



### InsSciDE Work Package 6:

#### **Security: Scientific and Technical Cooperation in the Context of European Diplomacy**

<b>Case Study n°6.4b</b>	<b>Role of the IAEA in the Development of Nuclear Techniques, Safety, and Security Measures in Morocco</b>
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### Abstract

In this study, I take up the matter of the role of the International Atomic Energy Agency (IAEA) as well as various bilateral relations in the development of a secure, productive nuclear technological infrastructure in one of the European Union's most important neighbors, Morocco. For years, the various authorities involved in the development of nuclear energy in Morocco have maintained relations with countries like France and the United States, as well as with international and supranational organizations like the IAEA and, more recently, the European Union. This study considers how these relations contribute to the advancement of a secure national, regional, and global nuclear infrastructure.

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The IAEA's founding mission, established in the late 1950s, was two-fold: to monitor against the proliferation of nuclear weapons, and to encourage the development of nuclear technologies in developing countries that lacked them. There is an important historical literature concerning the founding and early history of the Agency, one in which scholars critically examine the degree to which the IAEA reinforced rather than sought redress for the global inequalities that marked the Cold War. In addition, there is a longstanding scholarly concern with the effectiveness of the global non-proliferation regime, including the role of the IAEA. Still to be fully addressed, however, is the question of how and with what effectiveness the IAEA has provided an aide-based framework for the development of nuclear technoscientific infrastructures in member states. How, over the last half-century, has the IAEA provided support for its member states in the development of a useful and secure nuclear infrastructure? To what degree has it succeeded—and how is "success" to be understood and measured?

The present study examines these questions in the case of the Kingdom of Morocco. This is for two reasons. First, Morocco has a long and rich history of collaboration with the IAEA. Since the beginning of the 1960s, the Kingdom has called upon the IAEA to collaborate in areas ranging from basic assessment of infrastructure, to nuclear techniques in medicine and agriculture, to studies of desalination and power-producing plants, to exploration for nuclear raw materials. This especially wide spectrum of activity provides the opportunity for a historical study of nuclear energy in all its dimensions, including the role of other international organizations like the UNDP, UNESCO, and the OECD.

Second, Morocco's geography and history make it especially important strategically, for Europe and Africa. Morocco is linked by pipeline and electric undersea cable to Europe. Historically, Morocco has had close connections especially with France and Spain. The former connection is particularly important in the field of



nuclear energy, as many Moroccan nuclear engineers and scientists have trained in France and continue to maintain relations with their French counterparts on a bilateral as well as international basis.

IAEA, French, and US archives yield rich sources on the history of the Moroccan nuclear program's relationship with both the international agency and the nuclear authorities of those countries. While Moroccan archival resources are sparse, my research includes interviews with key Moroccan scientists and administrators involved in the realization of a program that has now become a regional international training center in the areas of radioprotection, nuclear safety, and nuclear science and technology services.

Preliminary results indicate novel findings of at least two sorts. First, the role of the IAEA is not to be underestimated in the development of a nuclear technoscientific infrastructure in the Kingdom. However, the historical process was rarely one of direct technology transfer. Rather, it was more often a process of what might be termed "collaborative nuclear reflection," as Moroccan authorities treated the administrative steps expected by the IAEA as moments to consider carefully the future direction of their nuclear program. Their assessment of that direction changed considerably over time.

Second, perhaps the most significant outcome of Morocco's decades-long collaboration with the IAEA, as well as with French and US administrations, is the present nuclear research center at Maâmora, north of Rabat—and its international orientation. Maâmora has become a key regional training center in the areas of radioprotection and nuclear safety, meaning the diplomatic initiatives in which Morocco was a junior partner have resulted in a situation in which the Moroccan research center now functions as an independent node in the IAEA-centered global nuclear security and safety network.

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