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Inventing a shared Science Diplomacy for Europe

InsSciDE Work Package 6: **Security: Scientific and Technical Cooperation in the Context of European Diplomacy**	
Case Study n°6.4a	**Addressing nuclear security through the study of IAEA's safeguards system**
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Abstract

This InsSciDE case study focuses on the historical role of the United Nations International Atomic Energy Agency (IAEA) in the creation and maintenance of the global nuclear safeguards system. Nuclear security is more than a matter of nipping nuclear weapons programs in the bud. Instances when nuclear proliferation is halted at the last possible moment before weapons-grade fissionable material is produced and explosive devices are assembled may offer the public the most drama. But history suggests nuclear security is a more subtle matter, involving global knowledge networks created and shaped by careful science diplomacy. We consider the paradoxes of the IAEA as an agency and system aiming at both the development of nuclear technologies (nuclear power, exploitation of nuclear raw materials), and their control and restriction. Our study seeks a comprehensive understanding of the negotiations that took place within the IAEA's most powerful policy organs such as the Board of Governors, the Safeguards Committee, and the Scientific Advisory Committee throughout the early years of the agency's operations. In addition, it follows the transformation of the safeguards system through the Iraqi crisis in 1991. The above negotiations reveal the interplay of nuclear science and diplomacy in the context of the most powerful international organization in the nuclear realm, allowing us to draw lessons in handling nuclear security issues and developing a shared nuclear diplomacy on a European level.

Introduction

In 1957 numerous nations across the globe welcomed the establishment of the IAEA for diverse political reasons, but almost all shared the expectation of acquiring nuclear energy in order to bolster industrial development. Yet the IAEA's application of a centralized safeguards system, that could and should "begin to diminish the potential destructive power of the world's atomic stockpiles" according to the US President Dwight Eisenhower, was not equally welcomed. The Agency's safeguards initially encountered mistrust and resistance from the member states of the developing world, and most significantly from the Soviet bloc. In addition, given that the European Atomic Energy Community (EURATOM) was actually the first that institutionalized safeguards at a regional level in 1957, some West European states saw the attempt to establish a safeguards system as a direct threat to EURATOM.

The reluctance of nations to place their programs under international control was smoothed only when the Unite States decided to transfer to the IAEA responsibility for safeguarding its nuclear exports to non-European countries. The fact that the Soviets gave full support to the IAEA safeguards system in 1963 also leveled debates. From 1965 to 1967, the IAEA was able to review its safeguard system and establish a more rigorous one covering reactors of all sizes, reprocessing plants, and fuel fabrication plants. A major turning

point was the 1968 Treaty on Non-Proliferation of Nuclear Weapons (NPT) that allowed the application of safeguards to all the nuclear material in the states that had not acquired nuclear weapons. The treaty entered into force in 1970 and the Board of Governors approved the IAEA safeguards system a year later. Although limited, the safeguards system focused on nuclear sites that each member state declared as such and willingly placed under the IAEA inspection. The possibility remained that undeclared plants might exist, but the IAEA safeguards had no power to inspect them. The architects of the system assumed that clandestine nuclear programs and undeclared plants would be detected by other means. It took them two decades and the Iraqi crisis to realize that only a stronger safeguards system might have the chance to unmask illicit nuclear activities.

Case study 6.4aseeks a comprehensive understanding of the negotiations that took place within the IAEA's most powerful policy organs such as the Board of Governors, the Safeguards Committee, and the Scientific Advisory Committee over safeguards throughout the early years of the IAEA's establishment. Checking the "EU Science Hub" website[1] in 2018 we learn that "Nuclear safety, security and non-proliferation are absolute priorities for the EU, supporting the international initiative on a holistic Safety, Security and Safeguards ('3S') concept for nuclear energy. The European Commission as guardian of the Treaties operates as an effective regional nuclear safeguard system (EURATOM) in close partnership with the International Atomic Energy Agency (IAEA)." How did diplomatic negotiations on safeguards within the IAEA–EU context evolve from mistrust to close and trusting collaboration? The history of IAEA's safeguards can indeed provide penetrating insight into security issues with strategy lessons for both EU diplomats and scientists.

Actors

The main actors are historical figures such as the senior members of each diplomatic delegation of IAEA Member States who participated in the meetings of the Board of Governors and the Safeguards Committee. In addition, important actors are the scientists composing the Scientific Advisory Committee set up in 1958 by decision of the IAEA Board of Governors to advise on the scientific program of the Agency.

Disciplinary/methodological approach

This study stands at the intersection, on the one hand, of history, philosophy and sociology of nuclear science and technology and, on the other, of international history and diplomatic studies. The aim is to develop a comprehensive understanding of nuclear diplomacy. For this we focus on formal diplomatic negotiations that took place at a highly international and institutional level, trying to identify the transformation of nuclear diplomacies during (roughly) the second half of the 20th century.

Our approach targets diplomats working in national delegations of IAEA Member States, nuclear science diplomats, diplomatic editors of major newspapers and electronic media as well as historical actors key to the case.

Key to this task is the textual analysis of published and unpublished sources to be identified in the IAEA archive and website relevant to the development of the safeguards system. Especially important are the recently declassified IAEA records of the Board of Governors, the Safeguards Committee, and the Scientific Advisory Committee. Important too is archival material from the European Commission Historical archives. In addition, our study considers visual material and objects to be texts (McKenzie, 1986). The textual analysis we employ here is original: using methods from a range of disciplines it places texts in a field of social forces and, at the same time, attempts to analyze them conceptually.

[1] https://ec.europa.eu/jrc/en/interlaboratory-comparisons/nuclear-safeguards

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