from access to free treatment at Russian clinics since compulsory insurance, like all other entitlements, was (and is) tied to residence on Russian territory. Similar restrictions were in place in higher education: it was only in 2021 that the Russian Unified State Exam (EGE) could be taken on the territories of the DPR and LPR. Before that, those wanting to enroll in a Russian university had to travel to the Rostov region to take the exam there. Before the annexations of September 2022, duties for passportized Donbas residents were also more relaxed, first and foremost regarding conscription. Male passportized Donbas residents of conscription age only had to register with recruitment offices (military commissariats or voenkomaty) of the regular Russian armed forces if they obtained a residence permit in Russia; travelling to Russian state territory was still possible without getting forcibly drafted into the Russian army. Contrastingly, with automatic naturalization after the September 2022 annexations, male residents of the four Ukrainian territories who had already obtained a Russian domestic passport had not just military conscription to fear, but also mobilization into Russia's regular army. Lastly, after the annexation of Crimea, the Ukrainian legal system there was replaced by the Russian legal system, which implied that Russia considered everyone residing on the peninsula as living on Russian soil with all rights and duties applying to those who did not opt out of Russian citizenship. In some cases, Russian legislation was even applied retroactively (Open Society Justice Initiative 2018, p. 13).

The third reason why (covert) occupation and annexation differ are the foreign policy aims Russia pursues with the territories in question. Occupied territories are mainly perceived as buffer zones between Russia proper and the parent state, and as bargaining chips to pressure the parent state during negotiations (such as the "DPR"/ "LPR" within the context of the Minsk Process up until 2022, and within the context of possible peace negotiations with Ukraine after the full-scale invasion). Seeking demographic turnover by luring the most mobile and sought-after persons on the labor market to Russia and by passportizing those remaining, Russia not only improved its net demographic balance (see Appendix 1, Figure 3 for the immediate effect of the 2019 passportization decree on the share of Ukrainians in the Russian naturalization statistics, reaching a share of up to 70 percent in late 2019 and 2020 and spiking again after the full-scale invasion in 2022), but also forcibly changed the socio-demographic composition of the Donbas to such a degree as to spark conversations about political gerrymandering with effects on the national level.

Each of these strategies not only violated Ukrainian sovereignty, but also enormously complicated conflict resolution. While a territory remained under simple occupation, as in the case of the "DPR" and "LPR" until February 2022, plausible deniability of Russia's actual intention and even eventual retreat remained possible; annexation, however, crosses the threshold, with Russia officially and irrevocably claiming these territories to belong to its state territory. Automatic naturalization of residents is part of the broader policy of transplanting the Russian legal framework and bureaucracy into these territories. Also significant: this full and open "incorporation" also has implications for Russia's security and nuclear doctrines, obliging it to defend territory it claims to be its own.

Annexation also comes with ethnic cleansing, including both deportation from and resettlement to annexed territories. Through 2021, more than 200,000 Russian citizens resettled to Crimea and Sevastopol (Crimean Human Rights Group 2021). The Kyivbased Regional Center for Human Rights estimates that this figure could even range between 600,000 and 800,000 (EBU Investigative Journalism Network 2023a). Through 2018, at least 369 court rulings were issued on deportations of Ukrainians who refused Russian citizenship and didn't properly register as a foreigner (Crimean Human Rights Group 2018, p. 8). On 27 April 2023, Putin signed a degree that facilitates the deportation of those residents who rejected forced naturalization by 1 July 2024 (Putin 2023). In parallel, the Kremlin allegedly aims to resettle as many as 300,000 Russians to Mariupol by 2035 with a preferential mortgage program and other incentives (Tsentr Natsionalnoho Sprotyvu 2023). Lastly, roughly one year after annexation, more than half of all leadership positions in the regional governments of the annexed territories were Russian citizens parachuted in from Russia proper (Verstka 2023).

Increasing Levels of Coercion and Threat to National Identity

The second dimension that influences the possible degree of agency in terms of naturalization is the level of coercion applied by Russia. This can be conceived of as being located on a continuum ranging from a low level of coercion, where Russia exploits the predicament of local residents by providing incentives to obtain Russian citizenship, to the other extreme, when the resistance to forced naturalization leads not only to active discrimination (e.g.,

on the labor market or against private business owners), but to deportation, physical harm due to denied access to medical care (Physicians for Human Rights 2023), or even direct threats to life as in the Kakhovka Dam catastrophe. For the Ukrainian nation as a whole, the deportation of Ukrainian children and the imposition of Russian citizenship on them—underpinned by a presidential decree from 30 May 2022 facilitating the naturalization of Ukrainian orphans and children left without parental care—poses the greatest threat to its identity, likely amounting to genocide (Humanitarian Research Lab 2023a; Ioffe 2023).

On the lower end of coercive intensity, for a certain period after the 2019 passportization decrees until February 2022, a "strategic citizenship" (Harpaz and Mateos 2019) choice for some Donbas residents was at least a possibility when in a complex "citizenship constellation." During this period, the three citizenships (Ukrainian, Russian and the IDs of the non-recognized "DPR" and "LPR") could coexist, and opting for passportization could be a pragmatic step to gain advantages in terms of cross-border mobility, social benefits or job security without forfeiting Ukrainian citizenship or identity. Naturally, this was never a truly free, but rather a forced "strategic" choice, as the discrimination against Ukrainian citizenship and the pressure to opt for passportization was mounting.

On the other end of the spectrum has been the nochoice situation of newborns in occupied or annexed territories whose parents were forced to accept Russian citizenship for their babies (Nickel and Benassatto 2023). Other situations leaving close to no choice include cases in which documents get lost amidst fighting, or when the Russian occupation authorities destroy Ukrainian passports on purpose to confront local residents with the choice between statelessness and Russian citizenship (Harary 2023).

Over time, the pace of change of the coercive regime also varied from more stable periods to critical junctures when rules—both formal and informal—quickly changed, with new presidential decrees issued in the wake of the annexation treaties or rapid changes on the battlefield. Hence, a rather stable and predictable situation could quickly turn into unpredictability of rules and sanctions for their non-adherence. Moreover, the breadth of coercion also varied, from targeting specific segments of society such as members of the security services and the military, regional and municipal public servants or teachers, to the population at large—pensioners, families, car owners, entrepreneurs. Automatic naturalization is therefore the most comprehensive form of coercion.

And finally, the type of coercion can range from lawfare and applications of "rule by law" resembling authoritarian repressions in Russia proper—aptly described as a "web of bureaucratic oppression" (Beketova 2023) to surveillance (e.g., by linking SIM cards or voter lists to passports), social peer pressure, and actual physical violence, for instance during interrogations in filtration camps. Reports on the forced passportization of Russian-occupied areas of Ukraine (EBU Investigative Journalism Network 2023a; Humanitarian Research Lab 2023b) describe at great length the far-ranging coercive practices employed since the full-scale invasion of Ukraine.

Taken together, these two dimensions result in four largely distinct modi of forced naturalization, the agency of individuals to choose or reject Russian citizenship differing markedly between them:

Table 1: The Four Modi of Forced Naturalization of Ukrainians

		Level of Coercion (continuum) Lower degree to higher degree of coercion/threat to national identity by Russification	
Institutional Context (categorical difference)	Occupation	DPR/LPR (before February 2022)	DPR/LPR and other occupied territories (be- tween February and September 2022)
	Annexation	Crimea (after 2014)	Eastern Ukraine (after annexation treaties in September 2022)

Passports = Collaboration? Ukrainian Policy Discussions and Public Perception

Russia's passportization and forced naturalization puts Ukraine in a bind: Ukraine has few options aside from reconquering and deoccupying territories it does not control by military means to prevent forced naturalization. One way to foster resistance against Russian occupation would be to encourage local residents to refuse Russian passports. This, however, is also problematic: since Ukraine does not recognize the forced naturalization of its citizens, and indeed dual citizenship more generally, it still considers residents living under occupation as Ukrainian citizens only. Consequently, this implies that the Ukrainian state is, at least in theory, obliged to fulfill its duties towards its citizens, such as paying pensions or providing state services (which, of course, is practically impossible). Moreover, active resistance to Russia's forced naturalization would likely be even more dangerous than accepting Russian citizenship. Ultimately, this debate boils down to the question of whether accepting Russian passports should be considered as collaboration.

The most prominent and adamant proponent of resisting Russian forced naturalization is Deputy Prime Minister and Minister of Reintegration of Temporarily Occupied Territories Iryna Vereshchuk. In August 2022,

she published seven rules for life under occupation, one of which was to not even touch the "passport of the enemy" (MinRe 2022). On 1 May 2023, she reiterated her firm stance not to take up Russian passports even after the Russian decree threatening deportation of those rejecting naturalization (Vereshchuk 2023). Many others, however, publicly oppose Vereshchuk's hardline stance by arguing that surviving under occupation has priority over a principled stance with regard to Russian forced naturalization. Proponents of this "survival by all means" policy are Parliamentary Commissioner for Human Rights Dmytro Lubinets (Suspilne Novyny 2023) and Secretary of the National Security and Defense Council Oleksii Danilov (Dzerkalo Tyzhnia 2023). Unsurprisingly, a broad coalition of renowned human rights NGOs have also stated that protecting and preserving the lives of citizens in the temporarily occupied territories has the utmost priority. Moreover, the NGOs called upon the Ukrainian government to communicate in a more coordinated and careful way with those million Ukrainians living under the harsh conditions of Russian occupation (Zmina 2023). Finally, Ukraine's legislation on collaboration and its enforcement in court has raised concerns internationally and among Ukrainian civil society organizations (Burdyga 2023; EBU Investigative Journalism Network 2023b; Syniuk and Lunova 2023). It is unclear how many, if any at all, of the 10,000 cases of "treason and collaboration" (Bereziuk 2023) investigated by the Ukrainian Prosecutor General's office relate to the acceptance of Russian citizenship. Nonetheless, the sheer number of forced naturalizations alone already exacerbates tensions around this issue.

Wartime surveys are a mixed bag, and quantitatively measured public opinion on forced naturalization is no exception. Since the full-scale invasion of Ukraine, public opinion in surveys conducted in areas controlled by Ukraine has hardened, becoming less sympathetic towards those remaining in occupied and annexed territories, with Crimeans garnering somewhat more favorable views than Donbas residents (see Appendix 2). On the other hand, three quarters of respondents agree that Ukraine should maintain ties with Ukrainians residing in non-government-controlled territories. Between one third and one half of respondents do not recognize Russian passports for Ukrainians in occupied territories as genuine citizenship, and demonstrate understanding for forced naturalization if it helps in surviving under occupation. Overall, this appears to show that a strategy of "building a wall" (Burkhardt et al. 2022) and exchanging "land—or people—for [a] peace agreement" is not very popular among the Ukrainian population.

On the other hand, the surveys also demonstrate considerable regional differences in the attitudes towards passportization, with the Western macroregion being

the least forgiving. Moreover, the large discrepancies in the assessment of the acquisition of Russian citizenship indicates that public opinion is fairly malleable in this regard, depending heavily on framing by politicians, the media, and the survey questions themselves. In a survey by the Kharkiv Institute for Social Research (KhISR) from November 2022, only 14 percent chose the option that acquiring Russian citizenship "is a criminal offense" (Appendix 2, Figure 2). However, in an earlier survey from July 2022 commissioned by the NGO Opora, 51 percent of respondents agreed that the acquisition of a Russian passport should entail criminal liability (Appendix 2, Figure 4). The large difference is unlikely to be attributable to the time of data collection (before and after annexation); a much more likely cause is differences in the framing of the survey question and the response items offered. Just like policy discussions among decision-makers and lawmaking on collaboration, public opinion also appears to be in flux in this regard.

Implications for Policy Towards Occupied Territories and Transitional Justice

In this analysis, I have argued that passportization should be distinguished from the more general concept of forced naturalization. Passportization should be understood as an extraterritorial coercive state practice and a form of forced naturalization by application, while forced naturalization—which as an umbrella term comprises both extraterritorial and territorial practices—is essentially territorial in annexed areas, as Russia claims annexed territories as its own and automatically considers all residents as Russian citizens. Differentiating between a) the two distinct institutional frameworks of occupation and annexation and b) the level of coercion, four modi of passportization and forced naturalization of Ukrainians since 2014 can be discerned, between which the potential for agency and choice regarding acquisition or refusal of Russian citizenship of individuals—and hence responsibility and even potential criminal liability—markedly differed.

According to Ukrainian intelligence, by September 2023 around 450,000 residents of newly occupied terri-

tories had acquired Russian citizenship, as well as around 1,400,000 in the areas of the "DPR" and "LPR" (Terebinskaia 2023), a figure that appears to be largely in line with the official Russian data presented in Appendix 1. This means that the forced naturalization under study is of an enormous scale that cannot be ignored, but also that hundreds of thousands of Ukrainians remain in occupied territories who so far have refused to take a Russian passport. Devising policies and a coherent public messaging to both of these categories of Ukrainian citizens would come close to squaring this circle.

Nonetheless, Ukraine has demonstrated that it is able to provide some proactive solutions to apparently insoluble problems, e.g. by facilitating reentry for those deported to Russia back into Ukraine via third countries utilizing fast-track applications filed in Ukraine by a relative or a legal representative (Borisenko 2023). Even though a coherent legislative framework for defining collaboration and transitional justice measures particularly with respect to forced naturalization—is still in the making, preparations are clearly ongoing. Passportized Ukrainians, for example, can notify the office of the Parliamentary Commissioner for Human Rights about forced naturalization, information that is then passed on to law enforcement for documentation in the Unified Register of Pre-Trial Investigations on the Perpetration of Criminal Offenses by the Russian Occupation Authorities (Taranova 2023).

While this preparatory work will facilitate transitional justice measures after a potential liberation, it also puts those reporting forced naturalization under heightened risk of reprisals if Russian occupation authorities learn about this reporting. Bearing in mind the different institutional contexts and varying levels of coercion, future transitional justice measures should be individualized and tailored to the specific modi of forced naturalizations and segments of the population. While developments on the battlefield are currently in a stalemate, forced naturalizations are ongoing. Overall, this steady process creates grave legacies that will be felt for many years, even decades beyond a possible future peace agreement.

About the Author

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Appendix 1: Naturalizations in Russia

The full dataset from which the following figures have been created is available in open access as: Burkhardt, Fabian. 2023. "The Four Modi of Russia's Forced Naturalization of Ukrainians. Passportization and its ImplicationsforTransitionalJustice."v.1.0,DiscussData,https://doi.org/10.48320/FE07BFE1-E1E5-4700-B926-932B94AF2CC9.

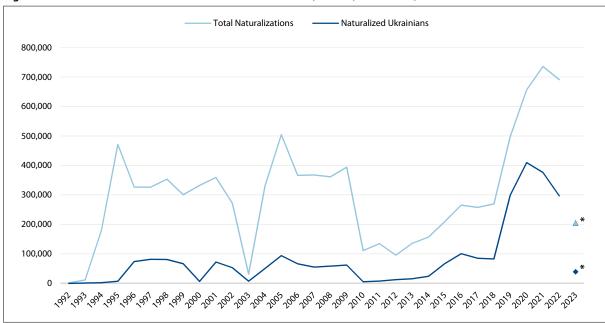


Figure 1: Absolute Number of Naturalizations in Russia (in Total, Ukrainians) in the Post-Soviet Period 1992–2022

Sources: Russian Ministry of Internal Affairs; Olga Chudinovskikh. 2014. Gosudarstvennoe regulirovanie priobreteniia grazhdanstva Rossiiskoi Federatsii: Politika I tendentsii, in: Working Paper Series WP8/2014/04, National Research University "Higher School of Economics"; Maksim Sidorzhevskii. Pasport dlia ukraintsev po uproshchennoi skheme: ugrozy Kievu, Deutsche Welle, 21 July 2017.

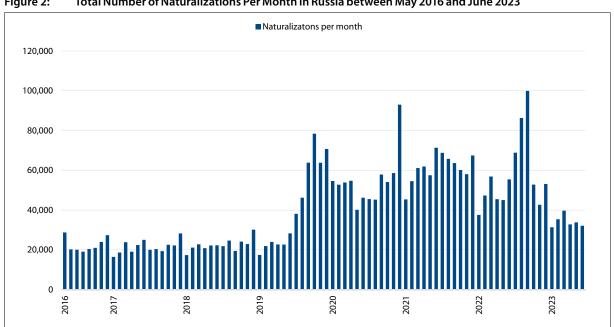


Figure 2: Total Number of Naturalizations Per Month in Russia between May 2016 and June 2023

 $Source: Own \ calculations \ based \ on \ data \ from \ the \ Russian \ Ministry \ of \ Internal \ Affairs \ downloaded \ from \ https://mbd.p\phi/Deljatelnost/statistics/migracionnaya.$

^{*} Data for 2023 is preliminary for the months January to June.

■ Ukraine (quarterly) ■ All other countries (quarterly) 100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% Q1 2018 Q1 2019 Q4 2019 Q2 2018 Q3 2018 Q4 2018 Q2 2019 Q3 2019 Q1 2020 Q4 2020 Q1 2017 Q2 2017 Q4 2017 Q3 2020 Q1 2022 Q2 2022 Q3 2017 Q1 2021 Q2 2021 Q3 2021 Q4 2021 Q4 2016

Figure 3: Share of Naturalized Ukrainians of the Total Number of Naturalized Persons in Russia between the Third Quarter in 2016 and the Second Quarter in 2023 (Quarterly Aggregated Data, in Percent)

 $Source: Own \ calculations \ based \ on \ data \ from \ the \ Russian \ Ministry \ of \ Internal \ Affairs \ downloaded \ from \ https://mbd.p\phi/Deljatelnost/statistics/migracionnaya.$

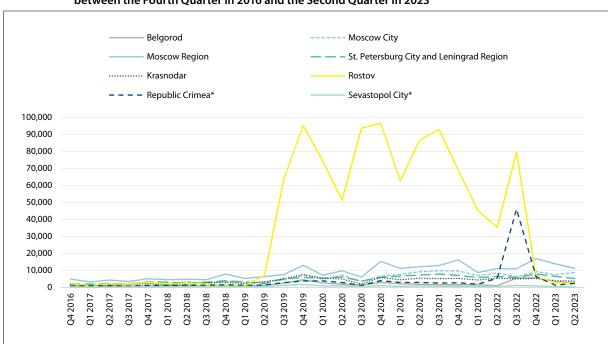


Figure 4: Absolute Number of Naturalizations in Selected Russian Regions, and Annexed Crimea and Sevastopol, between the Fourth Quarter in 2016 and the Second Quarter in 2023

 $Source: Own\ calculations\ based\ on\ data\ from\ the\ Russian\ Ministry\ of\ Internal\ Affairs\ downloaded\ from\ https://mbd.p\phi/Deljatelnost/statistics/migracionnaya.$

^{*} Crimea and the city of Sevastopol are internationally recognized territories of Ukraine. After their annexation, Russia considers them as two federal subjects of the Russian Federation.

New passports (domestic, per month)

1,000,000

900,000

600,000

400,000

200,000

100,000

0

2016

2017

2018

2019

2020

2021

2022

2023

Figure 5: Absolute Number of Newly Issued Passports in Russia between May 2016 and June 2023 (both Domestic and Foreign Travel IDs, Monthly Data)

 $Source: Own \ calculations \ based \ on \ data \ from \ the \ Russian \ Ministry \ of \ Internal \ Affairs \ downloaded \ from \ https://mbd.pdp/DeljateInost/statistics/migracionnaya.$

Appendix 2: Public Opinion in Ukraine on Residents of the Territories under Russian Occupation

November 2022

■ Yes ■ Rather yes ■ Rather no ■ No, we should not ■ Difficult to answer

Figure 1: Should Ukraine Maintain Ties with the Residents of the Temporarily Occupied Territories? (in %, November 2022

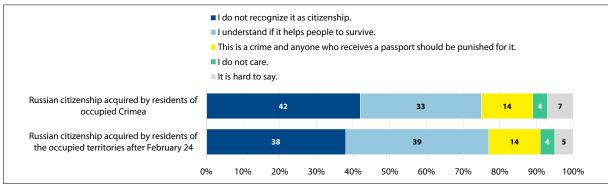
75 10 2 8 5

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Source: Denys Kobzin, Andriy Chernousov, Svitlana Shcherban (2022): Ukraine's postwar future, Kharkiv Institute for Social Research, p. 11. Fieldwork: 05 November 2022 to 24 November 2022.

Figure 2: Attitudes Towards Russian Citizenship Received by Residents of the Temporarily Occupied Territories of Ukraine and Crimea after 24 February (in %, November 2022)

Wording of the question: "What do you think about the Russian citizenship acquired by residents of the temporarily occupied territories after the beginning of the all-out aggression? What do you think about Russian citizenship acquired in temporarily occupied Crimea?"



Source: Denys Kobzin, Andriy Chernousov, Svitlana Shcherban (2022): Ukraine's postwar future, Kharkiv Institute for Social Research, p. 11. Fieldwork: 05 November 2022 to 24 November 2022.

Cold ■ Warm Neutral ■ Hard to say Residents of the So-Called DPR/LPR 10% 30% 40% 50% 60% 70% 80% 90% 100% May 2018 12 50 38 July 2020 50 April 2022 27 37 31 August 2022 14 32 **Inhabitants of Occupied Crimea** July 2020 52 April 2022 August 2022 22 45

Figure 3: The Dynamics of Attitudes Towards ...

Source: Ratinggroup UA (2022). Seventeenth national survey: Identity. Patriotism. Values (17–18 August 2022).

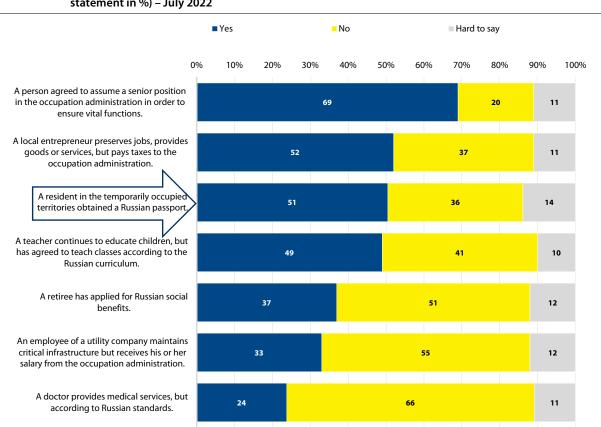


Figure 4: Criminal Liability for Various Types of Collaboration with Russian Occupation Forces (agreement with statement in %) – July 2022

Source: Opora (2022). Demand for a "strong hand", fast and structured news and regulation of the media space has increased during the full-scale war in Ukraine - survey, p. 21. Fieldwork: July 2022.

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- "Report of the Independent International Commission of Inquiry on Ukraine", A/78/540, 19 Oct. 2023, https://www.ohchr.org/sites/default/files/documents/hrbodies/hrcouncil/coiukraine/A-78-540-AEV.pdf
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 February 2022 23 May 2023", 27 June 2023, https://www.ohchr.org/en/documents/country-reports/detention-civilians-context-armed-attack-russian-federation-against
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- "Situation of human rights in the temporarily occupied Autonomous Republic of Crimea and the city of Sevastopol, Ukraine", A/HRC/53/64, 26 May 2023, https://www.ohchr.org/en/documents/country-reports/ahrc5364-situation-human-rights-temporarily-occupied-autonomous-republic
- "Report on the human rights situation in Ukraine, 1 August 2022 31 January 2023", 24 March 2023, https://www.ohchr.org/en/documents/country-reports/report-human-rights-situation-ukraine-1-august-2022-31-january-2023
- "OHCHR report on the Treatment of Prisoners of War and Persons Hors de Combat in the Context of the Armed Attack by the Russian Federation against Ukraine: 24 February 2022 23 February 2023", 24 March 2023, https://www.ohchr.org/en/documents/country-reports/ohchr-report-treatment-prisoners-war-and-persons-hors-de-combat-context
- "Killings of civilians: summary executions and attacks on individual civilians in Kyiv, Chernihiv, and Sumy regions in the context of the Russian Federation's armed attack against Ukraine", 07 Dec. 2022, https://www.ohchr.org/en/documents/country-reports/killings-civilians-summary-executions-and-attacks-individual-civilians
- "Report on the human rights situation in Ukraine, 1 February to 31 July 2022", 27 Sept. 2022, https://www.ohchr.org/en/documents/country-reports/report-human-rights-situation-ukraine-1-february-31-july-2022
- "The situation of human rights in Ukraine in the context of the armed attack by the Russian Federation, 24 February to 15 May 2022", 29 June 2022, https://www.ohchr.org/en/documents/country-reports/situation-human-rights-ukraine-context-armed-attack-russian-federation
- For a full list of OHCHR reports on Ukraine see <a href="https://www.ohchr.org/en/documents-listing?field_content_category_target_id[182]=182&field_geolocation_target_id[1136]=1136&field_published_date_value[min]=&field_published_date_value_DESC&page=0

 published_date_value[max]=&sort_bef_combine=field_published_date_value_DESC&page=0

International Criminal Court (ICC)

• An overview of the ICC investigation of alleged crimes committed in the context of situation in Ukraine since 21 November 2013 is available here: https://www.icc-cpi.int/situations/ukraine

Global Rights Compliance

• Agriculture weaponised. The illegal seizure and extraction of Ukrainian grain by Russia, November 2023, https://globalrightscompliance.com/wp-content/uploads/2023/11/20231115-Grain-Report-External.pdf

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• "Interim reports on reported violations of international humanitarian law and international human rights law in Ukraine", 20 July 2022, 14 Dec. 2022 and 17 July 2023, https://www.osce.org/odihr/537287

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International Commission on Missing Persons (ICMP)

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• "Thousands of Ukraine civilians are being held in Russian prisons. Russia plans to build many more", 13 July 2023, https://apnews.com/article/ukraine-russia-prisons-civilians-torture-detainees-88b4abf2efbf383272eed9378be13c72

ANALYSIS

Russia's Economic Occupation of Southeastern Ukraine

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Abstract

Since Russia's full-scale invasion of Ukraine in February 2022, Russia has been pursuing a comprehensive campaign to incorporate the new territories that it has occupied into the Russian Federation's economic, administrative and legal space. With the front line largely static during 2023, Russia has used the time to seize Ukrainian businesses and redistribute assets to loyal locals or Russian business groups. Russia is also pouring billions of dollars into a reconstruction campaign, centred on Mariupol. Russia hopes to use these economic levers to consolidate political and economic control over the territories, making it increasingly difficult for Ukraine to regain and reintegrate these lands in the future.

Introduction

As the Russian military presence in south-eastern Ukraine has become more entrenched, analysts have been shifting to attempting to understand the mechanisms and dynamics of Russian occupation policy, including its economic aspects (Lewis, 2023; Malyarenko & Kormych). Current policy can be considered a further development of policies conducted by Russia in different zones of Ukraine since 2014.

The areas of Ukrainian territory occupied by Russia in November 2023 are best considered as three zones at different stages of illegal occupation and

incorporation into the Russian political and administrative space.

First, in Crimea and Sevastopol, after a fraudulent referendum and annexation in 2014, Russia has spent the past eight years introducing its own legal, economic and political norms and aligning the peninsula with Russian political realities.

By contrast, the unrecognised de facto states of the Donetsk People's Republic (DPR) and the Luhansk People's Republic (LPR) existed in a legal grey zone after 2014, with their own passports, laws, criminal codes and government structures, all the while being

ultimately controlled by Moscow. On 30 September 2022, the DPR and LPR were annexed by Russia following sham referendums. They claim the entire territory of Ukraine's Donetsk and Luhansk Oblasts, although the Russian military does not control all this land.

Third, Russia claims to have also annexed Zaporizhzhia and Kherson Oblasts, although it does not control large parts of these provinces either. Russia was forced to withdraw from territories on the right bank of the Dnipro in Kherson Oblast, including the city of Kherson, in October 2022.

In international law, all these territories belong to Ukraine, and almost no state is willing to recognise the legal sovereignty Russia claims over these lands in its constitution. Nevertheless, over the course of 2022 and 2023, the Russian authorities moved quickly to consolidate administrative and economic control in the newly occupied territories.

Seizure of Businesses

Initially, in the spring of 2022, as Russian forces quickly overran many towns in southern Ukraine, the Russian occupation was often chaotic. Russian forces carried out brutal repressions against any sign of opposition to the occupation, with reports of hundreds of detentions and killings of those who refused to cooperate with Russian forces. Although numbers are uncertain, probably at least half the population of the newly occupied areas fled Russian occupation, either to government-controlled Ukraine or—in the eastern districts—to the Russian Federation (Lewis 2023: 6). In many places there was looting and marauding, with different militias and military units sometimes competing over assets.

Soon the occupation became more organised. The Russians set up Military-Civilian Administrations (VGAs) to manage the occupied areas. Although these were fronted by local politicians, real control was in the hands of the FSB and the military. Soon, however, Russian civilian officials were also deployed—many of them from the stable of technocrats developed by Sergei Kiriyenko, the First Deputy Chief of Staff of the Presidential Administration who has played a key role in the occupied territories. For example, Anton Koltsov, formerly the First Deputy Governor of Vologda Oblast, was installed as 'head of government' in Zaporizhzhia Oblast in July 2022. According to local pro-Russian official Vladimir Rogov, his job was to 'help us integrate into Russian realities'.

In August 2022, the Russian-backed government in Zaporizhzhia set up a new 'Ministry of Property and Land Relations', which began to publish almost daily lists of so-called 'ownerless' or 'abandoned' property belonging to people who had fled the region. According to the regulations, unless the owner reported to

the occupation authorities within three days to claim their business or property, it was effectively nationalised. Everything from nail bars and corner shops to huge mines and factories were seized by the occupation authorities and given over to new managers. Thousands of Ukrainian companies were reregistered and are now listed in the Russian corporate database, the Single State Register of Legal Entities (EGRYuL) (Lewis 2023).

Similar seizures were happening across the four occupied regions. Some of the biggest takeovers were in the mining and metals sector, which dominated the Donbas. The Russian military took control of the Zaporizhzhia Iron Ore Plant (ZZRK), one of Ukraine's biggest private ore mining companies, in June 2022. By July, the plant had been reregistered in the Russian corporate database under a new name—the Dneprorudny Iron Ore Plant. The Tokmak granite quarry in Zaporizhzhia Oblast was also seized in June 2022 after the management refused to cooperate with the Russians, according to reports (Talanova et al. 2023). By the end of the year, it too had been reregistered in Russian corporate records with a new owner from Russian-controlled Crimea. Meanwhile, Mariupol's famous steel plant, the MMK Ilych factory, is now emblazoned with portraits of President Putin, Chechen head Ramzan Kadyrov, and head of the DPR Denis Pushilin. Media reports claimed that Chechnya-linked business interests were in control of the factory (Davlyatchin 2023).

The other attractive sector in the occupied territories for Russian business interests has been agriculture. Much of Zaporizhzhia Oblast is prime farmland. Ukrainian companies HarvEast, Nibulon Ltd and Agroton Public Ltd have accused a major Russian agrocompany of seizing some 400,000 acres of their land (MacDonald & Pyrozhok 2023). The occupation authorities set up a new company in Zaporizhzhia, the State Grain Company, which reportedly bought up the harvest and exported it illegally through Crimea and Mariupol. According to the Russian agriculture inspectorate, 24 grain ships left Mariupol port between January and August 2023 (Rosselkhoznadzor). A new shipping route between Russia and the occupied territories was being developed to supplement the land route: ships left the port carrying grain and returned with building materials brought in for the reconstruction programme.

Pressure on Ukrainian Business

Those who fled the region could only watch as their businesses and lands were taken over by Russia or its proxies. Those who remained (Ukrainian officials believe around 30% of pre-war entrepreneurs in Mariupol were still working in 2023) faced different pressures, from informal 'taxes' and shakedowns to the imposition of Russian bureaucracy, which has forced

them into uncomfortable cooperation with the occupation authorities.

This bureaucratic occupation has been proceeding apace, often unnoticed by the outside world. More than 50 federal laws have been adopted to facilitate the incorporation of the regions into Russia's legal space. The Russian government plans to complete the transition of the annexed regions to the application of all Russian laws and regulations by 1 January 2026 (Izvestiya, 2022).

For Ukrainian businesses in occupied territories, this means having to register with the Russian tax authorities, use Russian banks, apply for Russian licences, and follow Russian economic regulations. The occupation authorities closed Ukrainian banks early in the occupation. These were replaced by branches of Promsvyazvbank (PSB), the bank that finances the Russian defence sector. One other bank, the Centre for International Settlements Bank (CMR Bank) has also begun operating. But it is difficult to get a Russian bank account without a Russian passport, and so—reluctantly—many people are taking up Russian identity documents. According to the Russian interior ministry, by September 2023 some 2.8 million Russian passports had been distributed in the occupied territories (Gromova and Degotkova, 2023).

Reconstruction

While many Ukrainians have lost their businesses, Russian companies have been making money in an emerging war economy. Deputy Prime Minister Marat Khusnullin oversees the Russian government's multi-billion-dollar development plan (2023–25) for the annexed regions. One strand of the plan aims to build new transport infrastructure across the territories, primarily to facilitate the movement of Russian military supplies to the front line. Roads have been upgraded, a new highway is being built between Mariupol and Rostov, and a new rail network is being developed. Russia is intent on developing its land corridor to Crimea as a permanent route to resupply the peninsula.

The reconstruction programme also aims to repair civilian infrastructure destroyed in Russia's military assault. At the centre of this effort is an ambitious reconstruction plan for Mariupol, the city famously destroyed by a brutal Russian siege in 2022. This reconstruction programme has now become a centrepiece of Russian propaganda. In August 2022, the government unveiled a glossy brochure with plans for an idyllic seaside city of half a million people, to be realized by 2035. Tens of thousands of workers have been brought in to construct new apartment blocks and social infrastructure.

These construction projects are often featured on Russian television as part of Russia's wartime propaganda. But away from the cameras, the social and economic reality remains grim for most Mariupol residents. Meanwhile, Russian companies are profiting from multibillion-dollar reconstruction budgets. Contracts are handed out through opaque tenders to politically connected subcontractors. Mariupol's flagship construction site, the Nevsky micro-district, which President Putin visited in March 2023, is being built by the Voenno-Stroitelnaya Kompaniya [Military Construction Company—VSK], the main construction company of Russia's Ministry of Defence. VSK in turn subcontracts the work to Olimpsitistroy, a company with a long history of winning construction projects from the military (Lewis 2023). Well-connected companies from Moscow and St. Petersburg are also benefiting from these state contracts. St. Petersburg companies have been particularly active, as city governor Alexander Beglov has used a twinning arrangement with Mariupol to revive his own political fortunes.

Russian officials have openly compared the plans for Mariupol to those of Grozny, which was rebuilt in the 2000s in a campaign with the slogan 'No traces of war'. During a visit in August 2023, Khas-Magomed Kadyrov, the mayor of Grozny, visited Mariupol and declared that his city was now twinned with Mariupol. Just like Grozny, the reconstruction of Mariupol will also comprise an architecture of forgetting-not just the memory of the war and the mass atrocities against the civilian population, but the entire history of Mariupol as a Ukrainian city. Russian authorities repainted signs in Russian colours and have attempted to remove all historical, linguistic and symbolic references to Ukraine. In October 2022, they took down a memorial to victims of what Ukrainians call the Holodomor, the Sovietengineered famine in the 1930s in which millions of Ukrainians died.

There are fears that Moscow will use immigration from Russia to maintain long-term control of the occupied territories. Residents complain that some new apartment blocks are not designed to house local people, but rather appear to be reserved for incoming Russians. The business takeovers in the occupied territories are also squeezing out Ukrainians. Many of those who have illegally seized Ukrainian businesses are entrepreneurs from Russia or Crimea. This forced Russification of the occupied territories is augmented by imposing Russian education in the schools, enforcing Russian internet restrictions, banning Ukrainian media, and promoting Russia's nationalist and propagandistic media outlets.

Collaboration and Resistance

As Russia's administrative occupation deepens, the difficulties for the Ukrainian population are becoming more complex. Although a minority of residents have supported the Russian occupation, anecdotal evidence suggests that there is still a high level of hostility to

the Russian military among those who remained under Russian rule. But for most residents in work or running a business, the Russian presence forces them to make complex and uncomfortable choices that may have legal consequences.

A law adopted by the Verkhovna Rada in March 2022 added two new articles to the Criminal Code, on 'collaboration activity' (Article 111-1) and 'aiding and abetting the aggressor state' (Article 111-2). These were believed to be necessary at the height of the Russian invasion to dissuade people from helping the Russian military.

Under conditions of longer-term occupation, however, the laws may be too broad. For business, in particular, Article 111-1 outlaws the 'implementation of economic activities in cooperation with the aggressor state, [or] illegal authorities created in the temporarily occupied territory, including the occupation administration of the aggressor state'. This definition gives wide scope to prosecute anybody forced to interact with the Russian authorities, such as a business that pays Russian taxes or sells food or other materials to Russian entities. A legal analysis by a coalition of human rights groups concludes that Art. 111-1 may criminalize 'perfectly legitimate activities', including humanitarian aid, medical services, or running a grocery store (ZMINA et al., 2023, 7).

This is a sensitive issue in Ukraine, but it is also used by Russia as part of its narrative that warns residents against a return to Ukrainian rule. To ensure successful longer-term reintegration of the occupied territories, the Ukrainian authorities may seek to develop a more nuanced approach to the difficult issue of collaboration, to distinguish between those who willingly promoted Russian rule and those forced to engage with the occupation authorities in order to survive.

Conclusion

While international attention has been focused on fighting on the front line, Russia's bureaucratic machine has been quietly taking over the everyday realities of life in the occupied Ukrainian territories. Russian-installed occupation authorities have dispossessed Ukrainian business and redistributed assets to their local proxies and to Russian companies. Russian laws and regulations are being imposed on the population. As hopes for a successful Ukrainian counteroffensive have faded, attention is beginning to turn to other potential mechanisms to raise the costs of occupation for Russia. Returning these lands to Ukrainian control may turn out to be a longerterm goal, but understanding the nature of Russia's administrative and economic occupation is an important starting point.

About the Author

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Nuclear Power in Wartime: Zaporizhzhia NPP as a Test Case for Nuclear Safety

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Abstract

Russia's war of aggression against Ukraine is the first interstate war in human history in which civilian nuclear facilities have been attacked. The article discusses the situation at Zaporizhzhia Nuclear Power Plant, Europe's largest NPP, which was occupied by Russia in March 2022. The six-unit plant is now a theatre of war and a test case for nuclear safety under wartime conditions. The safety issues analysed in this report are also representative for the operating nuclear reactors in Ukraine which are under Ukrainian control. Numerous abnormal operating situations have occurred at Zaporizhzhia as a result of the war. The staff have to ensure the safety of the plant under the terror of the occupying forces. So far, emergency situations have been managed without severe damage to the nuclear installations. However, there is concern that a major nuclear accident could occur in Zaporizhzhia. The fear of such an accident is also itself an instrument of hybrid warfare.

Introduction

Russia's war against Ukraine is the first interstate war in human history in which civilian nuclear facilities have been attacked. The facility in question, the Zaporizhzhia Nuclear Power Plant (NPP), was forcibly occupied by the attackers on March 4, 2022. It experienced abnormal operating states several times as a result of this act of war. By attacking an operating nuclear power plant, Russia broke international law: Article 56 of the Additional Protocol to the Geneva Convention "Relating to the Protection of Victims of International Armed Conflicts" prohibits attacks on objects such as dykes, dams and nuclear power plants if they may release forces dangerous to the civilian population.

The IAEA noted that the seven pillars on which nuclear safety is based had already been destroyed or had their stability threatened in Zaporizhzhia as a result of the attack. The prerequisites for nuclear safety are:

- 1) The physical integrity of the facilities;
- 2) The full functioning of safety and monitoring systems;
- 3) The operating crews must be able to work and make decisions without being bothered;
- 4) A safe external power supply must be ensured;
- 5) The supply with diesel fuel for emergency backup generators, spare parts, food etc. must be guaranteed;
- 6) Monitoring of the environment and emergency response measures must be guaranteed; and
- Unimpeded communication of the plant with the operating organization and the nuclear regulatory authority is required.

Russia did not follow the IAEA's repeated demand for demilitarization of the power plant site as the basic prerequisite for safety. Observers speak of "nuclear piracy," which differs from nuclear terrorism in that here it is a state posing the threat to nuclear security (IAEA 2022a, Alkis/Goldblum 2023).

The Human Factor

In October 2022, the occupiers unlawfully transferred the plant into the possession of the Russian nuclear power company Rosenergoatom (Pavlysh 2022) and installed an occupation management (Slovo i Dilo 2022, Ukrinform 2022, SNRIU 2023, Enerhoatom 2023a). Many members of the plant staff who were employed in departments not directly necessary for maintaining operations fled or were evacuated to areas under Ukrainian control. The occupation station manager stated at the end of 2022 that about half of the prewar workforce of 11,000 had left, and that 2,500 employees continued working on the plant site every day. Of the once 80,000 inhabitants of the nuclear city of Enerhodar, only 15,000 people remained due to flight and forced evacuations, especially of children and young people, to Crimea, Russia and Belarus (RIA Novosti 2022; Leite 2022; City of Enerhodar 2023; Voloshko 2023).

The remaining power plant workforce has been subjected to downright terror since the beginning of the occupation. This includes violent assaults by the soldiers present on the plant premises, arrests, disappearances and systematic torture in now around 1,000 cases (Truth Hounds 2023; Leite 2022; Avdeenko 2022). Since the fall of 2022, employees have been forced to sign employment contracts with Rosenergoatom and take on Russian citizenship. Those who refuse are subjected to reprisals and locked out; unofficial sources suggest up to 3,000 employees have been affected in this way. A number of ZAES employees are passively resisting and risking their lives by giving information to the outside world. Much of the inside information communicated through the legit-

imate Ukrainian nuclear operator, Enerhoatom, comes from sources such as these (Enerhoatom 2023b). This terror is also a direct threat to nuclear safety, as intimidated, injured, overtired employees, much less those not allowed to work in the first place, cannot serve the needs of the plant in the necessary capacity.

The Plant

The six nuclear units in Zaporizhzhia contain pressurized water reactors of the Soviet type VVER-1000-V320 with a capacity of 1,000 megawatts (MW) each. This is the most advanced type of late Soviet reactor, similar in standard to those of Western plants of the same generation. This should be mentioned in view of the many misunderstandings about Ukrainian nuclear power plants circulating in the Western public. The VVER should not be confused with the RBMK reactor that suffered an accident in Chernobyl.1 The basic concept of the VVER-1000 has many similarities with German nuclear power plants with pressurized water reactors: it is a monobloc unit with a "nuclear island" consisting of a reactor building with a four-loop primary circuit, an auxiliary building, and a turbine hall in which the non-nuclear parts of the steam generation system and the electrical machinery are located (BAES TsPP 2011; ENSREG 2012).

Nuclear Safety in Wartime

Despite the Russian attempts to reinterpret the occupation of Zaporizhzhia NPP into a normality clothed in formal legal forms, this "normality" is a mere illusion in view of the technical-military vicissitudes. During the summer of 2022 and the unceasing Russian artillery attacks on the Ukrainian power infrastructure in the fall and winter of 2022/23, regular operation of the plant could no longer be maintained. Therefore, on September 11, 2022, the last unit still in operation was shut down (Enerhoatom 2022a, Zaporiz'ka AES 2022). As of December 2023, Zaporizhzhia has since then provided no power to the Ukrainian grid.

After lengthy negotiations between Kiev, the IAEA headquarters in Vienna, and Moscow over safe travel routes, Russia agreed to allow an IAEA mission to enter the plant through Ukrainian-controlled territory. The IAEA Support and Assistance Mission to Zaporizhzhya (ISAMZ) consisted of several inspectors, two of whom remained at the plant as a permanent IAEA monitoring team. This was a clear security gain for the plant, and gave the Ukrainian side hope that any arbitrary or reckless Russian actions at the power plant site would now be observed and documented by a neutral party (IAEA 2022b).

With the attack on the Kakhovs'ka HES hydropower plant and its dam on June 6, 2023, the situation of Zaporizhzhia NPP was once again aggravated. In addition to the danger of a collapse of the external power supply constantly hovering over the plant, it experienced the loss of its ultimate heat sink, as the power plant's cooling pond was dependent on supplementary water from the reservoir. So far, the level of the cooling pond could be kept stable (Enerhoatom 2023c). The most recent episode of heightened tension was a communication war between Russia and Ukraine in early July 2023 over the alleged or actual mining of the plant, both sides accusing each other of preparing military actions against the NPP. Ultimately, it was indeed confirmed that Russian troops have laid minefields at the fence of the plant premises, though no further military actions are known to have taken place as of December 2023 (HUR MOU 2023, Enerhoatom 2023d, IAEA 2023a).

The Safety Concept of the Ukrainian Nuclear Power Plants

The safety challenges at Zaporizhzhia under wartime conditions are manifold. Statements about the safety systems and certain emergencies that have occurred or may occur during operation apply not only to Zaporizhzhia NPP, but also to the identical units at other Ukrainian sites: Rivne-3 and 4, Khmel'nytskyi-1 and 2, and South Ukraine-3. Units 1 and 2 at the South Ukraine plant are earlier VVER-1000 versions that may have slight variations.

The safety design of nuclear power plants is based on three overriding protection goals:

- Subcriticality of the reactor in the event of an accident—i.e., the self-sustaining chain reaction in the reactor core must be reliably stoppable and must not revive automatically;
- Heat transport from the reactor, i.e., the residual decay heat generated in the fuel assemblies even after the shutdown of the reactor, must be removed unhindered; and
- 3) Activity retention, i.e., there must be several barriers to prevent the release of radioactive fission products from the fuel assemblies.

These three protection goals are served by the safety equipment of a nuclear plant: various shutdown systems for subcriticality; operational and emergency cooling systems for heat transport; emergency power systems to maintain safety functions even in the event of a grid collapse; and specially sealed plant rooms, negative pressure maintenance, and hermetic reinforcements for reactor buildings (containment) for activity retention.

¹ The RBMK-1000 reactor at Chernobyl NPP was a graphite-moderated pressure-tube boiling water reactor whose design features made the system unstable in certain operating conditions.

Most safety systems follow certain design principles to make them fail-safe: redundancy (providing multiple safety trains); diversity (using different operating principles to achieve a given protection goal); and spatial separation. These precautions are designed to prevent common-cause failures, in our particular case, from direct destruction and fire due to artillery attacks or other military action on the site.

The safety systems at Zaporizhzhia NPP are designed with triple redundancy, i.e., one train of the emergency cooling system or one of three emergency diesel generators per unit is sufficient to control the design basis accident.² Each redundancy has its own emergency power supply. The design of the safety systems is similar to that of German nuclear power plants, with high-pressure and low-pressure emergency cooling systems, passive emergency cooling via accumulators, high-pressure boron injection, an emergency feedwater system, and filtered venting in case of overpressure inside containment.³

A Nuclear Site at War

Military actions of any kind on the power plant site can cause damage that may be safety-relevant. Russia's troops have placed military equipment in the turbine halls and between the units, increasing the risk of explosions and fires (Enerhoatom 2022b). Therefore, of great interest is how robust Zaporizhzhia NPP's structures are.

The VVER-1000-V320 have reinforced concrete containments comparable to those of the French and most US plants (BAES TsPP 2011, 20–23). The primary circuit equipment and the spent fuel pool are situated beneath this 1.2-meter-thick containment, which also features an 8-millimeter steel liner. The emergency cooling systems are thus located behind a double barrier consisting of the walls of the auxiliary plant building and the reactor containment.⁴

The VVER-1000 containment is designed to withstand a pressure buildup of up to 5 bar overpressure due to a core meltdown accident, sufficient to withstand the maximum earthquake expected at the site, the impact of a small aircraft (10 tons at 720 km/h) and explosion pressure waves of 2 bar. Experts therefore expect that random hits from heavy weapons will not disintegrate a VVER-1000 containment, but targeted continuous fire would (BAES TsPP 2011, 21–23).

In addition to the six reactors and two large special buildings (in which radioactive materials and components are also handled), there is an open-air interim spent

fuel storage facility at Zaporizhzhia NPP which is also subject to the effects of warfare and which must also be taken into account in risk analyses. This also applies to the pipeline bridges which, due to the spatial division of the radiation controlled area (RCA) between reactor buildings and special buildings, contain pipelines in which radioactively contaminated liquids are transported back and forth. Apart from the reactor buildings, none of these structures is structurally reinforced in such a way that radioactive releases in the event of bombardment can be ruled out. In addition, on the premises of the NPP, which covers more than 300 hectares, there are open-air facilities that are significant for residual heat removal from the reactors and the spent fuel pools, e.g. the spray ponds in which the essential service cooling water is cooled, as well as other buildings, pumping stations and containers for cooling water treatment and supply of demineralized water and nitrogen (Wikimedia Commons 2023, SNRIU 2023, BAES TsPP 2011, 15-20).

Power Supply at Risk

Of greatest concern is the infrastructure of the electrical transmission and distribution grids. In a worst-case scenario, hits on open-air switchgear or important transmission lines could cause the national grid of Ukraine, or at least that of large parts of the country, to collapse. Zaporizhzhia NPP has a total of seven national grid connections, plus reserve connections to the DniproHES and Kakhovka hydropower plants. At the NPP, there are three 5.6 MW emergency diesel gensets per unit, plus two mobile "common-unit" generators that can supply any two units (SNRIU 2023, 9–17). As early as mid-March 2022, three of the four 750 kilovolt (kV) and one of the three 330 kV grid connections collapsed for the first time, and for weeks the power plant was only connected to one 750 kV line (IAEA 2023b, WENRA 2022).

In the event of loss of offsite power (LOOP) while an NPP is operating, there are two possible scenarios, both of which having already occurred during wartime operations around Zaporizhzhia and other Ukrainian NPPs.

The first case is load shedding to station demand supply, meaning that a nuclear plant, due to grid collapse, cannot feed electricity to the grid anymore, but can produce for the demands of the plant itself. In this case, one unit at minimum load operation supplies the entire power plant with electricity. This case occurred

² The "design basis accident" is the gravest accident which is expected to be managed by the safety systems. In the VVER-1000, the DBA is the maximum loss of coolant accident, a complete rupture of a 850mm pipe in a main cooling circuit.

³ The safety systems of the VVER-1000 V320 plants are designed according to the n+2 principle. "N" here denotes the number of systems necessary for accident control, "2" the additional two systems forming the reserve (BAES TsPP 2011, 139–141).

⁴ Own inspections of Rivne NPP during field work, Units 3 and 4 (identical in construction to Zaporizhzhia-1 to 6), 2015–2018.—Rivne NPP, Plan pomeshchenii Reaktornogo Otdeleniia, Kuznetsovsk.

at Zaporizhzhia-6 from September 9 to 11, 2022. But such operation is not a permanent solution, as the risk of a turbine and reactor trip due to vibrations and other unstable parameters is relatively high. In the meantime, this mode of operation is ruled out in Zaporizhzhia, as it can be used only when the station is producing power.

In the case of unit blackout, if the unit is at full load, it is automatically shut down and transferred to fast-track residual heat removal procedures. The power supply for the vital functions, first of all for emergency cooling systems, is provided by the emergency diesel generators. The large equipment needed for power operation, such as main coolant and feedwater pumps, consume too much power to be backed up by emergency power systems. This means that if the emergency situation persists, it is not possible to restart the plant until offsite power supply is restored (SNRIU 2023, 15-17). In Zaporizhzhia, unit blackouts have occurred eight times so far, the longest lasting over 40 hours. The Khmelnytskyi Nuclear Power Plant, which has two VVER-1000 units, also experienced a unit blackout on November 15, 2022 (UBO-List, see Appendix 1).

Only if the grid connection in Zaporizhzhia were to break down and all 20 emergency diesel generators failed would there be a so-called "station blackout" (SBO), a situation comparable to the accident at the Fukushima Daiichi plant in 2011. The VVER-1000 plants, with their horizontally installed steam generators, have relatively large reserves for heat transport compared to Western plants (ENSREG 2012, 20). In the SBO case, a meltdown could be delayed by a maximum of 16.5 hours with emergency measures. However, this is three times more time than was available in Fukushima.

This grace period in the case of a station blackout is currently most relevant to the operating plants in Right-bank Ukraine.⁵ As Zaporizhzhia has been offgrid since the shutdown of Units 5 and 6 on September 11, 2022, the grace period has been extended to several days because much less decay heat needs to be removed from the fuel assemblies (Müllner/Hrdy 2023). This task is performed by the low-pressure residual heat removal systems as long as the reactor core is loaded, and by the pool cooling systems that cool the fuel assemblies in the spent fuel pool.

So far, the emergency power supply in Zaporizhzhia has proven to be very robust. The unit blackouts have lasted between a few hours and almost two days until the grid connections were repaired. There were no failures of the backup power supply for the residual heat removal systems during these periods. In the event of a prolonged emergency power outage, the plant must

be replenished with diesel fuel after no more than nine days. However, under wartime conditions, both fuel supply and repair of the national grid could conceivably be hampered for significantly longer. So far, Zaporizhzhia NPP has been supplied with fuel by convoys of both Ukrainian operator Enerhoatom and Russia.

"Hot Shutdown" as a Safety Issue

At Zaporizhzhia NPP, one unit at a time is operated in the so-called "hot shutdown" mode, which serves to provide for the supply of process steam for the plant and for Enerhodar's district heating. In this operating mode, no nuclear chain reaction is maintained in the reactor core, but the system is kept at nominal temperature and pressure with waste heat from running the main coolant pumps and with the pressurizer heating.

The IAEA and the Ukrainian nuclear regulator argue that the steam supply should be provided by a temporary external boiler system because a cold, subcritical, unpressurized reactor state is the safest condition for the plant in light of the ongoing war. In the event of a station blackout with a cold reactor, emergency responders are given several days to take remedial action with a provisional emergency cooling system.

If the reactor is kept in hot shutdown, as it currently is, the time to core damage is reduced to a maximum of 24 hours due of the high temperature in the primary circuit (IAEA 2023c). Another problem is the occurrence of steam generator heating tube leakages, which are exacerbated by this mode of operation and lack of maintenance. In this current case of "hot shutdown," radioactive primary coolant leaks into the secondary circuit, which also means that the protection goal of activity retention is compromised (Enerhoatom 2023e, Zaporiz'ka AES 2023).

Water Supply at Risk

A nuclear power plant has manifold cooling requirements both during power operation and during shutdown, especially for residual heat removal, but also for the supply of other safety-relevant cooling tasks, e.g. for the emergency power diesel generators. These functions have been affected by military actions. Although the NPP has an autonomous cooling pond with reserves that last for months given the current lower cooling demand, replenishment of this cooling pond is in turn dependent on a feed from the Kakhovka reservoir. Since the destruction of the Kakhovka dam, the water level in the reservoir has dropped below the level at which the nuclear power plant's extraction pumps can still operate in order to feed the cooling pond. Consequently,

⁵ The figure refers to the "latest possibility for operator to intervene" to stop irreversible core damage. At the Zaporizhzhia plant, this period is 18 hours, after which the core is uncovered. (SNRIU 2023, 71–74; ENSREG 2012, 17+19).

the NPP has to use alternative water supplies to hold the water level in the cooling pond, including from deep wells and from the nearby cooling water channels of the neighboring coal-fired power plant. An alternative would be to lay temporary hose connections to the Dnipro River, whose water can be pumped by fire trucks.

Fortunately, the NPP cooling water requirements are much smaller than they would be during operation at full capacity. Since the fuel assemblies now emit only a fraction of the decay heat that occurs shortly after a reactor shutdown, less heat must be transported and less cooling water evaporates and needs to be replenished. By mid-November 2023, the NPP reported a stable water level in the cooling pond and the water supply channel.⁶

Conclusion and Outlook

The Russian-occupied Zaporizhzhia Nuclear Power Plant is a theater of war and a test case for nuclear safety under wartime conditions. It is representative of other Ukrainian nuclear power plants of the same design. Zaporizhzhia has experienced numerous abnormal operating situations as a result of wartime operations. So far, the plant has proven robust to emergency situations such as blackouts, shelling, and loss of the ultimative heat sink, but this resistance is fragile. Adding to this fragility, the remaining staff faces the challenge of having to ensure the safety of the plant under the terror of the occupiers.

The power plant is located directly on the current front line of the Russian-Ukrainian war. Disruptive events resulting from acts of war, e.g. in the event of Ukrainian reconquest of the region, could worsen the situation at the power plant from one day to the next. Therefore, the concern about an accident in Zaporizhzhia remains, even though, according to experts, it would not reach the severity of the Chernobyl or Fukushima disasters, as the relatively long response time leaves many more chances for coping with emergencies. For a detailed analysis of accident scenarios and risk assessments, see Wendland (2023).

The fear of an accident is also used in the psychological warfare of both sides. While the Russian attackers want to terrorize and paralyze the Ukrainian side with their threat communication, the defenders are referring to Zaporizhzhia as a global threat in order to appeal to the world community for help. While this is a legitimate goal, Kyiv has put its credibility on the line with exaggerated portrayals of rather unlikely accident scenarios. This is another reason why the Zaporizhzhia Nuclear Power Plant remains a significant factor in the war effort—and why secure and accurate information about its condition is also a contribution to Ukraine's long-term resilience.

About the Author

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⁷ Ukrainian President Volodymyr Zelensky warned in a video message that an explosion at the six-reactor, 5,700 MW Zaporizhzhia plant could spell the "end of Europe." Russian forces seize Ukrainian nuclear power plant after shelling sets it on fire. Washington Post, 04 March 2022—Selenskyj warnt vor Atomkatastrophe. Tagesschau, 09 August 2022.

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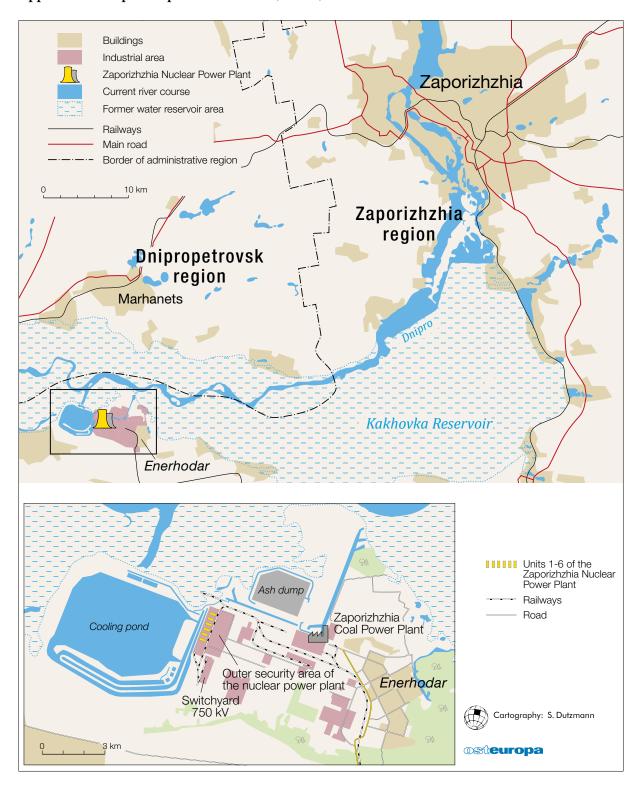
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Appendix 1: List of Unit Blackouts (UBO) and Other Critical Events For the Power Supply at Zaporizhzhia NPP (ZNPP) and Other Ukrainian NPP

<u> </u>	
25 August 2022	Reactor trip due to disconnection from the national grid, but no UBO, ZNPP units 5 and 6, i.e. for the first time since commissioning, all units shut down simultaneously, Enerhoatom via Telegram, 25 August 2022, https://t.me/energoatom_ua/9183
01 September 2022	UBO1 ZNPP-2 due to reserve transformer trip 330 kV/6kV; reactor trip Zaporizhzhia-5 (without UBO), Enerhoatom via Telegram 01 September 2022, https://t.me/energoatom_ua/9334
01 September 2022	Reactor trip at ZNPP-5, Enerhoatom via Telegram, 01 September 2022, https://t.me/energoatom_ua/9334
08/09 October 2022	UBO2, ZNPP, all units, 40h, Enerhoatom, 09 October 2022, www.energoatom.com. ua/o-0910221.html
12 October 2022	UBO3, ZNPP, all units, Enerhoatom, 12 October 2022, www.energoatom.com.ua/o-1210222.html
02 November 2022	UBO4, ZNPP, all units, Enerhoatom, 03 November 2022, www.energoatom.com.ua/o-0311221.html
15 November 2022	UBO, Khmelnytskyi NPP, units 1 and 2, due to bombing of a switchyard, IAEA Update 127, 16 November 2022, www.iaea.org/newscenter/pressreleases/update-127-iaea-director-general-statement-on-situation-in-ukraine
23 November 2022	UBO5, ZNPP, all units, Enerhoatom, 23 November 2022, www.energoatom.com.ua/o-2311222.html.—After Russian missile attacks on the same day, 23 November 2022, all running units of NPPs Rivne, Khmelnytskyi, Pivdennoukraiinsk went off the grid with reactor trips.
09 March 2023	UBO6, ZNPP, all units, Enerhoatom, 09 March 2023, www.energoatom.com.ua/o-0903231.html
22 May 2023	UBO7, ZNPP, all units, Enerhoatom via Telegram, 22 May 2023, https://t.me/energoatom_ua/13192
02 December 2023	UBO8, ZNPP, all units, Enerhoatom via Telegram, 03 December 2023, https://t.me/energoatom_ua/15943

See overleaf for a map of Zaporizhzhia NPP (ZNPP) and Environs.

Appendix 2: Map of Zaporizhzhia NPP (ZNPP) and Environs



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Founded in 1982, the Research Centre for East European Studies (Forschungsstelle Osteuropa) at the University of Bremen is dedicated to the interdisciplinary analysis of socialist and post-socialist developments in the countries of Central and Eastern Europe. The major focus is on the role of dissent, opposition and civil society in their historic, political, sociological and cultural dimensions.

With a unique archive on dissident culture under socialism and with an extensive collection of publications on Central and Eastern Europe, the Research Centre regularly hosts visiting scholars from all over the world.

One of the core missions of the institute is the dissemination of academic knowledge to the interested public. This includes regular e-mail newsletters covering current developments in Central and Eastern Europe.

Center for Eastern European Studies (CEES) at the University of Zurich

The Center for Eastern European Studies (CEES) at the University of Zurich is a center of excellence for Russian, Eastern European and Eurasian studies. It offers expertise in research, teaching and consultancy. The CEES is the University's hub for interdisciplinary and contemporary studies of a vast region, comprising the former socialist states of Eastern Europe and the countries of the post-Soviet space. As an independent academic institution, the CEES provides expertise for decision makers in politics and in the field of the economy. It serves as a link between academia and practitioners and as a point of contact and reference for the media and the wider public.

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