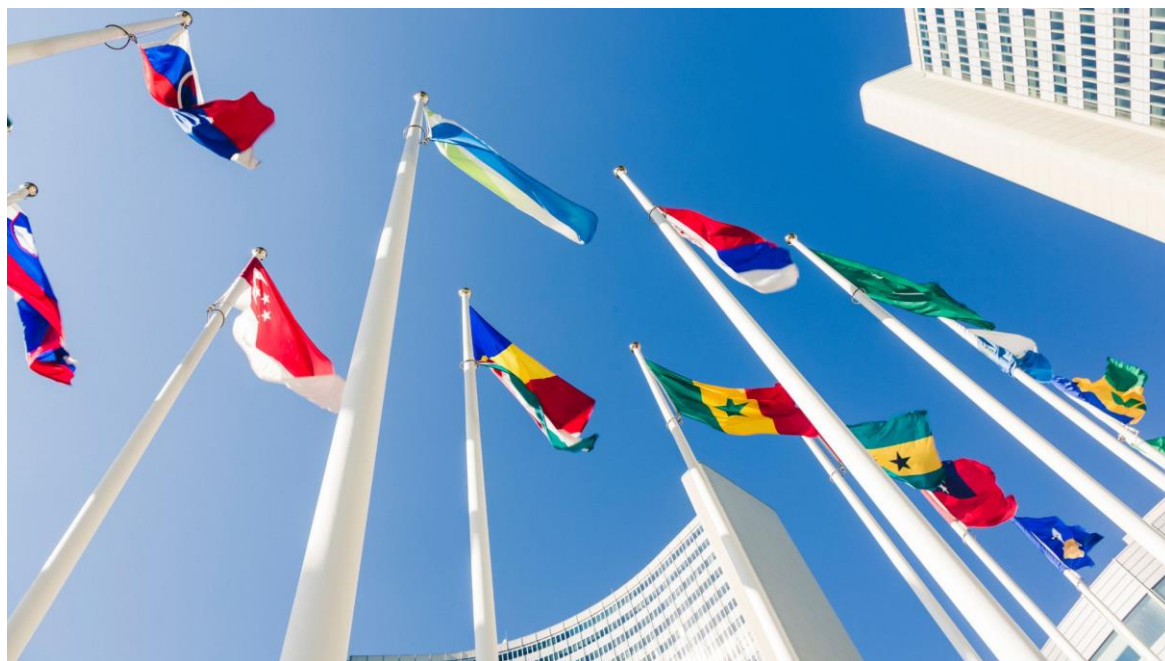




Wilton Park



Report

Moving forward on Irreversibility in Nuclear Disarmament

Wednesday 8 – Friday 10 March 2023 | WP3125

In association with the UK Foreign, Commonwealth and Development Office and the Royal Norwegian Ministry of Foreign Affairs.



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Executive Summary

Wilton Park, in partnership with the Norwegian Ministry of Foreign Affairs and the UK Foreign, Commonwealth & Development Office, hosted a dialogue on “Moving forward on Irreversibility in Nuclear Disarmament.” The conversation addressed ways of forging common understandings and commitments on nuclear disarmament, a critical component of the Treaty on the Non-Proliferation of Nuclear Weapons. A key question driving the conversations among participants was whether and how to define irreversible nuclear disarmament (IND). The diversity of approaches to IND would make it difficult to agree on one definition. Still, the dialogue produced a positive attitude towards crafting a shared understanding of what IND entails and demands. IND could be seen as a gradual procedure to build trust and consequences that belong to a broader set of nuclear disarmament instruments and commitments. To conceptualise IND better, the dialogue proposed to identify commonalities among transparency, verification, and disarmament and to think further about the necessary technical, legal, and political mechanisms that guarantee irreversibility.

Crafting a careful narrative about IND is necessary to engage with the larger audiences within the international non-proliferation and disarmament regime. In this effort, there is a need to trace the historical origins and development of IND and be mindful of the past compromises that actors and states have made regarding nuclear disarmament. An attentive portrayal of IND could bring together communities that, even when they disagree on components of the international non-proliferation and disarmament regime, value this set of norms, laws, and organisations and want to sustain it in an international context marked by challenges and competition.

Introduction

1. The Draft Final Document of the 2022 Review Conference of the Nuclear Non-Proliferation Treaty (NPT) stated that “States parties recognise that further work is required to ensure the irreversibility of nuclear disarmament.”¹ The draft asked to build an understanding of the application of irreversibility measures in attaining and maintaining a world free of nuclear weapons. Wilton Park took up this challenge in partnership with the Norwegian Ministry of Foreign Affairs and the UK Foreign, Commonwealth & Development Office.
2. Wilton Park organised a dialogue on “Moving forward on Irreversibility in Nuclear

¹ 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *Draft Final Document*, New York, United Nations, 2022, p. 25, in <https://reachingcriticalwill.org/images/documents/Disarmament-fora/npt/revcon2022/documents/CRP1.pdf>

Disarmament” to build shared understandings among NPT States Parties and advance the prospects for nuclear disarmament. Wilton Park hosted this conversation in March 2023. This event brought together representatives from States, non-governmental organisations, think tanks, and academia. The 2023 dialogue further advanced work carried out by Wilton Park earlier in 2022 with the goal “to start an international dialogue to better understand and identify requirements” for irreversible nuclear disarmament (IND).²

3. The dialogue revolved around how to define and conceptualise IND from a diversity of perspectives. Participants brought to bear their different professional experiences and academic expertise but shared a baseline assumption that IND is crucial to building a nuclear-free world. The intended outcomes of this event were to:
 - Assess the spectrum of positions on IND and work towards a shared understanding of what IND will require,
 - Identify and discuss the technical, legal, and political parameters and criteria for irreversibility, both during a process of disarmament and after disarmament has been achieved, and
 - Explore avenues for taking IND work forward and set out a programme of work that will include the next steps and fora for collaboration.

I organised this report around five key takeaways from these conversations.

Different and Diverse Views on Irreversible Nuclear Disarmament

4. In 2023, the Program on Nuclear Issues at the Center for Strategic and International Studies published a report titled *Irreversibility in Nuclear Disarmament*. In their introduction to this text, Heather Williams and Jessica Link remind readers that “nuclear ‘irreversibility’ is not a new challenge; it has been a component of nuclear arms control and disarmament efforts for decades.”³ They traced that the concept of irreversibility when discussing nuclear disarmament appeared for the first time as part of the vocabulary of the NPT in 2000 in the Review Conference Final Document. Since then, a diverse array of definitions of irreversibility have appeared, identifying different requirements, processes, and end-goals for IND.
5. Policymakers and analysts point to the diversity in approaches toward irreversibility as a challenge for conceptualising and operationalising IND. Participants in this dialogue concluded that diversity in how actors think about IND might not be an insurmountable obstacle per se. The international non-proliferation and disarmament regime functions with critical concepts that do not have a consensual or even definite meaning. Definitional ambiguity in the non-proliferation regime has been abused by governments but it has also provided opportunities to bring actors into the regime, strengthen commitments, and improve verification and monitoring mechanisms.⁴ Participants agreed, however, that crafting a shared vision of irreversibility is

² “In Preparation for the Wilton Park Dialogue: Irreversibility in Nuclear Disarmament,” Wilton Park, March 2022, in <https://www.wiltonpark.org.uk/wp-content/uploads/2022/03/WP2019-Pre-reading-document.pdf>

³ Heather Williams and Jessica Link, “Introduction,” in Heather Williams, Jessica Link, and Joseph Rodgers (eds.), *Irreversibility in Nuclear Disarmament*, A Report of the CSIS Project on Nuclear Issues, Washington, D.C., Center for Strategic and International Studies, 2023, p. 1, in <https://www.csis.org/analysis/irreversibility-nuclear-disarmament>

⁴ Stuart Casey-Maslen, *Arms Control and Disarmament Law*, Oxford, Oxford University Press, 2021, Chapter 3; Daniel Joyner, *Interpreting the Nuclear Non-Proliferation Treaty*, Oxford, Oxford University Press, 2011, pp. 21-22; Reid B. C. Pauly, “Deniability in the Nuclear Nonproliferation Regime: The Upside of the Dual-Use Dilemma,” *International Studies Quarterly*, vol. 66, 2022, sqab036, in <https://doi.org/10.1093/isq/sqab036>

necessary to lay the foundations for successful multilateral works around IND.

6. Despite challenges and pitfalls, diversity can become an asset when conceptualising and promoting IND. Only through diversity will it be possible to achieve a shared understanding of irreversibility that is not another hurdle to fulfilling a pillar of the NPT. Favouring diversity could also have a more pragmatic result: it can lead to constructing a more comprehensive toolkit to promote, guarantee, and sustain disarmament. The benefit of diversity, thus, would be to generate a common baseline upon which to build policies, practices, and mechanisms for IND. To achieve this goal, then, it is necessary to include more voices into more in-depth discussions, particularly from non-nuclear-weapon states and developing countries. A possibility could be to have NNWS and Global South actors host meetings on IND as part of the NPT intersessional working group or as part of the working of different nuclear-weapon-free zones.

Toward a Shared Understanding of Irreversible Nuclear Disarmament

7. IND as a concept remains unexplored. The 2010 NPT Review Conference reiterated the call in the 2000 Review Conference Final Document: nuclear-weapon states should undertake steps to accomplish nuclear disarmament “in accordance with the principle of irreversibility” and all states parties should commit to implementing their treaty obligations following the principles of irreversibility, verifiability, and transparency. Despite this restatement, irreversibility needs further conceptualisation. In response, participants in this dialogue discussed how to craft a shared understanding of IND further, following up on the precedent that the 2022 meeting at Wilton Park set.⁵
8. The discussions during the 2023 meeting at Wilton Park on IND reflected and embraced the diverse approaches to defining irreversibility. This diversity could have complicated the conceptualisation of this notion. However, participants embraced this diversity as a valuable tool to better appreciate the different IND components and the challenges that IND could face. After some conversations, the dialogue produced a positive attitude towards possible ways to conceptualise irreversibility. A potentially productive way to approach IND would see it as a gradual procedure to build trust and consequences in a spectrum on which states can more or less easily reverse a disarmament process. In this conceptualisation, IND would entail legal, political, economic, social, and technical processes that would make reversing disarmament difficult, complex, and costly.⁶
9. Participants emphasised that thinking about IND as a definite result in the long term might not be helpful. Instead of approaching IND as just an end goal or a definite result in the future, it is necessary to see it as a process—an end-in-view. Given the current international environment, IND faces an uncertain context. Thus, thinking about IND requires that analysts and policymakers map out the foreseen consequences that could arise while promoting IND. This preventive approach would prepare scholarly and policy communities to better deal with the *unforeseen* challenges and consequences that could emerge when operationalising IND. At the same time, seeing IND as a process or end-in-view would give a new meaning and further direct arms control or disarmament measures focused on immediate, short-

⁵ “In Preparation for the Wilton Park Dialogue: Irreversibility in Nuclear Disarmament,” Wilton Park, March 2022, in <https://www.wiltonpark.org.uk/wp-content/uploads/2022/03/WP2019-Pre-reading-document.pdf>

⁶ For a discussion of the different components that could affect and help IND, see Ian Anthony, *Irreversibility in Nuclear Disarmament: Political, Societal, Legal and Military-Technical Aspects*, Stockholm, Stockholm International Peace Research Institute, September 2011, p. 6, in <https://ext.d-nsbp-p.admin.ch/NSBExterneStudien/externestudien/590/it/2398.pdf>.

term goals and problems, situating them in a longer process that adapts to changing international circumstances.

Contextualising Irreversible Nuclear Disarmament

10. IND does not exist in a vacuum. It is necessary to contextualise irreversibility in nuclear disarmament as part of broader institutional architectures and historical dynamics. Irreversibility in nuclear disarmament must be considered a piece fitting into a broader set of existing instruments and historical bilateral and multilateral commitments promoting non-proliferation, arms control, and disarmament.
11. Analysts and policymakers could propose more creative ways of promoting IND grounded in the broader international non-proliferation and disarmament regime if they think about IND as a process with ends in view and not a potential result in the long term. IND proponents need to design policies and mechanisms that would make rearmament complicated. At the same time, these policies and mechanisms should be embedded in the broader components of arms control agreements and the international non-proliferation and disarmament regime. Following these two requirements would guarantee that IND becomes a new tool that reiterates commitments and maintains, sustains, and strengthens the international non-proliferation and disarmament regime with its very different components.⁷
12. Past experiences building arms control agreements and the international non-proliferation and disarmament regime could either help or question IND. Analysts and policymakers must trace the historical origins and development of IND to prevent challenges. Historicizing IND would also help them be mindful of the compromises actors and states have made when crafting the international non-proliferation and disarmament regime. Analysts and policymakers need to pay attention to 1) the efforts of non-nuclear-weapon states to promote disarmament and 2) why and how the 2010 NPT Review Conference action plan established irreversibility as a fundamental principle of disarmament, together with transparency and verification. As Williams and Link remind us in *Irreversibility in Nuclear Disarmament*, this notion is not new in the history of the NPT process.⁸ Thus, it is imperative to historically ground current efforts to conceptualise and operationalise IND to prevent alienating actors and audiences.
13. IND advocates need to ground current efforts to conceptualise IND in the historical development of nuclear arms control agreements and the international non-proliferation and disarmament regime. This attention will prevent side-lining the efforts of countries in the global south, non-nuclear-weapon states, and civil society that have advocated for strengthening development and disarmament as pillars of the NPT. It will be more constructive to bring these actors into a productive dialogue by presenting IND as a synthetic approach that considers diverse means and does not co-opt or ignore past efforts to promote development and disarmament.

Conditions to Achieve Irreversible Nuclear Disarmament

14. Participants engaged in a thorough revision of the elements that can facilitate IND as a process. They highlighted the legal, political, economic, social, and technical factors that could promote, guarantee, and sustain irreversibility. Following the lead

⁷ IPNDV Working Group 1: Monitoring and Verification Objectives, *Food-for-Thought Paper: Achieving Irreversibility in Nuclear Disarmament International Partnership for Nuclear Disarmament Verification*, Washington, DC, International Partnership for Nuclear Disarmament Verification, January 2018, p. 2, in <https://www.ipndv.org/reports-analysis/food-thought-paper-achieving-irreversibility-nuclear-disarmament/>

⁸ Williams and Link, *op.cit.*

of the 2010 NPT Review Conference action plan, participants emphasised the importance of improving transparency and verification mechanisms to go in tandem with irreversibility in nuclear disarmament. It is necessary to consider the technical capabilities that could help achieve IND, including the capabilities to dismantle nuclear weapons complexes transparently and to verify disarmament.

15. Complementing technical factors with social elements will be necessary to promote IND comprehensively. The technical components could lay the groundwork and provide the capabilities to guarantee IND, but a sustainable approach to irreversibility must pay attention to social dynamics.⁹ Two key societal factors for IND are confidence and stigmatisation. The international community might ask for mechanisms and tools to ensure a state has forgone its nuclear arsenal and effectively disarmed. Governments might also look for assurances that a state will disarm. Different options to improve confidence in disarmament include improving state relations and strengthening transparency and verification mechanisms.
16. Case studies and comparative analyses could help identify what technologies helped countries—e.g., Kazakhstan, South Africa, and Ukraine—dismantle their nuclear weapon programs and the mechanisms designed to verify these processes. Case studies and comparative analyses are also helpful in examining how rivals engaged in disarmament processes despite low levels of mutual trust. For example, Argentina and Brazil collaborated in building nuclear capabilities during the Cold War despite their rivalries; these countries cooperated again in the early 1990s to create the Brazilian–Argentine Agency for Accounting and Control of Nuclear Materials to guarantee the peaceful nature of their nuclear complexes.¹⁰
17. Participants discussed ways in which IND as a process could modify the value of nuclear weapons. They called for a better understanding of the processes of social stigmatisation as a possible way to change the perception of nuclear weapons and their possession. There is a tradition of engagement between nuclear scholars and psychologists to understand the social-psychological determinants of nuclear proliferation. IND advocates could forge a similar relationship to analyse what social-psychological could improve disarmament prospects. Adding social psychologists to disarmament conversations could help IND advocates devise techniques and tools to advance confidence-building around disarmament and stigmatisation around nuclear-weapon possession.
18. International Relations scholars examine how stigmatisation and stigma management work in international politics, especially regarding norm compliance.¹¹ These bodies of literature could help IND proponents understand how to socialise states into accepting IND by changing the value that societies attribute to nuclear weapons as a security tool—a potential component behind intentions to achieve or reverse disarmament processes. But these scholars could also made IND proponents aware to how nuclear and non-nuclear-weapon states might react and even successfully reject efforts to stigmatise nuclear weapons.

Crafting Narratives about Irreversible Nuclear Disarmament

⁹ Rebecca D. Gibbons, “Norms versus Security Approaches to Irreversible Nuclear Disarmament,” in Williams, Link, and Rodgers, *op. cit.*

¹⁰ Toby Dalton, Togzhan Kassenova, and Lauryn Williams (eds.), *Perspectives on the Evolving Nuclear Order*, Carnegie Endowment for International Peace, Washington, D.C., 2016, in <https://carnegieendowment.org/2016/06/06/perspectives-on-evolving-nuclear-order-pub-63711>

¹¹ George Lawson and Ayşe Zarakol, “Recognizing injustice: the ‘hypocrisy charge’ and the future of the liberal international order,” *International Affairs*, 2023, vol. 99, no. 1, pp. 201-217, in <https://doi.org/10.1093/ia/iac258>

19. IND requires a careful messaging and promotion to face criticisms and gather international support. In the effort to conceptualise IND, a danger to avoid will be transforming irreversibility into an obstacle to promoting disarmament. Critics of IND might point out the current unfavourable international conditions for disarmament and limited technical capabilities for verification and enforcement as insurmountable obstacles. The international context currently witnesses increasing tensions and competition among great powers and diverse and potentially contradictory visions about international security. Some analysts have questioned the utility of nuclear weapons while others have raised scepticism about successfully achieving disarmament in this environment.¹²
20. As a potential response to critics, participants argued that it is necessary to present IND as a process, an end-in-view that relies on constant updating and not as a definite result to achieve in the short term. Thus, IND must be framed as a continuous process depending on technical and social factors that could improve and adapt to better face changing circumstances. This framing would help IND proponents prevent unfair objections and even promote a dialogue with critics. To better think of framing options, case studies could give IND proponents examples of how nuclear powers have dismantled components of their nuclear weapons complex, sometimes even in competitive international contexts.
21. There is a need to craft a careful narrative about IND to also engage with the larger audiences in the international non-proliferation and disarmament regime. A mindful portrayal of IND would pay attention to how we talk about responsibilities and commitments. While non-proliferation, disarmament, and arms control advocates might share a desire to strengthen the regime, they might disagree on how to do so. Even disarmament proponents might disagree on the best ways to strengthen and improve this pillar of the NPT. These discrepancies are the result of different understandings of the origins and consequences of critical components of the regime, including disarmament commitments, rather than an unwillingness to dialogue.¹³
22. A prudent framing could help IND proponents bring together communities that, even when they disagree on the definition or importance of some of its elements, value the international non-proliferation and disarmament regime and want to sustain it in an international context marked by challenges and competition. Moreover, favouring negotiations over short-term steps about IND could help keep dialogues open and relations going, even when the broader strategic and political relations among states decline. Thus, seeing IND as a process could also help sustain the regime in a context marked by competition by maintaining open communication channels, even if the conversations are on specific IND components and short-term goals.

Conclusion

Nuclear arms control agreements and the international non-proliferation and disarmament regime are at a crossroads. IND could offer potential ways to deal with current uncertainties about the strength and future of commitments in a context marked by competition and challenges. A conceptualisation that sees IND as a process that requires constant updating could help analysts and policymakers better cope with the unknown

¹² For an overview of the landscape of opinions, see Rose Gottemoeller, "The Case Against a New Arms Race: Nuclear Weapons Are Not the Future," *Foreign Affairs*, August 9, 2022, <https://www.foreignaffairs.com/world/case-against-new-arms-race>

¹³ Jonathan Hunt, *The Nuclear Club: How America and the World Policed the Atom from Hiroshima to Vietnam*, Stanford, Stanford University Press, 2022.

unknowns that emerging risks, crises, and disasters pose to the regime.¹⁴ Building an approach of IND as an adaptive process requires embracing and promoting diversity, both in terms of concepts of irreversibility and practices to implement it. Diversity, in turn, will help encourage creativity in reshaping the norms and interests that make cooperation and governance innovation in the international non-proliferation and disarmament regime possible.¹⁵

Participants concluded this Wilton Park dialogue by pointing out areas needing further work to conceptualise IND better. Their suggested options fall into four broad categories. They posed that it is necessary to:

- Include more voices and approaches toward nuclear arms control and the international non-proliferation and disarmament regime in IND discussions. Embracing diversity during the conceptualisation of IND could help proponents have a more comprehensive view of the requirements and obstacles, both technical and social, that IND can face.
- Propose meetings under diverse leaderships on IND. For example, these meetings can occur as part of the NPT inter-sessional working group led by non-nuclear-weapon states and developing countries. Wilton Park could host an annual conference on IND to improve and adapt the conceptualisation of irreversibility in nuclear disarmament to changing circumstances and challenges.
- Invest in knowledge building to create an epistemic infrastructure for dialogue. Since IND remains an unexplored concept, IND proponents have the opportunity to propose a shared vocabulary and promote creative and innovative proposals to improve capacities for disarmament. These components could be a foundation to make policymakers, analysts, and the broader international public aware of IND as a real possibility. There is also a need to improve the legal arguments IND advocates can use to exert pressure on political decisions and channel political behaviour in favour of irreversibility in nuclear disarmament.
- Fund research to map out best practices to dismantle nuclear weapons complexes and build a governance of discontinuation. In this effort, literature reviews, case studies, comparative analyses, and wargaming exercises can help identify the legal, political, economic, social, and technical components that could help IND. Understanding how countries in different latitudes have approached these goals in the past could help IND proponents better ground future proposals. It would also give them illustrations they can use to engage the broader audiences within the international non-proliferation and disarmament regime and critics.

As a process and a goal, IND is a gradual procedure to build trust and consequences that does not exist in a vacuum. Thus, it is necessary to consider IND as a piece fitting into a broader set of existing instruments and commitments within the non-proliferation and disarmament regime, to think about the conditions that could improve the possibilities of IND, and to craft a careful narrative about IND and why it is necessary in order to engage with the larger audiences in the regime.

¹⁴ On how to deal with unknown unknowns in security contexts, see Daniel Deudney, *Dark Skies: Space Expansionism, Planetary Geopolitics, and the Ends of Humanity*, Oxford, Oxford University Press, 2020.

¹⁵ On diversity and creativity in global governance see Deborah Avant, "America's Pragmatic Role?," *International Studies Review*, vol. 23, no. 3, 2021, pp. 1126–1143, <https://doi.org/10.1093/isr/viaa069>

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