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Managing the Atom in the Middle East:
Hints from the EURATOM Experience for a WMDFZ
in the Middle East

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ISSN 1830-1541

© Mustafa Kibaroglu, 2013

Printed in Italy, October 2013

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Badia Fiesolana

I – 50014 San Domenico di Fiesole (FI)

Italy

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Abstract

The paper covers those verification provisions of EURATOM, which are thought to be relevant to a NWFZ/ME. To begin with, briefings about the emergence and evolution of EURATOM is useful in order to give an idea about how the characteristics of this region were embodied into reliable, effective and long-lasting regional agreements. Then, far-reaching and stringent safeguards procedures of EURATOM will be highlighted. Likewise, insights will be given about how peaceful uses of nuclear energy can become possible in environments reigned by mistrust and hostility, and can pave the way for further cooperation. The implications of the Western European experience for a Middle Eastern NWFZ will then be analyzed. Upon this analysis, several proposals regarding the nuclear non-proliferation initiatives for the Middle East will follow the suit.

Keywords

EURATOM, NWFZ, Middle East, Proliferation, IAEA, Safeguards

Introduction

Proliferation of weapons of mass destruction (WMD) has been one of the principal causes of instability in the Middle East. Though, there have been instances where chemical weapons are used already, luckily no explicit use or tests of nuclear devices happened to take place in the region.¹ Nevertheless, Israel is strongly believed to have already stockpiled atomic bombs in the basement. Yet, the official stance of the Israeli authorities against such allegations is neither the denial nor the acknowledgement of the existence of nuclear weapons in their military arsenal. This strategy is called the “policy of ambiguity” or “opaqueness”.² Iran, on the other hand, nurtured suspicions, especially in the West, with respect to the its objectives in far advancing its nuclear capabilities, over the last decade in particular, including uranium enrichment and plutonium reprocessing facilities, as to whether they may be diverted from peaceful to military applications in the future.

Needless to say, for building confidence among the states and promoting peace in the Middle East, transparency is essential. Only then the removal of all WMDs from the region is likely to be materialized.

Although, the modalities suggested for dealing with the threat emanating from the existence and the danger of proliferation of WMDs exhibit differences, a common view shared by the authorities is to deal with it within the context of a Zone Free of Weapons of Mass Destruction (WMDFZ) in the Middle East.³ Hence, on one side, the Arab states and Iran point out to the existence of universal conventions and treaties concerning the WMDs and declare that Israel should *a priori* become a member state to the Nuclear Non-Proliferation Treaty (NPT).⁴ On the other side, the Israeli officials specifically point out to the inefficiency and insufficiency of the nuclear non-proliferation regime. Notwithstanding, they endorse the idea of a WMDFZ by emphasizing the feasibility of a regional approach, provided the zonal agreement incorporates far-reaching verification provisions. In these circumstances, a middle ground between the parties to the dispute is expected to be found by the establishment of a nuclear-weapon-free zone (NWFZ) as the first step towards the creation of a WMDFZ. A potential treaty on NWFZ is thus suggested to be endowed with effective verification provisions, and also linked to the universal nuclear non-proliferation regime.

¹ Preliminary records on the use of chemical agents, both in the continental Europe and the Middle East, go back to the First World War years. Later, the Egyptian use of chemical agents in support of the republican forces in the Yemen Civil War (1962-1967) was the subject of numerous reports in those years. Libya is accused of using CW against the rebels in Chad in 1986 and 1987. During the Iran-Iraq War (1980-1988), use of chemical weapons has been extensively documented by UN investigations, including the massacre against the civilians in the Kurdish town of Halabja by Saddam’s forces in March 1988. See, Peter Herby, *The Chemical Weapons Convention and Arms Control in the Middle East*, Oslo: Falch Hurtigtryk as, for PRIO, 1992. More recently, chemical agents were reportedly used in Syria against the civilian population both in March and August 2013.

² According to Etel Solingen, opaqueness refers both to a policy and to a systemic outcome characterized by no open acknowledgement of existing nuclear military capabilities or of intentions to acquire a nuclear weapon, while refusing to commit fully and effectively to mutual or multilateral full-scope safeguards. See Etel Solingen, “The Domestic Sources of Regional Regimes: The Evolution of Nuclear Ambiguity in the Middle East”, *International Studies Quarterly*, June 1994, 38, pp. 305-337..

³ Indeed, a proposal co-sponsored by Iran and Egypt to establish a nuclear weapons free zone (NWFZ) in the Middle East was tabled in 1974 in a United Nations General Assembly meeting, and was adopted as the UNGA Resolution every year since then. Though, the same Resolution used to be adopted unanimously since the beginning of 1980s with Israel voting in favor, no substantial achievements have come through in the years followed. However, a proposal to establish a WMDFZ in the Middle East introduced by the Egypt’s former President Husni Mubarek in 1995 provided a fresh impetus to these efforts.

⁴ James Leonard, Jan Prawitz & Benjamin Sanders, “Establishment of a Nuclear-Weapon-Free Zone in the Region of the Middle East”, in the Report of the Secretary-General of the United Nations, *Study on Effective and Verifiable Measures which would Facilitate the Establishment of a Nuclear-Weapon-Free Zone in the Middle East*, (A/45/435), 1990.

Two such regional co-operation and non-proliferation arrangements do exist, namely EURATOM⁵ and ABACC⁶, out of which one can draw lessons for the Middle East. For the purposes of our project, this paper will only take the European experience into its scope. To give a preliminary insight, it may be stated that the significance of EURATOM stems principally from its enduring safeguards procedures which were carefully designed to make them acceptable both to its member states, and to the United States and Canada.⁷ EURATOM was actually seen, both by its member states and their Western allies, as a leverage for promoting cooperation and enhancing peace and security in Western Europe.

The scope of this paper will cover those verification provisions of EURATOM that are thought to be relevant to a NWFZ. First, the peculiar conditions under which the EURATOM has emerged and evolved into reliable, effective and long-lasting regional agreements will be discussed. Then, far-reaching and stringent safeguards procedures of this institution will be highlighted. Likewise, insights will be given about how peaceful uses of nuclear energy can become possible in environments reigned by mistrust and hostility until recently, and can pave the way for further cooperation. The implications of Western European experience for a Middle Eastern NWFZ will then be analyzed. Upon this analysis, proposals for a NWFZ in the Middle East will be presented in detail.

I. The Western European Experience in Managing the Atom: EURATOM

1. Emergence and evolution of the EURATOM Treaty⁸

The devastating effects of the two World Wars in the 20th century on continental Europe urged the politicians, scientists, scholars, bureaucrats, and all concerned figures from different fields and strata of the peoples of Europe, to find a way of putting an end to the hostilities among the states in the region and to promote peace and friendship. Due to the very fact that the 'war machine', or the 'armory', was essentially made of steel composed of iron and coal, it was thought that keeping these basic elements under control, would eventually allow to keep the development of 'armories' under control. This way of thinking, among others, gave way to the emergence of the European Coal and Steel Community (ECSC) in 1950, whose principal actors were France and Germany. Hence, the idea of a 'united Europe' practically came about with the ECSC.

However, the very same years had already witnessed an unprecedented weapon, namely the atomic bomb developed and used by the United States. This weapon technology was nonetheless bound to spread, in one way or the other. Hence, the same Europeans who had somehow found a way to control the 'war machine', then again, had to find a way to prevent further spread of this 'brand new' scientific discovery. The Continent's land for science and technology was very fertile. Accordingly, the idea of "atoms for peace" proposed by the US President Dwight Eisenhower in December 1953 at the United Nations had to go beyond mere rhetoric. The European Atomic Energy Organization (later EURATOM) was created in such a state of mind.

Giving birth to EURATOM was not an easy process politically, nor a straightforward one technically. EURATOM had to harmonize dissimilar and somewhat conflicting interests of various states both inside and outside the region. In particular, France had 'nuclear ambitions' on the one hand,

⁵ EURATOM denotes "European Atomic Energy Community".

⁶ ABACC denotes "Argentine-Brazilian Agency for Accounting and Control of Nuclear Materials".

⁷ EURATOM could not have come about, let alone survived, without the consent of its members, particularly of France, nor without the technological support of the United States or short of natural uranium of Canada.

⁸ For a comprehensive survey on the emergence and evolution of the 'EURATOM Safeguards System', and its political implications on the relations both among the friends and the foes during the Cold-War period see, Darryl A. Howlett, *EURATOM and Nuclear Safeguards*, London, MacMillan Press, 1990.

and was equally committed to not to leave the 'floor' to West Germany in the nuclear field, on the other. The latter aim of France did well coincide with that of the other European states as well as the United States and the Soviet Union. Even though the French determination to 'go nuclear' was in no way accepted by the United States, nor by the Soviet Union, it was clear that unless France gave its consent, no talk of a European institution, which would control the further spread of nuclear weapons would be possible, nor might West Germany be under effective and close scrutiny. This was a 'trade-off' for the United States, which finally culminated in its generous support for EURATOM. But a similar 'trade-off' was also the case for France. Since, unless the United States supported the idea of EURATOM, politically and technologically, it would have been very difficult for France to develop its infantile nuclear research program in relatively short time. Then, the sides agreed that this European institution had to be endowed with stringent verification provisions. The degree of stringency had to meet the US standards, otherwise the US inspectors themselves would have had to carry out inspections in the European nuclear installations. This was something the Europeans would like to avoid absolutely.

Concomitantly, the IAEA was in the process of establishing its global safeguards system, and there were concerns that the EURATOM system might undermine this objective.⁹ It was argued that the US support for EURATOM had "effectively ended any chance that the IAEA would develop into a universal safeguards system. Once this Pandora's box was opened, little possibility remained that other nations would readily agree to nuclear transfer terms more rigorous than those imposed upon EURATOM."¹⁰ However, the US support was secured. Experimentation with a tight international control mechanism, though in a limited area, could set an example for the evolution of a tight universal system among nations. In a way, this report revealed the US point of view on EURATOM's proposed safeguards procedures as being more promising than the procedures agreed upon in the IAEA's Statute. Therefore, for the US authorities, the idea of supporting the European proposal seemed interesting, especially since these safeguards procedures were actually derived from the safeguards provisions contained within bilateral nuclear transfer agreements, and the US domestic nuclear law. Moreover, the ideas that have been put forth at the time of the Acheson-Lilienthal Report and the Baruch Plan were enshrined into the EURATOM safeguards provisions. Therefore, these provisions were much like an *American cloth designed à taille Européenne*.

2. Fundamentals of EURATOM's safeguards system

The fundamental clauses of the EURATOM safeguards procedures can be found in Chapter VII of the EURATOM Treaty, which comprises Articles 77 to 85.¹¹ The significant feature of these nine Articles is that, when taken together, they encapsulate a whole range of different safeguards ideas. Some of these were quite novel to EURATOM and were therefore largely untested. Others were drawn from ideas developed in different industries. Still others did have a track record in nuclear regulation. What is noteworthy about all these ideas is that they are broadly representative of the entire spectrum of safeguards thought up to that time. When taken as a whole, EURATOM safeguards articles reveal a concerted attempt to mold together a coherent set of nuclear energy control provisions.¹²

⁹ Darryl A. Howlett, 'Regional Nuclear Co-Operation and Non-Proliferation Arrangements: Models from Other Regions', in Darryl A. Howlett & John Simpson (eds.), *East Asia and Nuclear Non-Proliferation*, Papers from Twelfth PPNN Core Group Meeting, Japan, 28-29 Nov., 1992, pp: 63-71.

¹⁰ Charles K. Ebinger, *International Politics of Nuclear Energy*, London, Sage Publications, 1978, quoted in Darryl Howlett, EURATOM and Nuclear Safeguards, p. 71.

¹¹ EURATOM Treaty was signed on 25 March 1957 at Rome, initially by Belgium, France, Luxembourg, the Netherlands, F.R. Germany, and Italy that established the European Economic Community (EEC).

¹² Darryl A. Howlett, *EURATOM*.. p. 87.

Accordingly, Article 77 of the EURATOM Treaty states that *..the Commission shall satisfy itself that, in the territories of Member States, (a) ores, source materials and special fissile materials are not diverted from their intended uses as declared by the users,..* Together with this, Article 2 of the EURATOM Treaty required the EURATOM Commission to ensure, *by appropriate supervision, that nuclear materials are not diverted to purposes other than those for which they are intended.* For the attainment of the objectives set out in Articles 2 and 77, the Treaty required from the operators, with Article 78, a declaration to the Commission concerning the *basic characteristics of the installations set up or operating for the production, separation or other use of source materials or special fissile materials or for the production of irradiated nuclear fuels.* Similarly, an approval by the Commission of *the techniques to be used for the chemical processing of irradiated materials* was made obligatory by the Treaty.

Since the European authorities were determined to secure the political and technological support of the United States without their direct involvement, the proposed US-EURATOM safeguards agreement had two basic features: a system of *checks* to ensure that reliable nuclear accountancy records were being kept; and a system of *inspection* implemented by EURATOM safeguards inspectorate comprised of EURATOM nationals only, in order to verify that the information supplied in the accountancy records was accurate.

Accordingly, Article 79 entrusted EURATOM with setting up a rigorous system of nuclear accountancy. To this end, the Commission required that *operating records be kept and produced in order to permit accounting for ores, source materials and special fissile materials used or produced. The same requirement shall apply in the case of the transport of source materials and special fissile materials.* With Article 79, the designers of the EURATOM Treaty satisfied both their American counterparts who insisted on a strict and reliable material accountancy system so as to allow transfer of nuclear material and technology, and they equally set up a system for themselves regarding their potential for nuclear trade and the related security issues

Similarly, to restrict the intrusion of US inspectors, Europeans set on to draft safeguards inspection provisions in such a way that even the US authorities would agree on not to carry out their own inspections in European installations. Hence, Article 81 states that: *The Commission may send inspectors into the territories of Member States....inspectors shall at all times have access to all places and data and to all persons...in order to apply such safeguards to ores, source materials and special fissile materials and to ensure compliance with the provisions of Article 77... if the carrying out of an inspection is opposed, the Commission shall apply to the President of the Court of Justice in order to ensure that the inspection be carried out compulsorily.....*

In the same regard, in Article 82, the Treaty brought clarity to the task of the inspectors and their selection by stating that *inspectors shall be recruited by the Commission [and] they shall be responsible for obtaining and verifying the records referred to in Article 79. They shall report any infringements to the Commission.* Thus, neither objections to the designation of the inspectors, nor attempts to retard the proper inspections were allowed to create a serious problem in the EURATOM Treaty.¹³ In Article 83, these sanctions are listed *in order of severity* as follows: (a) a warning; (b) the withdrawal of special benefits such as financial and technical assistance; (c) the placing of the undertaking for a period not exceeding four months under the administration of a person or board appointed by a common accord of the Commission and the State having jurisdiction over the undertaking; (d) total or partial withdrawal of source material or special fissile materials.¹⁴ The scope

¹³ As has been the case for the IAEA safeguards procedures, such 'tools' can very well be exploited by most of the 'nuclear going' states in order to gain time to hide their secrets. Even under the terms of the UNSC Resolution 687, Iraqi authorities 'dragged their feet' either by objecting to the inspectors or by not giving them proper 'escort' services to transfer the teams to the inspection sites.

¹⁴ The last sanction, which meant the confiscation of the precious assets of the violating party, is quite severe and thus of a deterring nature.

of application of EURATOM safeguards is elucidated in Article 84, which satisfied the French that nothing in the Treaty would preclude them from developing their atomic explosive device. Hence, Article 84 gave way to the French military nuclear program by not extending the application of safeguards *to materials intended to meet defence requirements*. As Lawrence Scheinman stated, no article of the Treaty limited a nation's right to use atomic energy for military purposes.¹⁵ The United Kingdom and France thus stand as the two-and only nuclear weapons states (NWS) party to the EURATOM Treaty. One important feature of the EURATOM Treaty is that, with Article 52 in Chapter VI, it provides the basis for the establishment of the *Supply Agency* by stating that the Agency *shall have a right of option on ores, source or special fissile materials produced in the territories of the Member States ...* Similarly, with Article 86 in Chapter VIII of the EURATOM Treaty, it is decided that the *special fissile materials shall be the property of the Community*. In the same regard, Article 88 stated that *the Agency shall keep a special account in the name of the Community, called Special Fissile Materials Financial Account.*

i. Commission regulations

The EURATOM Treaty was signed in 1957, but some additional regulations were required to put it into effect. Thus, in 1959 and 1960 the Commission of the European Communities adopted two Regulations (7 & 8), which formally started the operation of the terms of the Treaty.

The Commission Regulation 7 provided for the Commission to determine *the procedure for completing the declarations laid down in Article 78 of the Treaty*.¹⁶ Accordingly, Member States were required to provide the Commission with the following information: the type of the reactor and its principal use; its thermal power rating; its fuels (composition and enrichment of fissile material); brief description and general plans for the installation; the technical processes employed. The Commission Regulation 8, on the other hand, aimed at providing *the guidelines for proper implementation of the terms of the Article 79*. It thus required operators to furnish information concerning the details of their stocks and movements of ores, source materials and special fissile materials. It would then be possible to detect any loss or diversion of nuclear materials during the inspections.

ii. The age of the NPT and EURATOM

In the second half of 1960s and early 1970s, the NPT and its safeguards procedures to be implemented by the IAEA were of much concern for the authorities of both the IAEA and EURATOM. With the entry into the force of the NPT, the IAEA would be mandated to carry out safeguards inspections in the territories of the non-nuclear weapon states party to the Treaty. However, EURATOM's inspections were already underway in the territories of the European Community Member States. Therefore, the latter's regional safeguards would be likely to cause considerable problems to the universal aspirations of the former unless an effective way could be found for them to co-exist.

The problem was mainly two-folds: First, was the nature of the safeguards procedures to be applied to the EURATOM countries; and second, the organization to be entrusted with the responsibility of implementing these safeguards. Accordingly, a question arose: would EURATOM survive to the existence of the IAEA? However, West Germany and Italy strongly opposed to the abolishment of EURATOM, while the Benelux countries tended to support the Non-Proliferation Treaty. But in general, the EURATOM authorities' view was to keep their primary responsibility of carrying safeguards, while letting the IAEA act as a verifier.

¹⁵ Lawrence Scheinman, *Atomic Energy Policy in France under the Fourth Republic*, Princeton, Princeton University Press, 1965, pp: 185-186, quoted in Howlett, *EURATOM...* p. 96.

¹⁶ See the Official Journal of the European Communities - Special Edition 1959-1962 (November 1972), p. 23.

Nevertheless, the IAEA authorities thought in a totally different way. According to them, EURATOM had to forgo its safeguarding role and leave the floor to the IAEA's safeguards implementation. .

Even by the time the NPT was signed in 1968, the IAEA-EURATOM safeguards issue had still not been resolved. However, Article III of the NPT, that was eventually agreed, did include an acknowledgement of regional safeguards systems, thus giving an official recognition (if somewhat obliquely) to EURATOM's continued safeguards existence.¹⁷ Paragraph 4 of Article III states that *non-nuclear-weapon States Party to the Treaty shall conclude agreements with the International Atomic Energy Agency to meet the requirements of this Article either individually or together with other States in accordance with the Statute of the International Atomic Energy Agency.*

In May 1970, the IAEA Board of Governors established the Safeguards Committee to determine the essentials of a standard (model) agreement to be applicable to the non-nuclear weapon states party to the NPT. The result was *the Structure and Content of Agreements Between the Agency and States Required in Connection With the Treaty on the Non-Proliferation of Nuclear Weapons*, namely the INFCIRC/153. Accordingly, following the negotiations between the IAEA and EURATOM, both sides agreed on a document designated as INFCIRC/193. In July 1972, the non-nuclear weapon states of the European Community (i.e., West Germany, Italy, Belgium, the Netherlands and Luxembourg), EURATOM and the IAEA concluded this agreement. The parties signed it in April 1973 together with Denmark and Ireland.¹⁸

The safeguards arrangements were put into force in May 1975 with the ratification by all the non-nuclear-weapon states of the Community. They required the states party to the Treaty to set up a State's System of Accounting for and Control of (SSAC) nuclear materials (paragraph 32), then the EURATOM became the SSAC for the INFCIRC/193.

iii. IAEA inspections.

The IAEA was entitled, by the terms of INFCIRC/193, to conduct three different types of on-site inspections in the nuclear installations of the EURATOM Member States: First, *ad hoc* inspections, as stated in Article 71, in order to: (a) *Verify the information contained in the initial report...* (b) *Identify and verify if possible the quantity and composition of nuclear material* Secondly, routine inspections, as stated in Article 72, in order to: (a) *Verify that reports are consistent with records;* (b) *Verify the location, identity, quantity and composition of all nuclear material subject to safeguards....* (c) *Verify information on the possible causes of material unaccounted.* Third, IAEA could conduct special inspections, as stated in Article 73, in order to: (a) *.... verify the information contained in special reports;* or (b) *If the Agency considers that the information made available by the Community ... is not adequate for the Agency to fulfill its responsibilities.*

With the entry into force of the INFCIRC/193, the overall scope of the safeguards provisions differed from those readily established in the EURATOM Treaty. The EURATOM and the IAEA gained experience for decades by applying safeguards jointly, and eventually developed much smoother relations in comparison with the past.

¹⁷ Howlett, *EURATOM...*, *ibid.*, p. 137.

¹⁸ *Ibid.*, p. 151.

II. Proposals for Managing the Atom in the Middle East

1. Implications of EURATOM for a NWFZ/ME

The effective implementations of the safeguards procedures of EURATOM suggest that, if a safeguards system is to be acceptable to the potential members of a zone, its inspections procedures should be far more rigorous and intrusive than the existing IAEA safeguards inspections under the NPT. The overall set of verification provisions should enable the inspectors of the regional verification organization to have access to all places at all times to carry out their job during the *ad hoc*, routine and challenge inspections. Furnishing regular and detailed information about the operations in the facilities, and the transfers of nuclear materials out of and into the states should be among the basic undertakings of the member states. Moreover, the regional organization should have the sole ownership right of the fissile materials within the zone. Likewise, the regional organization must have the authority and the capacity to effectively sanction the violators.

EURATOM experience suggests the importance of certain processes which significantly contributed to creating a climate of mutual confidence. These included the highly public reciprocal head-of-state negotiations of the treaty, the relative integration of governance structures under one Commission, advance notification of significant nuclear developments by member-states, a long pattern of technical exchanges producing considerable rapport between the nuclear energy commissions, and the creation of a parallel Common Market that integrated other aspects of European economies. These actions preceded and ultimately paved the way for substantive bilateral, regional and international non-proliferation agreements.¹⁹

2. Suggestions for the organizational framework of a NWFZ

The ways and means of using nuclear energy solely for peaceful purposes in Western Europe have prompted certain proposals for the Middle East in the same regards. For the organizational framework establishment of two institutions is essential, namely the Council and the Supply Agency.

i. The Council

First a *Council* endowed with the necessary authority and the responsibility to execute the terms of the zonal agreement is suggested. To fulfill this task, the *Middle East Council for Controlling Atomic Energy (MECCAE)* is proposed.²⁰ The Council, namely the MECCAE, is suggested to consist of a representative number of seats, preferably seven, with one permanent seat, with no right of veto, for Iran, Israel, and Egypt, regarding the non-Arab identities and significant nuclear engagements of the former two, and the political weight of the latter in the Arab world and in the NWFZ issue. The remaining four seats may be distributed based on some geographical criteria agreed upon in a General Conference. The term of the MECCAE members may be three or four years. The elections for the four non-permanent seats may be so arranged that their holders alternate among different Arab States at the end of each term. The decisions of MECCAE concerning compliance/non-compliance disputes, and the decisions upon the requests of any state party on non-routine inspections to be conducted in any other state party, should be taken by a majority of four out of seven (equivalent to a ratio slightly more than 57%). To execute verification, MECCAE should designate a specific number of inspectors (a pool) each chosen unanimously so that no state party to the NWFZ subject of a routine or non-routine inspection should object to the inspectors and cause delay in inspections. For each inspection, whether

¹⁹ John R. Redick, *et al.*,

²⁰ The author's sole purpose in associating the name of the Council with the name of a city which is of utmost importance for, and the most respected in the Muslim world, is to make a virtuous start, and emphasize that the guiding principle of the zonal agreement will be mutual 'respect'. Throughout this part, MECCAE will thus denote the proposed Council.

routine or non-routine, in each inspection team, MECCAE should assign at least one inspector being the national of the inspected state.

ii. The Supply Agency

As another important institution, the establishment of a *Supply Agency* is suggested. The Agency should have the exclusive right to hold the special fissile nuclear materials of the states. Therefore, special fissile material should become the property of MECCAE. The Supply Agency should keep records concerning the value and the inventory of special fissile materials left to its possession, and should submit regular reports to MECCAE, so as to ensure that no such material is removed from the Agency. The Supply Agency should also have the optional right of ownership of non-direct use (source) nuclear material and keep detailed information about them.

3. Basic undertakings within the NWFZ

Since, the primary purpose of establishing an NWFZ is to promote peaceful uses of nuclear energy as well as providing the states in the region with the necessary and sufficient assurances, member states should agree to undertake several obligations. The first fundamental undertaking would be to declare that the states will use nuclear energy exclusively for peaceful purposes. Another fundamental undertaking would be to agree not to attack against nuclear installations and facilities in the states party to the NWFZ.²¹ Therefore, states party to the NWFZ should refrain from undertaking, encouraging or participating in, directly or indirectly, any action aimed at causing the destruction of, or damage to, any nuclear installation or facility in other states party. Additionally, the states should certify that they won't receive or seek any assistance in the manufacture or acquisition of nuclear explosive devices, or conduct any research relating to nuclear weapons or tests of nuclear explosive devices. Moreover, the states should undertake to place under the control of the Supply Agency, as of the date of entry into force of the Treaty, all their special fissile materials already produced and stockpiled, and accept all routine and non-routine safeguards inspections to be conducted at all times at any place on all their nuclear materials and installations, by either MECCAE or the IAEA inspectors assigned by MECCAE both for routine and non-routine inspections. For proper implementation of safeguards inspections and verification the states should declare all their initial inventories relating to their nuclear materials, and provide exact locations and complete information on the installations where they conduct their nuclear activities (or used to conduct in the past). The states should also furnish regular reports including complete information, about all their imports from and exports to states either party or non-party to the NWFZ, relating to all nuclear material, technology and equipment, and reports including the data relating to the operation of reactors and changes in the quantities and composition of nuclear materials.

4. Verification procedures

For verification of the basic obligations of the states, a "*Common System of Accounting and Control of Nuclear Materials*" (CSAC) should be established. An Additional Protocol should thus be signed by the IAEA and MECCAE on behalf of the states party to the NWFZ/ME. There should be mainly two types of inspections, namely the routine and non-routine inspections. The rights and responsibilities of the two institutions to conduct these inspections should be clearly defined as well.

²¹ Bearing in mind the Israeli air raids against the Osiraq reactor in Iraq in 1981, and the Al Kibar reactor in Syria in 2007, such an undertaking would stand as a confidence-building measure.

i. Routine inspections

For routine inspections, MECCAE is suggested to have the primary responsibility to administer and implement CSAC, and to verify the information made available by the states. During these routine inspections, the IAEA inspectors may *only* observe the verification process. The purpose of observations by the IAEA inspectors should be to allow them to make sure that the verification process is being properly accomplished by the MECCAE inspectors.

ii. Non-routine inspections

For non-routine inspections, two categories of requests are envisaged: First, either the IAEA may have a request to conduct a non-routine inspection, in case: (a) the IAEA inspectors are not satisfied throughout their observations with the verification process implemented by the MECCAE inspectors; (b) any information is provided by any of the Permanent Members of the United Nations Security Council relating to suspected activities of a state party to the NWF; or (c) just for the sake of operationalizing the IAEA's principle to deter the states against possible diversion of significant quantities of nuclear material by the risk of early detection. Secondly, the states party to the NWFZ may request a non-routine inspection to be conducted in any other state party to the NWFZ. Such a request should be discussed in MECCAE without delay, and a decision should be taken with a majority of four out of seven votes. In case a decision taken to conduct a non-routine inspection, the MECCAE inspectors should carry out this task without delay.

No *quota* is suggested for the states to accept non-routine inspections. One reason for this is the imbalances amongst the levels of developments of nuclear infrastructures and know-how capacities of the states in the region. Therefore, a common quota may not be adequate or applicable to each state and the installations in these states. Some of the installations may require almost a continuous process of verification. A second reason is that, since it is in the authority and responsibility of MECCAE to decide upon the requests of the states whether to conduct a non-routine inspection or not, for the sake of fostering confidence-building and the credibility of the regional organization, the decisions of MECCAE should be respected, and should be considered satisfactory. During the non-routine inspections upon the request of the member states, the IAEA inspectors may either observe the MECCAE inspectors, or they may conduct their independent inspections. If the latter happens, the results of these independent inspections should be compared with each other.

5. Non-compliance & enforcement measures

In case of violation of the terms of the Treaty, two categories of measures are suggested. First, regarding the level of seriousness of violation, MECCAE may itself apply a set of measures with an equivalent level of severity. Therefore, MECCAE may either: (a) warn the violating state publicly; (b) withdraw special benefits such as financial and technical assistance; or (c) withdraw totally or partially the source materials in the installation, and freeze the rights of the states over their source materials kept in Supply Agency. Secondly, even if when the above measures taken, the violating state still resists to comply with the terms of the Treaty, MECCAE should bring the case to the attention of the IAEA. Further measures will then be in the responsibility of the IAEA. Then, the Board of Governors of the IAEA should discuss the issue upon the report of the Director General of the Agency. The Board then: (a) should call upon the violating state to remedy forthwith any non-compliance which it finds to have occurred, either by relying on the information provided by MECCAE, or by taking independent initiative; (b) should report the non-compliance (in case of extended denial by the violator) to all the Members of the Security Council and General Assembly of the United Nations.

Conclusion

No two regions in the world look alike geographically or culturally. Therefore, no two regions can be expected to have identical characteristics in political, military or economic terms, either. Nevertheless, these differences should by no means undermine the importance of the lessons that one can draw from distinct case studies. Hence, the main theme of this paper is based on such a deduction. It goes without saying that the Middle East has more dissimilarity in many respects, rather than similarities, with Western Europe and Latin America. However, such issues as the verification provisions of diverse regional nuclear non-proliferation agreements exhibit many similarities. The scope of these provisions is usually a reflection of the expectations and the intentions of the parties. These expectations and the intentions themselves are the repercussions of the characteristics of the regions. Therefore, these characteristics do have an impact on the scope of the region-wide verification provisions. Incorporating these regional characteristics into regional agreements may thus require additional verification provisions, and additional rights and obligations conferred to the regional institutions. The verification provisions and the institutions introduced in this paper for a Middle East NWFZ are attempted to be in line with such reasoning.

Short Biography

Prof. Dr. Mustafa Kibaroglu (Ph.D., Bilkent University, International Relations Department, 1996) is currently the Chair of the International Relations Department at Okan University in Istanbul since September 2011. Prof. Kibaroglu used to teach courses on “Arms Control & Disarmament” and “Turkish Foreign Policy” in the Department of International Relations at Bilkent University in Ankara from 1997 to 2011. He was a Research Fellow at UNIDIR in Geneva (1995); IAEA Fellow at the University of Southampton (1996); Post-doctoral Fellow at the Monterey Institute in California (1996/97); and Sabbatical Fellow at the Belfer Center of Harvard University (2004/05). He is a Council Member of Pugwash, and Academic Advisor of the NATO Centre of Excellence Defence Against Terrorism in Ankara. Prof. Kibaroglu is the co-author of *Global Security Watch – Turkey* (2009) by Praeger in the United States, and the co-editor of *Defence Against Weapons of Mass Destruction Terrorism* (2010), *Bioterrorism: Threats and Deterrents* (2010), *Responses to Nuclear and Radiological Terrorism* (2011), *Defence Against Terrorism* (2011), and *Analysis and Strategies to Counter the Terrorism Threat* (2011) by IOS Press in Netherlands. He is also the author and co-author of numerous chapters in books as well as articles in academic journals, such as *Security Dialogue*, *Nonproliferation Review*, *Bulletin of the Atomic Scientists*, *Middle East Quarterly*, *Middle East Journal*, *Brown Journal of World Affairs*, *Middle Eastern Studies*, *Korean Journal of Defense Analysis*, *Middle East Policy*, and *Journal of Balkan and Near Eastern Studies*.