Chapter 6

National Sovereignty and Responsibility for Spent Nuclear Fuel

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1. Introduction

Since the end of the Second World War the dualism between civilian and military applications of nuclear technological knowledge has been a central issue for international political debate. In the focus of this debate stands the tension of the known destructive power of military applications, illustrated by Hiroshima and Nagasaki, and the perception that civilian applications can be a source of energy supply for humanity.

This Janus-faced character of nuclear technology constitutes the basis for the development of multilateral regulation and co-operation that started during the latter part of the 1940s. The challenge facing political decision makers was, and still is, to create legal and administrative structures that further applications within the civilian sphere, while curtailing and phasing out applications within the military sphere. Despite the creation of a comprehensive regulation this objective has not been reached, and the fundamental dilemma is still with us. Furthermore, this dilemma has been accentuated by the ambition in an increasing number of states to develop a capacity for civilian nuclear energy production, a development that might be accelerated through the advancing consciousness of global warming.

The tension existing between hope and threat of nuclear energy is mirrored in the debates on principles for the responsibility of spent nuclear fuel which contains fissile materials that can be useful in both military and civilian applications of nuclear technology.

The objective of this chapter is partly to investigate to what extent existing multilateral regulation affects national competence to develop exclusively national systems for the disposal of spent nuclear fuel. Moreover, the analysis includes a forward looking perspective, taking into account arguments and initiatives for the development of

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1 The typical composition of used nuclear fuel from a light water reactor is: Uranium 94.5%, Fissile products 4.3%, Neptunium 0.055%, Plutonium 1.086%, Mericium 0.053% and Curium 0.006%. J. Wallenius, ‘Nyttiggörande eller kvittblivning’ in M. Andrén and U. Strandberg (eds.), Kärnavfallets politiska utmaningar (Gidlunds förlag, Stockholm, 2005) pp. 101-115, 103.
multinational repositories for the final disposal of spent nuclear fuel, and calls for limitations on sovereignty concerning national control over the final stages in a civilian nuclear fuel cycle.

These initiatives constitute a challenge to the national positions of several states, such as Sweden, France and Finland, all of which have enacted national laws prohibiting the disposal of foreign spent nuclear fuel within their territories. This principle of exclusive national responsibility has a clear political logic: the political choice of whether or not to develop a civilian nuclear industry lies within national sovereignty. If the choice for such a development is made, there follows a responsibility for handling the spent nuclear fuel. The responsibility is reciprocal and thus has an exclusive national character — no state is under an obligation to handle foreign spent nuclear fuel. In addition, it should be noted that the principle of exclusivity has increasingly been perceived as being a precondition of mustering local acceptance for the localisation of facilities for final disposal of spent nuclear fuel.

1.1 The first Initiatives for Multilateral Regulation
– The Baruch Plan and the Soviet Counter Proposal

The importance of preventing a nuclear arms race while simultaneously stimulating the development of civilian applications of nuclear technological knowledge was discussed at the tripartite meeting between the US, Soviet and British ministers of foreign affairs held in Moscow in December 1945. At that meeting an agreement was reached to create a special UN Commission to further such a development. This new institution, the UN Atomic Energy Commission, began its activities in January 1946. In its mandate, adopted by the UN General Assembly, it was stated:

“The Commission shall proceed with the utmost despatch and enquire into all phases of the problem, and make such recommendations from time to time with respect to them as it finds possible. In particular the Commission shall make specific proposals.

a. For extending between all nations the exchange of basic scientific information for peaceful ends;
b. For control of atomic energy to the extent necessary to ensure its use only for peaceful purposes;
c. For the elimination from national armaments of atomic weapons and of all other major weapons adaptable to mass destruction;
d. For effective safeguards by way of inspection and other means to protect complying States against the hazards of violations and evasions…”

From an American perspective it was clear that the military nuclear monopoly constituted an intermittent position of strength. The establishment of a multilateral regulation for the application of nuclear technological knowledge was therefore seen to be of

2 Finland; Kärnenergilag 1987/990, para 6b. France; Loi 91-1381 relative aux recherches sur la gestion des déchets radioactifs. Sweden; Lag om kärnteknisk verksamhet, SFS 1984:3, para. 5a.

3 ‘Commission’s terms of reference’, Article 5, UNGA Res. 1, 24 January 1946.