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BEYOND THE BAN: A GLOBAL AGENDA FOR NUCLEAR JUSTICE

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Aerial view of nuclear weapons test site on South Sea atoll Mururoa.
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The issue of nuclear justice has recently gained prominence in international debates about nuclear weapons. How should the international community deal with the past use and testing of nuclear arms so as to do justice both to the victims of these nuclear acts and to the states or individuals that caused them? And what lessons should it draw from the past to prevent future use and testing of nuclear weapons? These questions have been raised with increasing urgency as part of global discussions and diplomatic efforts concerning nuclear arms control and disarmament. The growing interest in nuclear justice is also reflected in the entry into force of the Treaty on the Prohibition of Nuclear Weapons (TPNW), which acknowledges and addresses the suffering of victims of past nuclear uses and tests.The much older Nuclear Non-proliferation Treaty (NPT), in contrast, remains silent on the legacy of the nuclear past. Instead, nuclear justice in the NPT context is usually understood as referring to the institutionalised inequality between nuclear "haves" and "have-nots", and the perceived injustice resulting from the unwillingness of the former to disarm. With this report, we challenge this discursive and institutional disconnect by outlining a broad global agenda for nuclear justice. The vital discussion about how to reckon with and learn from past nuclear use and testing, we argue, must not remain limited to supporters of the nuclear ban – nor to bilateral negotiations between nuclear powers and their former testing sites.

We propose an analytical framework for subjecting past and ongoing nuclear justice processes to a systematic review. To capture the multifaceted nature of nuclear justice, we draw on existing conceptualizations of *transitional justice* (TJ) with its four pillars "criminal liability", "redress", "truth-telling and apologies" and "reform". These dimensions, we show, are of equal relevance, and often explicitly referred to, in discussions about past nuclear weapons use and testing. Using the framework as analytical guidance, we provide an overview of the nuclear justice agenda and map the progress made toward addressing it across these different dimensions. We discuss, successively, (1) justice for past uses of nuclear weapons in Hiroshima and Nagasaki (criminal liability, reparations, and truth), (2) justice for past tests of nuclear weapons (criminal liability, reparations, and truth), and (3) legal and political reforms that would influence assessments of the legality and legitimacy of future nuclear uses and tests and/or that have been put in place specifically to prevent the recurrence of nuclear uses and tests.

Based on this analysis, we conclude that some progress has been achieved on all dimensions of the nuclear justice agenda – albeit to varying degrees. While criminal liability is the least developed element of nuclear justice, and is unlikely to play a role in addressing past nuclear wrongs, some headway has been made with respect to redress for victims of past nuclear use and testing. Still, major shortcomings remain in this area, as compensation programs are often underfunded, discriminate among different categories of victims and impose high standards of proof. These shortcomings are also closely linked to truth-telling and apologies. To date, no official apologies have been issued for the only nuclear weapons uses that have occurred so far, or for the consequences of numerous nuclear tests (with the sole exception of the United States' apology to its own citizens). Neither have nuclear weapon states recognized responsibility for the health and environmental repercussions of nuclear use and testing. In terms of non-recurrence, some progress has been achieved in creating and expanding legal and political restrictions on the use and testing of nuclear weapons. These result from progress in international humanitarian law, international human rights law, international crimi-

nal law, as well as international environmental law, but also from global norm-building with a specific focus on nuclear weapons. The TPNW in particular represents normative progress in that it explicitly prohibits the use or threat of nuclear weapons and nuclear testing while formulating positive obligations in terms of victim assistance. However, the TPNW also has shortcomings in this respect as it assigns responsibility for victim assistance to states affected by nuclear weapons (not the perpetrators). Furthermore, the treaty's impact is clearly limited by the fact that neither nuclear powers nor their allies are likely to join it in the foreseeable future.

In light of the remaining gaps and limitations, we suggest possible steps that both state and non-state actors can take to advance the nuclear justice agenda. Most fundamentally, we argue that debates around the nuclear past should be framed more clearly in terms of nuclear justice. This would help link the debate to the broader transitional justice agenda, drawing on already existing (legal) expertise in this area. At the political level, disarmament advocates should (continue to) raise the problem of nuclear justice as a priority, particularly in all contexts where nuclear weapon states are present. At the first meeting of TPNW states parties, member states of the nuclear ban treaty will have to concretize the positive obligations they have accepted by joining the treaty. Norm-building efforts outside the TPNW that are aimed at constraining future possibilities for nuclear use and testing could and should be framed more explicitly as measures to contribute to non-recurrence and thus as forming part of a broader nuclear justice agenda. The upcoming NPT Review Conference in 2022, for example, should be used to advance accountability and reparations, as well as effective measures for non-recurrence. In addition, it is time for formal apologies for past uses and tests, as well as a reform of nuclear doctrines with a view to nuclear justice. At first glance, the group that can do most for nuclear justice – nuclear-weapon states and allies relying on their nuclear protection – appears to have the least interest in doing so. However, the report argues that constructive engagement with the nuclear justice agenda is in fact in their self-interest. Given the evolution of contemporary international humanitarian and environmental norms, any hypothetical future use (or even resumption of testing) of nuclear weapons would raise major nuclear justice issues that nuclear weapon states would have to deal with legally, politically and financially. Failure to recognize the political relevance of nuclear justice would also have a negative impact on the ability of the nuclear powers and their allies to shape nuclear arms control and disarmament in an increasingly dynamic international and diplomatic environment with more assertive non-nuclear weapon states and emerging powers.

CONTENTS

1. INTRODUCTION

> "For the past 75 years, the people of the Marshall Islands have lived with the legacy of nuclear injustice; commencing in 1946 when the Marshall Islands was designated as the proving grounds for a series of nuclear weapons testing that would last over the span of 12 years and leave multiple lifetimes of trauma and irrevocable damage."[1]

As this recent mission statement of the non-governmental *Coalition of Nuclear Justice Advocates* (CONJA) illustrates, the issue of nuclear justice – that is, the question of how to deal with the past use and testing of nuclear weapons so as to do justice both to the victims of these nuclear acts and to the states or individuals that caused them – is currently being raised by a growing number of activist organizations. At the same time, it is also receiving increasing attention among governments, in the media and in the academic community. This interest is driven by various recent developments and events: among others, the 75th anniversary of the bombing of Hiroshima and Nagasaki and of the first nuclear test, the ongoing re-negotiation of the "Compact of Free Association" between the United States and the Pacific Island States (Thomas 2019), a new study on the impact of French nuclear tests in the Pacific,[2] or the release of a new government-commissioned report on the legacy of French colonialism in Algeria (Cooper 2021).

In addition, the entry into force of the Treaty on the Prohibition of Nuclear Weapons (TPNW) on 22 January 2021 expressed and intensified the growing interest in nuclear justice. The new treaty complements – and in some respects challenges – the much older Nuclear Non-Proliferation Treaty (NPT), which is scheduled to undergo its Tenth Review Conference in spring 2022 (Baldus 2021). Most political and scholarly discussions of the two treaties focus on their different approaches to the legality of current and future nuclear arsenals and deterrence policies: the TPNW prohibits all nuclear weapons while the NPT merely limits the proliferation of nuclear weapons (technology) beyond the circle of five recognized nuclear weapon states. Yet, the TPNW and the NPT also differ in their approach to the nuclear past and the related question of nuclear justice. The TPNW recognizes the "unacceptable suffering" of the victims of past atomic weapons uses – the *Hibakusha* of Hiroshima and Nagasaki – and the victims of past nuclear tests (TPNW, Preamble), and obliges its parties to engage in victim assistance and environmental remediation (Art. 6). The NPT, in contrast, remains silent on the legacy of past atomic bombings and nuclear tests. When discussed in the NPT context, nuclear justice is mostly understood as referring to the treaty's in-built inequality between nuclear "haves" and "have-nots", and the perceived injustice arising from the former's reluctance to disarm (e.g. Müller 2019).

With the present report, we challenge this discursive and institutional disconnect by outlining a broad global agenda for nuclear justice. In our view, the vital discussion about how to reckon with and

1 https://www.labrats.international/conja (accessed 21 May 2021).

2 https://moruroa-files.org/en (accessed 25 May 2021).

learn from past nuclear use and testing must not remain limited to supporters of the nuclear ban – nor to bilateral negotiations between nuclear powers and their former testing sites.

One reason is that discussions on nuclear justice must involve the states bearing greatest responsibility for both past nuclear harm and today's nuclear threats: current nuclear weapons states and to a lesser extent their allied "umbrella" states. Their participation is essential to any future multilateral initiatives for redressing and remediating past harm done by the use and testing of nuclear weapons. Efforts to reform nuclear weapons regulations (so as to prevent future harm) are unlikely to succeed without their support. As we argue in our report, it is also in nuclear states' own interests to engage proactively with the nuclear justice agenda and thus to work against political fissures in the nuclear non-proliferation regime.

At the same time, it would be equally problematic to treat nuclear justice as an issue arising merely between the governments of nuclear powers and the states and communities affected by their testing or use of nuclear weapons. Politically, many of these negotiating contexts are marked by stark power asymmetries, obstructing efforts to push for nuclear justice. Analytically, only a systematic comparison of past nuclear experiences and of different approaches to nuclear justice – both across nuclear testing states and between the victims of nuclear use and nuclear testing – offers the chance to identify deficits as well as positive examples.

Our report offers an analytical framework for subjecting past and ongoing nuclear justice processes to such a systematic review. To capture the multi-faceted nature of nuclear justice, we draw on existing conceptualizations of *transitional justice*, coined with respect to (non-nuclear) violations of human rights and humanitarian law (e.g. United Nations 2010). This umbrella term refers to a bundle of legal and non-legal strategies that newly democratized societies can use to come to terms with wrongdoings committed by previous oppressive regimes.

Our case for appropriating it for the nuclear debate rests on two observations. First, as with non-nuclear human rights violations, ongoing efforts at seeking accountability for past nuclear use and testing address acts which can be classified as "systemic wrongdoing" *(Systemunrecht):* they were committed on behalf of governments who regarded their actions as legal and legitimate in light of existing (national and international) norms, but were judged as illegal or morally inappropriate by later generations following normative change.[3] Second, as highlighted by our analysis, discussions about the nuclear past revolve around the same collective responses (and related individual rights) that form the different pillars of transitional justice: criminal liability (right to justice), redress for victims (right to reparations), truth-telling and apologies (right to truth), as well as legal reforms (guarantees of non-recurrence/duty of prevention) (United Nations 2010).

Capturing these discussions with a concept of justice translated from the field of human rights is thus not only fitting but sheds new light on the agenda of dealing with the nuclear past – and on how it is linked to present and future nuclear policies. In contrast to discussions about "addressing

3 On the notion of "systemic wrongdoing" or Systemunrecht, see e.g. Teitel (2015: 402); Eser/Arnold (2012).

the consequences of nuclear weapons" (e.g. Bolton/Minor 2021), talking about *nuclear justice* frames the debate in terms of victims' rights and nuclear powers' obligations, and it draws attention to inconsistencies between the international community's approach to nuclear victims and the victims of other violations.

The present report provides an overview of the nuclear justice agenda and maps the progress made toward advancing it across the four above-cited dimensions.[4] It is structured into three sections addressing (1) justice for past uses of nuclear weapons in Hiroshima and Nagasaki (criminal liability, redress, truth-telling and apologies), (2) justice for past tests of nuclear weapons (criminal liability, redress, truth-telling and apologies), and (3) legal and political reforms that would influence assessments of the legality and legitimacy of future nuclear uses and tests and/or that have been put in place specifically to prevent the recurrence of nuclear uses and tests.

2. JUSTICE FOR PAST NUCLEAR WEAPONS USES

On 6 August 2020, the world marked the 75th anniversary of the atomic bombings of Hiroshima and Nagasaki (the latter occurred on 9 August 1945). Public speeches and media reports commemorated the up to 210,000 victims killed in the blasts and thousands of others that died later of radiation sickness.[5] Most talks and articles also drew attention to the fate of survivors or "persons affected by the bomb" (*Hibakusha*), but gave only scant attention to the Hibakusha's decades-long struggle for justice. The Hibakusha have long sought recognition of and compensation for their suffering, at the same time fighting off Japanese government attempts to rhetorically exploit their fate to portray Japan as a victim of the war.

2.1 CRIMINAL LIABILITY

In this struggle for justice, the question of *criminal liability* has played a relatively minor role. The most important reason for this is the lack of an international legal framework clearly outlawing the use of nuclear weapons at the time of the bombings. Nuclear weapons being a new technology at the time, no specific regulations on this type of weapon had been adopted. With regard to air warfare in general, aerial attacks on cities had been criticized as inhumane by contemporaries since before World War I, yet states had failed to agree on binding restrictions of this practice by the start of World War II.[6] Existing rules on land warfare were understood as prohibiting, inter alia, the bombardment of "undefended" towns (Art. 25 Annex to Hague Convention IV). Yet, dominant powers had long interpreted

4 We do not conceive of nuclear justice as an "end state" that can be reached through complete reparation or reconciliation. Rather, we understand it as a continuous process of dealing with and learning from past wrongdoing.

5 Casualty estimates range between 110,000 (initial US military assessment) and 210,000 (1977 international symposium) (Wellerstein 2020).

6 A treaty drafted in 1923 by an international expert commission, The Hague Rules of Air Warfare, never gained traction among governments (Jochnick/Normand 1994: 83).

this provision as allowing attacks as long as they served any kind of military objective. In World War II, this logic was pushed to the extreme, as "morale bombings" of cities came to be justified with the "military objective" of undermining the enemy's will to fight (Jochnick/Normand 1994).

In line with this reasoning, neither the International Military Tribunal (Nuremberg Tribunal) nor the International Military Tribunal for the Far East (Tokyo Tribunal) prosecuted military commanders or political leaders – from Allied or Axis powers – for the policy of strategic bombing conducted by all sides. Adopting an expansive view of military necessity, the Nuremberg Tribunal explicitly condoned "an air bombardment, whether with the usual bombs or by atomic bomb" serving the only purpose "to effect the surrender of the bombed nation" (cited in Jochnick/Normand 1994: 92). The Tokyo Tribunal never discussed the legality of the atomic bombings, declining to examine evidence on the matter presented by the US defence counsel (Tanaka/Falk 2009: 2). Disagreement with the tribunal's assessment of Hiroshima and Nagasaki was also voiced by Radhabinod Pal, Indian judge on the Tokyo bench. In his dissent with the tribunal's judgment – advancing an anti-colonial critique of the tribunal's prosecution of "crimes against peace" – Pal also touched on the atomic bombings, arguing that "if any indiscriminate destruction of civilian life and property is still illegitimate in warfare, then, in the Pacific war, this decision to use the atom bomb is the only near approach to the directives of the German Emperor during the first world war and of the Nazi leaders during the second world war" (cited in Tanaka/Falk 2009: 2).[7]

In spite of such objections, the dominant view held that the US bombings of Hiroshima and Nagasaki had been legal, barring a criminal prosecution of US soldiers, military commanders or political leaders involved in the decision. Consequently, later discussions of the US decision to drop the first atomic bomb have centred on the question of whether the decision was morally legitimate in light of historical facts.[8]

2.2 REDRESS

And yet, the question of the bombings' legality continued to play into the second, and more important, aspect of the Hibakusha's quest for justice: the struggle for *redress*. Underlying this struggle were physical as much as social and psychological needs. Following their fight for survival in the immediate aftermath of the bombings, many Hibakusha were not only tormented by severe health problems and suffered from their inability to work and provide for themselves and their families, but also faced

7 Pal's legacy has become tainted by his later involvement with Japanese nationalists, who used his dissent to denounce the tribunal and justify Japan's war-time conduct. However, later generations of progressive Japanese law scholars have equally criticized the tribunal's neglect of the atomic bombings, arguing that its selectivity stands in the way of addressing Japan's own wartime crimes (Sellars 2010: 1099f.).

8 See e.g. Yagami (2009) for an overview of this debate, and Alperovitz (1965, 1995), Bernstein (1995), Hasegawa (2006), Sherwin (1975) for seminal contributions.

fierce social discrimination in Japanese society.[9] Many also grappled with feelings of guilt vis-à-vis those killed in the blasts.

The Hibakusha's quest for redress had a legal as well as a political dimension. Legally, the only route open to survivors was to work through national courts. At the time of the bombings, neither an international human rights system nor an internationally agreed notion of state responsibility for international crimes existed that could have formed the basis of international proceedings against the United States. In addition, the Japanese government had waived all potential compensation claims against the Allies in the 1951 Peace Treaty. With regard to national courts, it was Japanese lawyer Okamoto Shoichi who first took the initiative. Having worked with US lawyers as a defence counsel at the Tokyo Tribunal, he initially sought to convince his American colleagues to support a civil lawsuit in the United States against the US government over the bombings. Failing to muster sufficient support, he turned to what he saw as a more promising route: a civil lawsuit against the Japanese government in a Japanese court. In 1955, a group of Hiroshima A-bomb survivors represented by Okamoto opened a case in the Tokyo District Court. Their argument held that the US bombings constituted a war crime, that the Japanese government (illegally) waived all claims for compensation, and that the Japanese government was therefore responsible for paying damages to the plaintiffs. The court took until 1963 to pronounce its judgment in the "Shimoda" case (named after the main plaintiff), which constituted a partial success for the Hibakusha. Other than the Nuremberg Tribunal, the court found that the US bombings had violated existing international law.[10] While it also ruled that US leaders could not be held accountable due to sovereign immunity, and that the plaintiffs were not entitled to individual compensation (Tanaka/Falk 2009), it stated that the Japanese government should provide "adequate relief measures" for survivors (cited in Tachibana 1995: 337).

While the Shimoda ruling thus did not immediately improve the legal position of the Hibakusha, it gave a boost to the Hibakusha's *political* struggle for redress that had gained momentum since the initiation of the proceedings. Victims groups had first formed in the aftermath of the bombing as a-political self-help groups. In 1954, however, the US *Castle Bravo* nuclear test off the Bikini atoll irradiated the crew of a Japanese tuna boat, causing a public outcry across Japan and giving rise to a broader anti-nuclear movement. As part of this movement, Hibakusha became more vocal and formed the Japan Confederation of A-bomb and H-bomb Sufferers Organizations (*Hidyanko*) (Tachibana 1995). By the time of the Shimoda ruling, the group had successfully pressed for a first aid measure from the Japanese government, the 1957 Medical Care Law for A-bomb Victims, but the Tokyo Court's ruling suggested that the government needed to do more.[11]

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9 Hibakusha were ostracized due to their physical and emotional scars, and both they and their children were suspected of genetic deformation and treated as "unmarriageable".

10 The court based this assessment on Hague Convention regulations, on the 1925 Geneva Protocol prohibiting poisonous gases, as well as on the draft rules on air warfare.

11 The Medical Care Law was also prompted by the release of the first comprehensive report of the Atomic Bomb Casualty Commission (ABCC, see below) in 1955. The law adopted a highly exclusive definition of victims, providing healthcare benefits only to victims directly injured by the blast who could prove their presence in the blast radius at the time of the explosion.

In the following decades, Hibakusha activists used both political pressure and strategic litigation to press for more and more comprehensive aid legislation. In 1995, their campaign culminated in the adoption of the 1995 Atomic Bomb Survivor Relief Law, which dramatically expanded both the group of survivors eligible for treatment – recognizing, for instance, victims of radioactive fallout – and the range of illnesses and treatments covered. Still, victims continued to bear the burden of proof that they had been affected in one of the ways defined by the law. Another gap in the 1995 law was that it excluded non-residents of Japan from government support, and thus effectively denied aid to "Overseas Hibakusha" – most notably Koreans who had lived in Hiroshima and Nagasaki as workers or forced labourers in 1945.[12] It took several landmark verdicts by Japan's supreme court (in 2007 and 2015) and several rounds of legal amendments of the law to address this gap and extend full coverage of medical expenses to all Overseas Hibakusha (Naono 2018; Osaki 2015).

With their decades-long struggle, the Hibakusha have thus succeeded in establishing the most comprehensive aid programme that currently exists – exceeding, as the following sections will show, most aid measures for nuclear test victims.[13] And yet, Japanese government policy still fails to meet one long-standing demand of the Hibakusha: that the government accept formal responsibility for the bombings and pay *compensation* to victims. Ever since 1957, the Japanese government has framed all aid programmes as welfare measures, acknowledging merely a political responsibility but consistently rejecting any legal responsibility to pay compensation to the Hibakusha (Naono 2018: 239–241; Tachibana 1995: 338). In 1995, the Hibakusha organization Hidyanko was unsuccessful in its campaign for making the principle of "state compensation" part of the 1995 relief law (Yamada 1997). A key reason for this persistent omission has been the weariness of political elites that an admission of legal responsibility could open the door to far-reaching claims from foreign victims – relating to Japan's own war time crimes.

2.3 TRUTH-TELLING AND APOLOGIES

For the Hibakusha, the government's refusal to accept legal responsibility has clear practical implications: victims who do not require medical help, such as people orphaned by the bombings, are excluded from financial compensation. Much more important, however, is the symbolic difference between aid and state reparations, which Hibakusha activists have consistently stressed (Tachibana 1995: 339f.). It is linked to the third dimension of the Hibakusha's quest for justice, the struggle for the establishment of historical truth and the acknowledgment of moral guilt – on the part of US and Japanese governments. For many survivors, this struggle is also about their own moral rehabilitation: having experienced life-long feelings of guilt or shame vis-à-vis those whose "atrocious death" they witnessed, they have been longing for an answer to the question of "who was responsible for robbing them of their humanity" (Tachibana 1995: 340).

12 An estimated 30,000 Koreans died in or shortly after the bombings; 27,000 out of 30,000 survivors returned to Korea (Tong 1991).

13 As of 2019, the Japanese government had spent an estimated USD 52.3 billion on Hibakusha aid (Van Duzer/Sanders-Zakre 2021).

For many years following the bombings, US officials took a highly selective interest in recording historical facts about their effects. At the same time as censoring any public debate about the bombings in occupied Japan up until 1948 (Dower 1995: 281–283), the US government set up the Atomic Bomb Casualty Commission (ABCC) to investigate the human damage caused by the bombings (O'Malley 2016). Between 1945 and 1975, the ABCC interviewed and examined A-bomb victims and conducted various studies. While its reports also informed the successive relief laws adopted by the Japanese government, its rationale was military and scientific, offering US military and civil defence planners "a unique opportunity for the study of the medical and biological effects of radiation" (Letter by US Secretary of the Navy James Forrestal, signed by President Truman, cited in Lindee 1994: 461). Accordingly, the ABCC adopted a formal "no treatment" policy, prompting allegations that survivors were used as "guinea pigs" (Dower 1995: 283). Despite this resentment, and although ABCC doctors routinely violated the no treatment policy (Lindee 1994: 470–473; O'Malley 2016: 528), it was never officially reversed. A key reason was that, according to US authorities overseeing the study, treatment would be perceived as "atonement" for the bombings, and thus amount to an admission of their illegality or immorality (cited in Lindee 1994: 481). Thus, the establishment of medical truth about the bombings' effects was intertwined with political narratives about their legitimacy.

Meanwhile, Japanese narratives of Hiroshima and Nagasaki evolved in a different direction. At the same time as the Hibakusha were experiencing strong discrimination, public remembrance of their suffering became institutionalized and politicized. Japan's politics of memory turned Hiroshima and Nagasaki into iconic places for the peace and anti-nuclear movements, but also into symbols of a Japanese "victim consciousness" that often entailed deemphasizing Japan's own role as a victimizer (Dower 1995). Eventually, it was the Hibakusha's own fight for redress that shifted the public's focus from "Japanese suffering" to the distinct experience of A-bomb victims. The result was, on the one hand, a growing recognition that the medical effects of the bombings had been more severe than initially acknowledged; on the other hand, it brought the suffering of non-Japanese Hibakusha into sharper focus – and thus the victims of Japanese crimes. This evolution of truth-telling, particularly since the 1990s, created an opportunity for de-coupling the demand for atonement for Hiroshima and Nagasaki from neglect of Japanese crimes and their victims.

And yet, neither US nor Japanese governments have thus far made full use of this opportunity. US President Barack Obama, on his historical 2016 visit to Hiroshima, recognized the Hibakusha's suffering and (implicitly) the US historical responsibility for the bombing (Astarita 2020), but avoided the formal apology that Hibakusha organizations have long demanded from both US and Japanese governments (Tachibana 1995: 339).[14] In his own speech on the same occasion, Japanese Prime Minister Shinzo Abe did not endorse the Hibakusha's call for a formal apology, and was reportedly even opposed to such a US apology – in part because such a move would have put pressure on him "to apologize in kind" for Japanese war crimes (Leonard 2016).[15]

14 Still, Obama's speech represented a softening of previous US presidential statements, which had explicitly stressed that the United States does not owe an apology to Japan.

15 Japanese government representatives have repeatedly apologized for Japanese crimes to different countries and groups of victims, but until the 1990s, many of these statements were perceived as relatively shallow "token" apologies (Lind 2009: 134). Abe apologized for Japanese crimes against Korean "comfort women" in 2015 but otherwise

3. JUSTICE FOR PAST NUCLEAR TESTING

2020 marked not only the anniversary of the nuclear bombings of Hiroshima and Nagasaki but also of the very first nuclear weapons test – the "Trinity" bomb test – that took place on 16 August 1945 in the US state of Nevada. Since then, eight of nine nuclear weapons possessors have conducted nuclear weapons tests – a total of over 2,000. Most tests were conducted by the Unitd States (1,123) and the Soviet Union (982), with France (210) in third place.[16] Many of the weapons tested had a yield that exceeded that of the Hiroshima and Nagasaki bombs multiple times, with devastating effects on the environment and the population of affected regions. In addition to direct health effects through radioactive fallout and the contamination of land, water and food supplies, the damage was also social and cultural as entire populations had to be dislocated in some cases (Bolton/Minor 2021).

The history of nuclear testing is also a history of systemic injustice that is largely rooted in power imbalances between nuclear testing states and their testing sites located mostly in countries of the Global South (i.e. in former colonies), in rural areas or in regions inhabited by indigenous people. In most cases, local people were neither asked for permission nor informed about or protected from the tests. In the aftermath of tests, the same power imbalances have obstructed legal and political efforts to achieve justice for their victims.

3.1 CRIMINAL LIABILITY

For several reasons, criminal liability has played almost no role in the international discourse on nuclear testing. One is the culture of secrecy surrounding nuclear weapons tests. Information about adverse health and environmental effects and possible misconduct related to nuclear testing has generally remained classified (Bolton/Minor 2021). Another key obstacle to seeking criminal liability has been the lack of a legal and institutional basis for addressing (past) nuclear tests as *international* crimes. Despite the progress of international humanitarian law (IHL) following World War II (discussed below), nuclear explosions for testing purposes and the more indirect damage they cause through secondary radiation – compared to the bombings of Hiroshima and Nagasaki – do not fall under the Geneva Conventions. Alternatively to being framed as a war crime, nuclear testing could be treated as a crime against humanity, bringing it within the scope of international criminal law and under the jurisdiction of the International Criminal Court (ICC, also discussed below). Yet even if the Hague-based court would accept such an interpretation, it could not investigate events that took place before its foundation in 2002, while its relevance for judging future tests would be limited by the fact that only two nuclear powers – Britain and France – have joined it. A promising route would run through national courts: following the model of a growing number of “universal jurisdiction” trials,

restricted himself to declaring in 2013 that his cabinet concurred with the statements of previous Japanese governments.

16 This section focuses on nuclear testing by the five nuclear weapon states recognized by the NPT (United States, Russia, United Kingdom, France, and China), hereinafter referred to as ‘nuclear testing states’. This is due to the low number of (exclusively underground) nuclear tests conducted by India, Pakistan, and North Korea and the lack of documentation on their effects.

e.g. on Syrian war crimes (Fehl 2020), human rights organizations could use decentralized strategic litigation based on national international criminal law statutes to seek criminal liability for future nuclear tests.

3.2 REDRESS

In contrast to criminal liability, the question of redress has been key to test victims' struggle for justice. To date, most of this struggle has focused on the national and bilateral level. While some international organs, such as the European Commission/Court of Human Rights, can order states to pay compensation to individual victims, they have thus far been used only in attempts to stop impending or ongoing tests (see section "legal reform"). However, victims organizations or human rights activists may well decide to initiate new cases if national and bilateral offers of redress remain insufficient.

At the national level, nuclear testing states' efforts to redress test victims vary widely in terms of their scale and conditions. They also mirror the geographical power imbalances that have marked the history of nuclear testing in granting varying degrees of support to different categories of test victims, ranging from military personnel involved in the tests (nuclear veterans), to local service personnel and the population living at or close to the nuclear test sites.

All nuclear testing states have granted compensations and/or enhanced health services to their nuclear veterans, yet, in some cases, only after prolonged struggles and individual or collective lawsuits.[17] In most cases, repayments are only directed towards military personnel – local service people (let alone local population) are largely excluded from compensational claims.[18] Russia for instance pays reparations (monetary and non-monetary) to Russian veterans of nuclear testing and Russian residents on the Kazakh border near Semipalatinsk, while it does not provide financial compensation for Kazakh citizens of the Semipalatinsk area. China too provides compensations for its military veterans, but not for the local population near the test sites (Van Duzer/Sanders-Zakre 2021). The United Kingdom only provides nuclear veterans (including from former colonies) with enhanced medical care. However, the British government has officially declined responsibility for any impacts of nuclear testing: when in 2018, New Zealand and Fiji test veterans associations called for compensations and redress for the repercussions of the British test series "Operation Grapple", the British Ministry of Defence maintained that "[al]most all the British servicemen involved in the UK nuclear tests received little or no additional radiation as a result of participation" (Bolton 2018). The British Ministry of Defence – when confronted with a complaint by a nuclear veteran – even sought to shield itself from legal responsibility by denying its liability in torts based on the Crown Proceedings Act of 1947.

17 For instance, Association des Vétérans des Essais Nucléaires (AVEN) v. unknown; Melvyn Pearce v. UK Ministry of Defence; Ken McGinley v. UK Ministry of Defence.

18 This is linked to recent debates about "nuclear racism", see https://thebulletin.org/tag/racism/, or "nuclear imperialism" (Maurer/Hogue 2020).

The issue of immunity was referred to the House of Lords which rejected the claim of the Ministry of Defence (MoD) and thus allowed for individual or collective legal complaints.[19]

In France, the veterans' struggle for compensation was (at least partially) rewarded in 2010 when the French government adopted the so-called *Loi Morin* "to compensate those suffering illnesses among the 150,000 army and civilians who worked on the tests in Algeria and French-owned Polynesian atolls" (Chrisafis 2008). Still, the law applies a very narrow definition of those sicknesses that are eligible for compensational claims (the radiation exposure has to cause more than a "negligible risk"). With some exceptions, this prevented Algerian and Polynesian victims of French testing from applying for and being accorded compensations. This is reportedly also a problem of other compensation programmes for nuclear testing: the diseases eligible for compensational claims are narrowly defined, effectively limiting the number of possible claimants. In essence, this requires victims of nuclear testing to prove a causal connection between radioactive contamination and their illnesses, thus hampering progress in the struggle for nuclear justice (Van Duzer/Sanders-Zakre 2021). In addition, the compensation programmes do not redress many forms of suffering, including psychological trauma and social ostracism experienced by victims of nuclear testing, or cultural damage.

Only the United States has accepted more far-reaching claims in terms of the health damages resulting from nuclear tests on its Nevadan test site. The 1990 Radiation Exposure Compensation Act (RECA) provides financial indemnities for nuclear veterans, "downwinder" communities, as well as other US citizens involved in the nuclear industry, e.g. Uranium mining. When the Republic of the Marshall Islands (RMI) gained independence from the United States in 1986, both states negotiated the so-called Compact of Free Association (CPA), which in exchange for the acceptance of a US military base in the RMI, established a Nuclear Claims Tribunal (NCT) "to settle claims for personal injury and property damage resulting from the nuclear tests" (Ruff 2015). Additionally, the United States provided funding for the medical treatment of the residents of those four atolls that had suffered the most from the nuclear tests. By accepting the terms of the CPA, the Marshall Islands had to give up any further compensational claims that might arise from the consequences of nuclear testing. For this reason, the NCT has been idle since 2008, as the funds have effectively drained, while the rate for health care has never been adjusted for inflation since the 1980s. Although the RMI's government submitted several petitions to supplement the fund ("changed circumstances petition", CRS 2005), these attempts were ultimately unsuccessful.[20] In the course of the renegotiation of the CPA, which is scheduled for 2024, the issue of nuclear justice is expected to play a central role (Thomas 2019).

Matters of nuclear justice have never attracted much attention in nuclear testing states, and the location of the testing sites in the (global or national) periphery has made it easy for nuclear weapons

19 A detailed summary of the case can be found in a decision of the European Court of Human Rights (Application no. 61332/12, SINFIELD and Others v. United Kingdom).

20 The establishment of the NCT was preceded by unsuccessful attempts to seek compensation through civil law suits in the United States. In 1958, Marshallese citizen Linus Pauling (amongst others) filed a complaint under the Alien Tort Statute (PAULING v. McELROY). The claim requested the US to stop nuclear testing on the Marshall Islands, as the resulting radiation would inflict genetic injury on the atoll's inhabitants, and was later extended to include a demand for compensation. The US court in charge dismissed the claim (CRS 2003).

states to ignore the problems that resulted from their testing programmes. The symbolic character of nuclear testing as a service to the nation and world peace has also stymied critical voices within those states that conducted nuclear tests or has even made nuclear veterans sympathetic to their "sacrifice" for the nation (Bolton 2018). Over time, several victims' associations for nuclear veterans and international coalitions have formed to call for an appropriate way to deal with the damages caused by nuclear testing. However, as international advocacy has rarely been fruitful, many affected states created compensation programmes of their own for their citizens. The states concerned are well aware of the absurdity of this situation. The government of Fiji, for instance, has explicitly formulated the compensation it offers to survivors of British nuclear tests in light of nuclear justice: only because the perpetrator of nuclear injustice is unwilling to assume responsibility, the Fijian government must intervene (Bolton 2018).

3.3 TRUTH-TELLING AND APOLOGIES

Similarly to US policy in the aftermath of the Hiroshima and Nagasaki bombings, nuclear weapon states have taken a highly selective interest in recording historical facts about the effects of nuclear testing. On the one hand, the radioactive contamination of people and environment was a welcome opportunity to study the effects of nuclear weapons in terms of their military destructiveness, on the other, the production of scientific studies on the medical and environmental impacts of nuclear testing was always interlinked to practices of classifying the truth, targeted disinformation or denial of the effects nuclear testing (Barillot 2007).[21] Local service people were often ill-informed about the potential hazards of nuclear weapons tests (and usually ill-equipped). The concealment of possible repercussions not only made (and still makes) it more difficult for nuclear test victims to prove that health issues were indeed a product of radioactive contamination, and thus to claim compensation – but it also denied victims a public recognition of their suffering and their right to (medical) truth. Even decades after the end of the nuclear tests, responsible states reject or marginalise scientific evidence linking medical and environmental anomalies to their actions.[22] The Soviet/Russian government, for instance, blamed "the poor health of the villagers on 'anything but exposure to nuclear contamination'. It was the fault of poor diet, inadequate sanitation, a harsh climate, and the faulty genes of the Kazakh people from time immemorial" (Gustersen 2009). It took France more than 40 years after its first test to establish a national commission that investigated the effects of the nuclear programmes resulting in the *Loi Morin* (Assemblée Nationale 2008).[23] Nonetheless, even this report leaves many issues un(der)studied such as the environmental impacts of radioactive leftovers that were disposed of in the Sahara (Collin/Bouveret 2020) or the Pacific Sea.

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21 Bruno Barrillot refers to this as "nuclear negationism" (2007: 448).

22 The US Department of Energy (DoE), for instance, recently issued a report on environmental damage by a nuclear waste-filled dome in the Republic of the Marshall Islands. Contrary to assessments that the nuclear waste could be especially perilous due to rising sea levels, the DoE concludes that the dumpsite poses no danger to the local environment (Yucatan Times 2020).

23 The recent government-commissioned report by historian Benjamin Stora on the French colonial war in Algeria also touches on nuclear testing. While the report was hailed for shedding light on the link between nuclear weapons programmes and colonialism, it was also criticized for falling short of "nuclear reconciliation" (Cooper 2021).

Thus far, only the US government has offered an apology for the consequences of nuclear testing. Through RECA, the United States has accepted responsibility for past nuclear harm, even going so far as to "apologize on behalf of the Nation to the individuals" who were "involuntarily subjected to increased risk of injury and disease to serve the national security interests of the United States" (RECA 1990, Section 2). However, this apology extended only to victims of nuclear testing within the United States – not to citizens of the Marshall Islands. The UN also remained silent on the issue of nuclear testing for a long time. It was only in 2012 that a UN Human Rights Council report on nuclear testing in the RMI called upon the US to "consider issuing a presidential acknowledgment and apology to victims". The report also addressed the UN's own role in enabling the continuation of the testing programmes in the RMI (by placing the RMI under US trusteeship), and recalled the international community's special obligation "to encourage a final and just resolution for the Marshallese people" (UNHRC 2012).

Ultimately, truth finding mostly remained in the hand of states affected by nuclear testing. For instance, the Australian government established the so-called McClelland Royal Commission in 1985 to investigate the effects of British nuclear testing (Hawkins 2018). The governments of New Zealand and Kazakhstan each commissioned own medical studies to investigate the (long-term) health effects of radiation on their population (Bolton 2018). A noteworthy event was the establishment of the Marshall Islands' National Nuclear Commission (NNC) in 2017 that among others has the task "to develop a detailed strategy and plan of action for pursuing justice as concerns the [US nuclear testing] Program" and "preserve the findings, conclusions, and records from all past activities related to the Program and its effects" (NNC 2019). The NNC's "nuclear justice strategy" is based on the five pillars compensation, health care, environment, national capacity, and education and awareness – and thus closely links truth-telling to the other elements of nuclear justice. More specifically, the NNC asserts that nuclear justice can only be reached

> "when the health of the Marshallese people and our islands is restored, when displaced communities are returned to or compensated for their homelands, when the full range of damages and injuries stemming from the programme is acknowledged and compensated by the US Government, when the record of adverse impacts from nuclear weapons testing is preserved for the benefit of humankind, and when every Marshallese citizen understands the activities that took place in our islands and their aftermath and feels empowered to use their voice to advocate for the needs of their communities." (NNC 2019)

4. MEASURES FOR NON-RECURRENCE, LEGAL REFORM, AND TRANSFORMATION

According to common understandings of transitional justice, efforts to seek justice for past wrongs would remain incomplete without an attempt to draw lessons and craft legal and political guarantees for the *non-recurrence* of the crimes in question. In the realm of nuclear justice, non-recurrence can be understood as relating to three distinct goals: the prevention of future nuclear weapons uses, the prevention of future nuclear tests, and the prevention of future injustice through a strengthening of

criminal liability and redress for victims of nuclear use and testing. As the following review shows, legal and political efforts related to these three aspects have been closely intertwined. With regard to all three goals, the same civil society groups and epistemic communities that strongly contributed to revealing and making public the effects of the Hiroshima and Nagasaki bombings and of nuclear testing were also crucial promoters of normative change. To disentangle this cluster of normative developments, the following analysis zooms in on different political contexts and institutional fora in which reform efforts have taken place over the course of the past decades. We first address attempts undertaken at the national level to avoid disproportionate humanitarian consequences of nuclear weapons use through deployment guidelines and provisions for legal consultation. Second, we assess the evolution of broader international legal frameworks applicable to nuclear weapons: international humanitarian law, human rights law, international criminal law, and international environmental law. We then look at legal struggles in various international judicial bodies in which states have sought to draw on these general strands of international law to argue for the illegality of using and/or testing nuclear weapons. We conclude with an analysis of international norm-building efforts focused specifically on the use and testing of nuclear weapons, including the Comprehensive Nuclear-Test-Ban Treaty (CTBT) and the TPNW.[24]

4.1 DEPLOYMENT GUIDELINES AND PROVISIONS FOR LEGAL CONSULTATION AT THE NATIONAL LEVEL

At the domestic level, potential measures to insure non-recurrence include reforming targeting policies, institutionalizing constraints, trainings, decision-making procedures or creating ombudspersons within nuclear weapon states. In reality, only modest progress has been made at that level. Although leaders and governments of nuclear powers have dealt with and expressed concerns about humanitarian and environmental consequences of nuclear weapons ever since the 1950s,[25] to this day they have not systematically explored what changes would be required from a humanitarian standpoint (Perkovich 2020a). By and large, attempts to restrict the use of nuclear weapons with regard to their catastrophic impact have remained limited to doctrinal statements and operational guidelines with little constraining power.

In the 1980s, Soviet military experts considered that full scale nuclear operations had to be prevented, while strictly limited nuclear strikes with low-yield weapons on a small number of targets could be viable (Perkovich 2020a: 8). Today, legal analysis prior to operations has evolved, particularly in the United States, where military plans, including nuclear options, have to be reviewed by members of the Judge Advocate General's (JAG) Corps (Richard 2016; Savarese/Witt 2017). Leading

24 The NPT is largely bracketed from our analysis. Although non-proliferation contributes indirectly to making recurrence less likely, the treaty does not directly regulate the use or testing of nuclear weapons.

25 Already in the early 1980s, researchers on both sides of the iron curtain published studies exposing the dramatic global environmental and climatic consequences that would result from nuclear war and that would severely affect food production (Crutzen/Birks 1982; Aleksandrov/Stenchikov 1983). Since then there have been numerous discussions and studies on the (potential) consequences of nuclear war and testing (Coupe et al. 2019; Jeanloz 2015; Robock et al. 2007; Toon et al. 2007, 2019; Xia/Robock 2012).

military officials, including the US Strategic Commander, are regularly trained in the law of armed conflict to avoid the execution of an unlawful order (Hyten 2017). The US nuclear doctrine clearly commits the United States to adhering to humanitarian law (US Department of Defense 2018: 23). However, neither do legal advisors hold any veto power that could force the commander in chief to opt for a decision compliant with international humanitarian law (see also Warren/Perry 2021), nor does the US nuclear doctrine clearly define to which extent a nuclear operation could be compatible with this legal corpus.

4.2 INTERNATIONAL LEGAL FRAMEWORKS APPLICABLE TO NUCLEAR WEAPONS

International humanitarian law (IHL) is the body of international law that is most directly applicable to potential future *uses* of nuclear weapons. As a result of the evolution of IHL since World War II, there is now a broad normative framework regulating the protection of civilians in armed conflict that did not exist at the time of the Hiroshima and Nagasaki bombings. Above all, it was the adoption of two Additional Protocols (AP) to the 1949 Geneva Conventions in 1977 that brought the greatest progress with regard to civilian protection.[26] The Protocols (AP I on international conflict and AP II on non-international conflict) established three basic principles as decisive for the assessment of any use of force: the principles of distinction, proportionality and precaution.

The principle of distinction requires that differentiation between combatants and non-combatants be ensured in order to protect civilians who do not take part in hostilities – therefore also known as the principle of protection (AP I, Art. 48, Art., 50, Art. 51). Considering the scale of destruction and the massive amounts of ionizing radiation caused by nuclear weapons, it is hardly imaginable how the principle of distinction could be observed and how civilians could be spared in their use.

AP I also includes the principle of proportionality, which prohibits any use of force that might cause excessive loss of civilian life, injury to civilians, damage to civilian objects or both in relation to the intended military advantage (AP I, Art. 51 (5) (b), Art. 57 (2) (a) (iii), Art. 57 (2) (b)). When used in a populated area, a nuclear weapon would have catastrophic consequences for civilians. Even in an unpopulated area, the destruction of the environment and resulting climate effects would bear severe risks for food security.

The principle of precaution demands that in choosing the means for a given military action, a belligerent party must prevent causing unnecessary death or injuries (AP I, Art. 35 (2). Compared to any other weapons type, nuclear weapons would cause more suffering and injuries while adding the lasting effect of ionizing radiation. Humanitarian assistance after a nuclear attack would be impos-

26 Like the Geneva Conventions themselves, the APs are today regarded as customary international law that binds even non-signatories. During the negotiations on the Geneva Conventions, opinion was divided as to whether certain means of warfare, including nuclear weapons, should be mentioned and restricted. By a large majority, however, the states that wanted to include only general provisions concerning the effect of the means used prevailed (Yingling/Ginnane1952: 413). During the negotiations on the APs, this dispute and alternative suggestions flared up again and resulted in various opposing statements on how the restrictions in the final protocols affect the use of certain weapons systems, including nuclear weapons (Bothe et al. 1978: 40).

sible. Therefore, any use of nuclear weapons in proximity to a civilian population would cause more death and suffering than the use of conventional weapons. For many experts, this would automatically result in war crimes (see also Colangelo/Hayes 2019: 227–229), suggesting that the bombing of Hiroshima and Nagasaki would be illegal today (McKinney et al. 2020).

While it remains somewhat speculative to assess how changed norms would have played out in a past context, it is certain that states are much more restricted in their choice of weapons by contemporary IHL than they were in 1945. In November 2011, the International Committee of the Red Cross and Red Crescent (ICRC) adopted a resolution in which it emphasized the incalculable human suffering that can be expected to result from any use of nuclear weapons, the lack of any adequate humanitarian response capacity and the absolute imperative to prevent such use. Further, the ICRC finds it difficult to envisage how any use of nuclear weapons could be compatible with the rules of international humanitarian law, „in particular the rules of distinction, precaution and proportionality." (ICRC 2011: §2)

International human rights law is a second relevant body of international law that evolved only after 1945, with the adoption of the Universal Declaration of Human Rights in 1948, the International Covenant on Civil and Political Rights in 1976, and a series of other treaties dealing with the rights of specific groups or specific violations over the following decades. Monitored by international treaty bodies as well as regional human rights courts, this body of law is increasingly recognized as applicable to situations of armed conflict alongside IHL (Hathaway et al. 2012), and it is also applicable to human rights violations outside of armed conflict caused by nuclear testing. A seminal statement in this regard was the General Comment on the Right to Life issued in 1984 by the UN Human Rights Committee. In this statement, the UNHRC classified the production of nuclear weapons, including nuclear testing, as a severe threat to the human right to life, also demanding the recognition of nuclear testing as a crime against humanity (UNHRC 1984). The step was sharply criticised by some states, who contended that the Committee on Civil and Political Rights (CCPR) had "overstepped its mandate by commenting on issues of nuclear weapons" (Rietiker 2019a).[27]

By referring to crimes against humanity, the CCPR already touched on a third body of law linked to both IHL and international human rights law: *international criminal law* (ICL), which seeks to prevent certain international crimes – genocide, crimes against humanity, war crimes, and aggression – by ensuring individual criminal liability for perpetrators. After a long period of stagnation following the post-war Nuremberg and Tokyo tribunals, it was the adoption of the Rome Statute of the International Criminal Court (ICC) in 1998 – entered in force in 2002 – that gave shape to contemporary ICL. In defining war crimes, the statute reconfirms the IHL principles of distinction, proportionality and precaution, implying that the court would judge any future uses of nuclear weapons committed by or against an ICC member state on these principles.[28] With regard to crimes against humanity, the

27 The opinion of the CCPR was reaffirmed in 2018. In General Comment No. 36 (2018) on article 6 of the International Covenant on Civil and Political Rights (ICCPR), on the right to life, the CCPR states that "the threat or use of nuclear weapons is incompatible with the Right to Life and may amount to a crime under international law" (UNHRC 2018).

28 If no member state was involved in a nuclear attack, the UN Security Council could still refer the respective situation to the court.

ICC refers to a variety of crimes including murder, extermination and „other inhuman acts […] intentionally causing great suffering" (Rome Statute, Art. 7, 3–4) „when committed as part of a widespread or systematic attack directed against any civilian population" (Rome Statute, Art. 7 §1, 3). Arguably, a nuclear strike in proximity to a populated area would be widespread for the purpose of the ICC Statute, which would bring the use of nuclear weapons within the ambit of crimes against humanity (Colangelo/Hayes 2019: 229f.).

In contrast, all efforts to include explicit provisions on nuclear weapons in the ICC statute have thus far failed. Although the Rome Statute explicitly mentions "poisonous" weapons prohibited under existing IHL (Rome Statute, Art. 8, 2 B9 xvii–xviiii, 5), drafters chose not to reference the general prohibitions on chemical and biological weapons under the respective conventions. Politically, this would have required including nuclear weapons as the third weapon of mass destruction – and nuclear powers and their allies resisted this move. Equally unsuccessful was the 2009 Mexican proposal of an amendment to the Statute that would include the use or threat of use of nuclear weapons as a crime under the jurisdiction of the ICC.

A fourth relevant body of international law that has evolved since 1945 and that is also relevant to nuclear testing is international environmental law. In particular, the customary international law principle of "transboundary responsibility", i.e. preventing damage to neighbouring environments, effectively challenges the legality of atmospheric, underwater and outer space testing (Rietiker 2017; Venturini 2020).[29] The application of international environmental law is more difficult in the case of underground tests or even computer simulations, which today propel the modernization of nuclear weapons. This is where the legal ambiguity of nuclear testing is most evident, as "the relevant sources of international law are incomplete and fragmentary" (Rietiker 2017).

4.3 LEGAL STRUGGLES OVER NUCLEAR USE AND TESTING

As discussed in the preceding section, there are several strands of international law that could be applied to the use and testing of nuclear weapons. With the exception of international criminal law, states and activists opposed to nuclear weapons have drawn on each of them in legal struggles before various international judicial bodies with the aim of outlawing nuclear weapons use and testing – with mixed results.

The most prominent case was certainly the request of the UN General Assembly (UNGA 1994) to the International Court of Justice (ICJ) for an advisory opinion on the legality of the use and threat of nuclear weapons in 1996 (ICJ 1996: E, 266).[30]

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29 The notion of international radiological safety requiring transboundary responsibility was first established in the 1986 Conventions on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident (IAEA 1986a, b), following the Chernobyl catastrophe.

30 As early as 1961, the UNGA – with the majority of non-nuclear weapon states – had for the first time denounced the use of nuclear weapons as a violation "against the laws of humanity" and a "crime against humanity and civilization"

The opinion represents a narrowly agreed compromise that was preceded by intense debate among the judges. On the one hand, the court stated "that the threat or use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict, and in particular the principles and rules of humanitarian law" (ICJ 1996: E, 266); on the other hand, it leaves open the possibility of a different assessment for a specific case, stating that "it cannot conclude definitively whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defence, in which the very survival of a State would be at stake" (ibid.: 267).[31]

Despite its ambivalence, the ICJ decision represented a major step forward in advancing international norms limiting the use of nuclear weapons. It summarizes in detail the state of the international legal corpus, especially international humanitarian law, and defines high hurdles for the legality of nuclear weapons use and threat. Even in the narrowly defined case of a threat to state survival, legality would still not be certain.

The ICJ's opinion further contains general obligations to ensure that a state's nuclear weapons programme does not cause environmental damage to other states. The Court „recognizes that the environment is under daily threat and that the use of nuclear weapons could constitute a catastrophe for the environment" (ICJ 1996: E, §29, 241) and confirms „[t]he existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control" (ibid.: 242). In certain cases this also raises the question of legality of nuclear testing.

While advisory opinions of the ICJ are not binding, the 1996 opinion represents a seminal statement that would be certain to carry great weight in any future cases about actual uses of nuclear weapons.

In other international legal proceedings, plaintiffs sought to use different bodies of law to stop impending or ongoing nuclear weapons tests, particularly French tests. In 1973, the governments of Australia and New Zealand brought cases against France before the ICJ that focused on issues of territorial sovereignty and environmental integrity. Supported by a Greenpeace campaign, both states requested France to halt any further atmospheric nuclear tests in the South Pacific, as the latter would result in the deposit of radioactive material upon their territory. The government of France generally rejected the jurisdiction of the ICJ over the case. However, already in 1974, France declared that it would not conduct further atmospheric tests. While the ICJ had initially called on France to avoid nuclear tests with radioactive fallout on Australia or New Zealand pending the judgement, the ICJ later concluded that the case no longer had any object due to the concessions made by France (ICJ 1974a, b).

(UNGA 1961). Numerous such resolutions followed with ever-increasing state support, but were not legally binding under international law.

31 However, the court does not conclude that the use of nuclear weapons is justified in this case of extreme self-defence, it only admits its inability to decide legality or illegality in this regard.

In 1995, it was again French nuclear testing that became the object of legal struggles in various international bodies. A new ICJ case brought by New Zealand again focused on transboundary effects under international environmental law. In addition, a group of Tahitian plaintiffs complained to the European Commission on Human Rights, demanding that France refrain from the announced resumption of underground testing in the Mururoa and Fangataufa atolls, as this would violate their right to life and health. With similar arguments, Tahitians also submitted a communication to the Committee monitoring the International Covenant on Civil and Political Rights (Bothe 1996).

Although all three cases were dismissed, the ICJ decision was based on procedural issues, whereas the two human rights cases were complicated by the fact that those tests had not yet begun and demonstrable damage had not yet occurred at the start of proceedings. It is thus by no means clear that future environmental or human rights cases addressing the consequences of nuclear tests would be unsuccessful.[32] Both environmental and human rights law offer ample opportunities for strategic litigation that victims and activists have not yet fully exploited.

4.4 GLOBAL NORM-BUILDING ON NUCLEAR WEAPONS

At the same time as states, transnational non-governmental organizations (NGOs), and victims groups sought to apply various bodies of general international law to prevent future nuclear tests and uses, the same actors also became norm entrepreneurs in the development of normative restrictions specifically dealing with nuclear weapons.

With regard to nuclear use, early efforts to develop constraining norms focused, inter alia, on so-called Negative Security Guarantees (NSGs): assurances given by nuclear weapon states not to attack non-nuclear weapon states, which would prohibit cases comparable to the nuclear bombing of Japan. In 1968, the UN Security Council (UNSC) adopted resolution 255, in response to demands for NSGs that were raised by non-nuclear weapon states in the negotiations leading up to the adoption of the NPT. This initial resolution offered *positive* security assurances promising assistance in case of an attack against non-nuclear states. Following renewed calls for NSGs in the debate about the indefinite extension of the NPT in 1995 (see also Krieger 2019), nuclear weapon states agreed to resolution 984, which again only contained a positive security assurance, adding the UNSC's intent to provide procedures for the victim of aggression to receive compensation from the aggressor under international law. This promise, however, remained vague, referred only to the assumed nuclear aggressor and did not involve any collective responsibility of the members of the UNSC possessing nuclear weapons (Perkovich 2020a).

In addition to Security Council resolutions, nuclear weapon-free zones (NWFZs) and individual NSGs given by nuclear weapon states to NWFZs-member states have been an important normative

32 The European Commission on Human Rights considered the possibility that "the new tests constituted a continuation of earlier tests and thus a continued violation where the former tests had already caused damage to values protected by the Convention". However, plaintiffs found it difficult to assemble sufficient evidence of such earlier damage in the shortage of time available (Bothe 1996: 256).

instrument for ensuring non-recurrence (Nielebock 1989). As of today, five NWFZs cover continental or subcontinental groups of countries (Latin America and the Caribbean, Southeast Asia/ASEAN, the South Pacific, Central Asia and Africa), one refers to that status for Mongolia and three include Antarctica, the seabed, and outer space. By treaty law, those NWFZs ban the development, manufacturing, control, possession, testing, stationing or transporting of nuclear weapons in a given area, with mechanisms of verification. Restricting themselves in this way, NWFZs-member states have built up an often underestimated global framework for prevention and non-recurrence while advocating the inclusion of nuclear weapon states through NSGs. The five nuclear weapon states recognized by the NPT have made several individual pledges regarding NSG referring to NWFZs, and circulated them in 1995 to the UNGA and UNSC. However, the official additional protocols to the NWFZs that govern NSGs have not yet been fully ratified in many cases (US ratification in particular is lacking in most cases).[33] China should be highlighted here, as it follows a strict policy of no first use of nuclear weapons and has pledged not to use or threaten to use them against non-nuclear states or NWFZs.

Since NWFZs (through their additional protocols) also prohibit nuclear tests within the respective area, they also constituted an important early building block of an emerging normative framework constraining nuclear testing. Globally, a legal framework prohibiting nuclear weapons tests evolved from the 1960s onwards. In 1963, the United Kingdom, the United States and the USSR negotiated the Partial Test-Ban Treaty (PTBT), which prohibited nuclear weapons tests in the atmosphere, in space, and under water. A full-fledged nuclear weapons test ban prohibiting its member states "to carry out any nuclear weapon test explosion or any other nuclear explosion" (CTBT Art. I) was only agreed in 1996.[34] A Comprehensive Nuclear-Test-Ban Treaty (CTBT) was a major demand of the Non-Aligned Movement (NAM). The consent to the indefinite extension of the NPT in 1995 was made conditional on its fulfilment. However, not least due to the refusal of US Republicans in Congress and the Chinese leadership to ratify the treaty, it still has not entered into force. The CTBT has nevertheless succeeded in creating a robust anti-test norm and a strong institutional framework that is capable of detecting nuclear weapons tests in even the remotest places. Since 1996, the official nuclear weapon states have not tested nuclear weapons by unilateral restraint, and later nuclear weapons tests by India, Pakistan, and North Korea were internationally condemned and sanctioned. Whether the test ban norm can be deemed legally binding on states is nevertheless disputed. It is argued that "the test ban has been reinforced by signatories' and ratifiers' subsequent practice" (Venturini 2020), i.e. through moratoria on nuclear testing (United States, China, India, and Pakistan), commitments to the CTBT's goals by the official nuclear weapon states (P5 2016) or through UN Security Council resolutions condemning nuclear testing (Taheran 2016; UNSCR Resolution 2310). However, the legal force of these practices is fragile and perpetuates a state of ambiguity about the general illegality of nuclear weapons testing (Asada 2021).

Efforts at norm development regarding nuclear uses and tests eventually flowed together in the thus far most systematic attempt to transform the international legal framework with regard to nu-

33 For an overview of NWFZ ratification status, see ACA (2017).

34 While Britain, Russia, and the United States had halted their test programmes and declared test moratoria by 1992, France and China continued testing until 1996.

clear weapons: the so-called Humanitarian Initiative that resulted in the Treaty on the Prohibition of Nuclear Weapons (TPNW) in 2017. The origins of this treaty and the seven-year diplomatic history that led up to its adoption have been told and analysed in detail elsewhere (e.g. Müller/Wunderlich 2020). What deserves to be highlighted in our context is the strong involvement of victims and their supporting groups in the process as well as the truth-telling character of preparatory conferences, at which participants assembled, completed and made public information about the devastating consequences of the use and testing of nuclear weapons.

The stated goal of the TPNW was to close the legal gap as seen in the fact that nuclear weapons were the only weapon of mass destruction that had not fully been banned until then. Art. I therefore commits state parties not to „develop, test, produce, manufacture, otherwise acquire, possess or stockpile nuclear weapons or other nuclear explosive devices; […] transfer [them] to any recipient […]" (TPNW, Art. 1). The prohibited activities include the use or threat of use as well as stationing, installation or deployment of any nuclear weapons on state parties' territory (TPNW, Art. 1).

Although it does not contain legally binding obligations, the preamble is important for the interpretation of the treaty. In the TPNW, it is particularly detailed and introduces new elements into international humanitarian disarmament law: by stating that complete elimination „remains the only way to guarantee that nuclear weapons are never used again" (TPNW, Preambular § 2), it echoes the idea of a guarantee of non-recurrence that forms one of the pillars of nuclear justice.[35] The preamble also sets a precedent in recognizing „the disproportionate impact of nuclear weapon activities on indigenous peoples" (ibid., §7) as well as „on women and girls, including as a result of ionizing radiation" (ibid., §4).

With the adoption of the TPNW, states parties also wanted to address the accountability gap. Following the example of previous initiatives of international humanitarian disarmament law, particularly the 1997 Anti-Personnel Landmines Convention and the 2008 Convention on Cluster Munitions, they introduced a right to remedy and reparation in a set of *positive obligations*: within their own jurisdictions, member states are obliged to assist victims (including through "medical care, rehabilitation, and psychological support"), clear contaminated land, provide risk reduction education and engage in international cooperation and assistance (TPNW, Art. 6 &7, 6; Rietiker 2019b). However, the introduction of such positive obligations was not uncontested. Many states, especially those affected by nuclear weapons tests, opposed taking on any further responsibilities or obligations of their own, and preferred a simple ban containing only provisions that states who own nuclear weapons would have to deal with. Ultimately, they nevertheless agreed to the positive obligations, both out of concern for the principle of state sovereignty and due to a realization that otherwise there would not be any multilateral provision for victims and environmental aid. Importantly, the provisions relating to positive obligations explicitly do not exempt other states, in particular polluter states, from the duties and obligations under international law or bilateral agreements (TPNW, Art.6, §3, 6). Furthermore,

35 The NPT preamble, in contrast, avoids both the word "guarantee" and the reference to earlier uses of nuclear weapons. It refers to the "devastation that would be visited upon all mankind by a nuclear war and the consequent need to make every effort to avert the danger of such a war and to take measures to safeguard the security of peoples" (NPT, Preamble).

Article 7, in a rare logic of solidarity, obliges all states parties to engage in international cooperation and reciprocal assistance to achieve the treaty's goals, including its positive obligations (TPNW, Art.7, 6).[36] Anticipating the eventual accession of former nuclear weapon states, it provides, that state parties that have „used or tested nuclear weapons or any other nuclear explosive devices shall have a responsibility to provide adequate assistance to affected States Parties, for the purpose of victim assistance and environmental remediation" (TPNW, Art.7, §6, 6). The provisions are not limited to future nuclear weapons detonations, since it was the intention of most of the negotiating parties to cover also past use and testing.

5. OUTLOOK: AN AGENDA FOR NUCLEAR JUSTICE

Over the past decades, considerable progress has been made in achieving justice for past uses and tests of nuclear weapons. Yet, this progress varies strongly both across and within the four pillars of nuclear justice – criminal liability, redress, truth-telling and apologies, and legal reforms – and leaves much work to do for both nuclear and non-nuclear weapon states, humanitarian NGOs and victims groups. In the following section, we highlight both positive examples and critical gaps to suggest pathways for advancing the nuclear justice agenda.

Criminal liability is the least developed element of nuclear justice, and is unlikely to play a role in addressing past nuclear wrongs. However, the shadow of future criminal sanction has an important symbolic function, which may not suffice to effectively deter the use of nuclear weapons but can contribute to the moderation of nuclear doctrines and nuclear brinkmanship. Even without incorporating nuclear weapons explicitly in the ICC Statute, contemporary international criminal law offers a solid basis for sanctioning most conceivable future nuclear uses, and perhaps even nuclear testing. Although many nuclear weapon-states remain outside the ICC's own jurisdiction, national codes of crimes under international law (based on the ICC Statute) and universal jurisdiction trials offer a promising route around these constraints.

Redress for victims is the second pillar of nuclear justice, and in this regard both Japan's Hibakusha and victims of nuclear testing have scored some important – and hard-won – successes. Yet, large gaps remain. The United States, as the only state to have used nuclear weapons, has never provided any compensation to Hibakusha. With regard to testing, not all nuclear testing states have set up national and bilateral compensation programmes. With the exception of Japan's support for the Hibakusha, the programmes that do exist remain underfunded and discriminate between different categories of victims. High standards of proof and the predominant focus on medical conditions – as opposed to psychological trauma, social ostracism and cultural damage – constitute additional limitations.

36 This is particularly noteworthy because it also places an obligation on the other contracting states to provide support within the scope of their possibilities regardless of whether a nuclear weapon detonation has occurred on their own territory.

The incomplete progress on reparations is closely related to *truth-telling and apologies* as the third pillar of nuclear justice. To this day, nuclear testing states do not fully acknowledge their responsibility and systematically deny the health consequences of nuclear testing. Official apologies have been issued neither for bombings of Hiroshima and Nagasaki nor for the consequences of nuclear testing, with the exception of the US apology to its own citizens.

With regard to *non-recurrence* as the fourth pillar of nuclear justice, some headway has been made in creating and expanding legal and political restrictions on the use and testing of nuclear weapons. The TPNW in particular represents normative progress, explicitly prohibiting the use or threat of nuclear weapons and nuclear testing and formulating positive obligations in terms of victim assistance. However, under the terms of the treaty states affected by nuclear weapons (not the perpetrators) still bear primary responsibility for the latter. Furthermore, the treaty's impact is clearly limited by the fact that neither nuclear weapon powers nor their allies are likely to join it for the foreseeable future.

Given the considerable remaining gaps, what can both state and non-state actors do to advance the nuclear justice agenda?

5.1 VICTIMS GROUPS, HUMAN RIGHTS AND HUMANITARIAN NGOS

Victims groups, as well as transnational human rights and humanitarian NGOs supportive of their claims, obviously have the strongest interest in pushing for redress, apologies and legal reform. To underline and reinforce the demands they have long raised in both bilateral and multilateral contexts, they could consider framing their struggle even more clearly in terms of *justice*. This framing would allow them to link up to the broader transitional justice agenda and reach out to scholars and activists working in this field. At the same time, it would help them to expose inconsistencies between the strong support of at least some nuclear powers (Britain, France, in part the United States) to transitional justice in other fields and their reluctance to come to terms with their own nuclear past. Furthermore, both the nuclear justice agenda and general transitional justice efforts converge on the task of addressing colonial injustices. The latter are currently receiving increasing attention from transitional justice researchers and practitioners as well as in national and bilateral debates – as exemplified by the "Stora report" on France's Algerian legacy or by Germany's recent decision to offer aid (but no formal compensation or apologies) in recognition of the German genocide of the Herero and Nama in Namibia.

At a more practical level, victims groups and supporting NGOs should consider decentralized strategic litigation in international, regional and national courts to press for adequate compensation of the victims of past nuclear tests. While past proceedings were unsuccessful, they have created case law to build on, and offer grounds for optimism that future claims could succeed with somewhat different substantive arguments or procedural choices. At a minimum, such legal strategies could create additional leverage for test victims to win political concessions, including with regard to symbolic gestures such as formal apologies. Finally, with regard to any *future* nuclear tests, criminal lawsuits in national courts based on universal jurisdiction provisions should be considered.

5.2 STATES AFFECTED BY NUCLEAR TESTING AND/OR SUPPORTIVE OF NUCLEAR DISARMAMENT

Likewise, states affected by nuclear testing and all other states supportive of nuclear disarmament could and should consider initiating new ICJ cases to address any transboundary effects of future nuclear tests, but possibly also still the harm already done by past tests. As with human rights proceedings, the chances for success are not clear, but the route could be used to build up political pressure.

At the political level, disarmament advocates and test-affected states should (continue to) raise the problem of nuclear justice as a priority particularly in all contexts where nuclear weapon states are present, most obviously the upcoming NPT Review Conference.

At the first meeting of TPNW states parties in January 2022, member states of the nuclear ban treaty will have to concretize the positive obligations they have accepted by joining the treaty, including provisions for international solidarity and assistance. However, work on both issues should start now, and should involve not only TPNW members. For instance, states wishing to support the nuclear justice agenda could propose international reparation initiatives within the framework of the United Nations for the remaining Hibakusha and test survivors, as well as global environmental clean-up initiatives to account for radioactive contamination of land (following the example of the UN climate fund).

Finally, norm-building efforts outside the TPNW that are aimed at constraining future possibilities for nuclear use and testing – including discussions on Negative Security Guarantees, on disarmament in the NPT framework, and on the Comprehensive Nuclear-Test-Ban Treaty – could and should be framed more explicitly as measures to contribute to *non-recurrence* and thus as forming part of a broader nuclear justice agenda. Thus, disarmament advocates would make it clear that efforts to prevent nuclear war cannot ultimately rely on (deterrence) policies that legitimize past and future uses of nuclear injustices.

5.3 NUCLEAR WEAPON STATES AND NUCLEAR UMBRELLA STATES

The group that can do most to advance nuclear justice even beyond these proposal – nuclear weapon states and allies relying on their nuclear protection – at first sight appears to have the least interest in doing so. What these states *should* do from a moral viewpoint is straightforward: recognize the suffering of the Hibakusha and of nuclear test victims, as well as the environmental devastation created by nuclear tests; formally apologize for the Hiroshima and Nagasaki bombings (United States) and for the devastating humanitarian consequences of nuclear testing; systematically integrate critical assessments of the Hiroshima and Nagasaki bombings and of nuclear tests into school and university curricula and military training, as well as official memorial events, exhibits, and monuments; create, reform or expand national and bilateral compensation programmes, offering equal compensation to nuclear veterans and foreign civilian populations; undertake environmental remediation activities at and around former test sites; and contribute to non-recurrence by reforming nuclear doctrines (e.g.

"minimal deterrence" and "no first use") and decision-making procedures, by offering Negative Security Guarantees and by supporting international arms control and disarmament norms. But do these proposals constitute more than an activist wish list detached from reality?

In fact, engaging constructively with the nuclear justice agenda is in nuclear powers' (and their allies') enlightened self-interest. First, in light of contemporary international humanitarian and environmental norms, any hypothetical future use (or even just resumption of testing) of nuclear weapons would raise major nuclear justice issues that nuclear weapon states would have to deal with legally, politically, and financially *regardless* of their opposition to the nuclear ban.[37] Arguably, deterrence doctrines failing to take these costs into account lack important rational choice considerations and credibility.[38]

More importantly, contributing to nuclear justice does *not* presuppose acceptance of the TPNW,[39] but offers nuclear powers and their allies an opportunity to demonstrate their willingness to engage with the treaty's supporters. Without such engagement, the already deep fissures among NPT member states are likely to deepen further, ultimately endangering the non-proliferation goals that are vital to nuclear weapon states' own interests. Current efforts to repair and rebuild the international nuclear arms control and disarmament architecture undertaken by nuclear weapon states will fail to gain the necessary global support and recognition if they exclude important aspects of nuclear justice that affect a large segment of the global community. Stabilizing the non-proliferation regime therefore requires a comprehensive reappraisal of justice issues and attention to nuclear justice as a global public good.

Lastly, for Western nuclear weapon states and nuclear umbrella states in particular, a refusal to talk about nuclear justice would also risk undermining their efforts to strengthen accountability for the use of other weapons of mass destruction, e.g. for the use of chemical weapons in Syria. It would also stand in the way of ongoing efforts to address lasting traces of colonialism and racism, thus diminishing Western diplomatic reputation and "soft power" on the global stage and fuelling domestic tensions over racial justice.

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37 Emerging norms for redressing "collateral damage" to civilians in the context of armed conflict (Muhammedally 2015) also suggest that claiming the "legality" of a specific use of force is no longer seen as removing responsibility for dealing with its humanitarian consequences. Hence, nuclear weapon states would be expected to redress damage generated by future nuclear activities even if these were not found to violate international law.

38 To factor in these costs, Harald Müller proposes the thought experiment of requiring nuclear powers to take out a "liability insurance" to pay for the consequences of potential future nuclear uses (Müller 2013). Far from creating a moral hazard to actually use nuclear weapons, such an "insurance policy" would be prohibitively expensive.

39 The Ottawa Convention is a good example where non-party states have committed and contributed to part of the treaty agenda. The United States, for instance, has become the world's leading funder of demining programmes despite never joining the Convention.

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ABCC	Atomic Bomb Casualty Commission
A-bomb	Atomic bomb
AP	Additional Protocol
AVEN	Association des vétérans des essais nucléaires
CCPR	Committee on Civil and Political Rights
CONJA	Coalition of Nuclear Justice Advocates
CPA	Compact of Free Association
CTBT	Comprehensive Nuclear-Test-Ban Treaty
Hidyanko	Japan Confederation of A-bomb and H-bomb Sufferers Organizations
ICC	International Criminal Court
ICJ	International Court of Justice
ICL	International Criminal Law
ICCPR	International Covenant on Civil and Political Rights
ICRC	International Committee of the Red Cross and Red Crescent
IHL	International Humanitarian Law
JAG	Judge Advocate General
MoD	(British) Ministry of Defence
NAM	Non-Aligned Movement
NCT	Nuclear Claims Tribunal
NGO	Non-Governmental Organization
NNC	National Nuclear Commission (of the Marshall Islands)
NPT	Nuclear Non-Proliferation Treaty
NSG	Negative Security Guarantees
NWFZ	Nuclear Weapon-Free Zone
PTBT	Partial Test-Ban Treaty
RECA	Radiation Exposure Compensation Act
RMI	Republic of the Marshall Islands
TJ	Transitional Justice
TPNW	Treaty on the Prohibition of Nuclear Weapons
UNGA	United Nations General Assembly
UNHRC	United Nations Human Rights Committee
UNSC	United Nations Security Council

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JANA BALDUS // CAROLINE FEHL //
SASCHA HACH

BEYOND THE BAN: A GLOBAL AGENDA FOR NUCLEAR JUSTICE

The issue of nuclear justice is becoming increasingly important in international debates on nuclear arms control and disarmament. How can justice be achieved for both the victims of past use and testing of nuclear weapons and for the states or individuals who caused them? The concept of transnational justice provides the authors with the analytical framework to review the state of nuclear justice. The authors conclude with recommendations on what state and non-state actors can do to advance the nuclear justice agenda.

The authors are members of PRIF's Research Department "International Security". Jana Baldus and Sascha Hach are Doctoral Researchers working on nuclear non-proliferation and disarmament, Dr Caroline Fehl is Senior Researcher working on nuclear arms control regimes as well as international criminal justice.

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