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CTBT HOLD-OUT STATES

Why did „the longest sought, hardest fought prize
in arms control history” still not enter into force?

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GRUPPENPROFIL IFAR²

Die „Interdisziplinäre Forschungsgruppe Abrüstung, Rüstungskontrolle und Risikotechnologien (IFAR²)“ beschäftigt sich mit dem komplexen Zusammenspiel von rüstungsdynamischen Faktoren, dem potenziellen Waffeneinsatz, der Strategiedebatte sowie den Möglichkeiten von Rüstungskontrolle und Abrüstung als sicherheitspolitische Instrumente. Der Schwerpunkt der Arbeit liegt dabei auf folgenden Forschungslinien:

- Grundlagen, Möglichkeiten und Formen von Rüstungskontrolle, Abrüstung und Nonproliferation nach dem Ende des Ost-West-Konfliktes sowie die Entwicklung von anwendungsbezogenen Konzepten präventiver Rüstungskontrolle
- „Monitoring“ der fortschreitenden Rüstungsdynamik und Rüstungskontrollpolitik in Europa und weltweit mit Fokus auf moderne Technologien
- Technische Möglichkeiten existierender und zukünftiger (Waffen-) Entwicklungen, besonders im Bereich Raketenabwehr und Weltraumbewaffnung

Der steigenden Komplexität solcher Fragestellungen wird in Form einer interdisziplinär arbeitenden Forschungsgruppe Rechnung getragen. Die Arbeitsweise zeichnet sich durch die Kombination von natur- und sozialwissenschaftlichen Methoden und Expertisen aus. Durch die intensiven Kooperationen mit anderen Institutionen unterschiedlicher Disziplinen wird insbesondere Grundlagenforschung im Bereich der naturwissenschaftlich-technischen Dimension von Rüstungskontrolle geleistet. Darüber hinaus beteiligt sich IFAR auch an einer Reihe von Expertennetzwerken, die Expertisen aus Forschung und Praxis zusammenführen und Forschungsanstrengungen bündeln.

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ABSTRACT

Stopping nuclear proliferation is at the top of the international agenda for years. With 182 signatures and 153 ratifications most states recognize the Comprehensive Test Ban Treaty as substantially inhibiting further vertical nuclear proliferation and in some extend halting the horizontal spread of nuclear weapons. Unfortunately, the entry into force of the treaty is in limbo due to nine hold-out states - China, Egypt, India, Indonesia, Iran, Israel, North Korea, Pakistan and the United States. Why do they oppose it? Are there any windows of opportunity for the CTBT? The qualitative analysis distinguishes the inter-state, intra-state and decision-maker-level arguments. It is conducted in form of nine case studies and is primarily based upon official documents. Governmental statements rarely reveal full reasons for states' reluctance concerning the CTBT, but outline necessary conditions for its success and provide a framework to work out policy approaches aiming at the treaties entry into force. The study points at a complex interrelation of technical reasons, security related arguments, arms-control related motivations and domestic policy issues. The most important findings to grapple with are seeking regionally comprehensive solutions and closing all outstanding loopholes accompanying the treaty. India and North Korea will be the toughest parties to sign and ratify the treaty, as there is either no interest in a treaty text as negotiated or no interest in banning nuclear testing at all, respectively. According to most hold-out states nuclear weapon states bear the highest responsibility for the treaty entry into force.

This Working Paper is based on a master's thesis submitted within the postgraduate course "Master of Peace and Security Studies – M.P.S." as a joint programme of the University of Hamburg and the Institute for Peace Research and Security Policy (IFSH). The thesis has been submitted in July 2010. The time frame, thus, focuses primarily on the debate until July 2010 and only briefly indicates on current occurrences.

CHAPTER 1. INTRODUCTION

1.1. Problem diagnosis

Fifteen years after the Comprehensive Nuclear-Test-Ban Treaty (CTBT) was opened for signature, 13 states had not signed and 42 not ratified the treaty. While the treaty itself has to be seen as a success in terms of its international support, it nevertheless has not entered into force. According to the treaty text further nine states' ratification is required for it to become legally binding. Those states of particular interest – China, Egypt, India, Indonesia, Iran, Israel, North Korea, Pakistan and the United States – are an interestingly incoherent set. The hold-outs present a diverse group of states which already possess the status of an official NPT nuclear weapon state (China and United States), non-NPT states having nuclear weapons (Israel, India, Pakistan, North Korea), a state suspected of having worked on nuclear weapons (Iran), and states without any indications for nuclear weapons as yet (Egypt, and also Indonesia for several decades now). Those differently motivated countries with varying standing within the international community “put a hold” on the CTBT, the conclusion of which has been designated at the 1995 NPT Extension and Review Conference as a legally binding obligation (Final Document 1995). It is noteworthy that the treaty has been signed by states that might be seen as the hold-outs' counterparts. For example, China and United States still have not ratified the CTBT although other NPT nuclear-weapons states like France, Great Britain and Russia, have ratified it.

The CTBT imposes an indefinite ban on all types of physical nuclear testing (apart from computer simulations and sub-critical tests). It is accompanied by a tight verification regime consisting of 337 facilities around the world and is capable of detecting nuclear tests of even 0,1 kT TNT-equivalent with a high probability. The ban on testing restricts new nuclear weapons design development and is seen as an “essential pre-requisite to prevent horizontal and vertical proliferation” (Statement 2001). As the CTBT limits the ability of non-possessors to develop nuclear weapons, it would have an impact on horizontal proliferation (Preez 2010:7). As it constrains the development and qualitative improvement of new and more advanced warheads it would have an impact on vertical proliferation (Preez 2010:7).

Observance of a complete ban also prevents a possibly significant public health hazard from regional and global spread of nuclear fallout. In practice atmospheric testing has been abandoned voluntarily by 125 states that are party to the Partial Test Ban Treaty, so this is more of a nominal than actual benefit. There have also been trace releases of radioactivity from underground nuclear explosives

testing since the CTBT was opened for signature. The public health impact of such releases is probably minimal compared to radiation exposures from steps in preparing nuclear explosives, but observance of a test ban could have an impact on both releases from underground testing and the overall scale of nuclear explosives manufacture. For a security study, it is the limitation that a test ban places on nuclear weapons design and manufacture rather than the effect on future radiation releases from nuclear explosive testing that is of principle interest.

Taking into account the international debate on nuclear policies, a “Global Zero” picture arising at the horizon will hardly be possible without the CTBT entering into force. With President Obama’s famous Prague speech, hopes for a CTBT entering into force have been awakened again, at least in the pro-disarmament community.

1.2. Research questions

This research analysis aims to identify the motives for not signing or ratifying the CTBT by the nine outstanding hold-outs. This is the principle question addressed here. As the group in focus is very uneven in political, geographical and economic terms, tracing for an answer might either reveal a common ground for the hold-out states’ decisions, or explanations different case-by-case. Unfortunately, states are not very open in publicly laying down their reasons and motivations for their behavior. As there probably will not be any direct answer to the research question, it has to be derived from sub-questions. What is the utility of nuclear testing for states currently possessing nuclear weapons? Here potential motivations for further testing might be conclusive. And if the state does not even possess capabilities for testing yet, what would it need the nuclear weapons for? Would this utility implicate future testing?

1.3. Political and scientific relevance

There has not yet been any comprehensive study on the CTBT hold-out states. The most sophisticated works on the issue are the recent ”Report of Pugwash Consultation on CTBT Entry Into Force” (Cotta-Ramusino et.al. 2010) and an successively updated study by Jonathan Medalia (January 2010), who is a Specialist in Nuclear Weapons Policy in the U.S. Congressional Research Service. The Cotta-Ramusino Report gives a brief analysis of all hold-out cases, but lacks deep explanation within a historical context. Medalia gives an U.S.-oriented perspective that does not refer

to all hold-outs, leaving the analysis without any comments on Egypt, Indonesia, Iran or Israel. The studies are focused on giving policy advice and serving as background information for decision-makers, and do not analyze the research object within a theory of international relations. The value added of the present work is an examination of motives using a structured analysis based on theories of international relations. The definition of causal phenomenon will outline conditions under which the hold-outs will vote in favor of CTBT, thus providing insight on incentives on further approaches to achieving CTBT ratification.

1.4. Theoretical approach

Due to the broad range of cases discussed, it is difficult to find a simple and generally applicable theory. In order to overcome this problem in a structured manner, the study uses a threefold “level of analysis” approach (c.f. Singer 1961) and looks at every state actor from the inter-state, intra-state (state) and individual level perspectives. However, this does not mean that all levels will be examined in comparable detail in all cases. Thus, only those analysis levels will be discussed which are important for each state. The theoretical framework has been significantly influenced by the analytical approach of Saira Khan (Khan 2002: 12-30). Khan conducted a study on the causal phenomena of states involved in protracted conflicts that seek or already acquired nuclear weapons.

The inter-state level refers to the almost anarchical system of international relations between states and is based on explanations from a Realist theoretical perspective (Khan 2002:12-13). Putting Khans ideas upon our case, a CTBT veto might be explained as a means to preserve the states’ military options through keeping the testing option open and when testing - vicariously gain international recognition and prestige, allusively achieve the status of a regional hegemony, obtain favorable bargaining capability (c.f. Epstein 1977), or some mixture of these motivations.

The leitmotif of securing the states’ existence through the development of a nuclear deterrent is one possible reason for keeping a nuclear weapons option open, for states surrounded by nuclear or conventionally better off neighbors, who pose a (subjective) threat to the state. By keeping the nuclear option open, a state shows its possible nuclear capability or just does not want to close the option for potential testing. As possession of nuclear weapons became an obvious feature of global powers, in less extreme security threat situations testing can be aimed at least in part at gaining international recognition and prestige by presenting nuclear capability. In this context it is worth noticing that the norm system has changed through the NPT regime and the possession or testing of

nuclear weapons is being more and more disregarded by the world community in terms of human responsibility (Dhanapala 1999: 2). Furthermore, testing of nuclear weapons might be used to intimidate weaker states in the pursuit of regional hegemonic status. This is due to the perception that showing nuclear capabilities can be a mode of deterrence not only of a massive attack by another state, but also of less extreme actions that can be deterred by the hint of a threat of use of nuclear weapons [Khan 2002: 14]. Beyond that, states may be in favor of the CTBTs purpose and objectives, but use their veto right to bargain a change in relations with other states, gain recognition of a regional conflict by the world community, negotiate economic help or a faster disarmament process. Those motivations can be correlated with the realist approach. With the pessimistic view on human nature, realists conclude that in the absence of a central controlling instance at the self-help international system, actors are faced with a security dilemma (c.f. Morgenthau et al. 2006; Knapp et.al. 2004). Trying to achieve a “balance of power”, they improve their security, while their actions increase the insecurity of other actors and thus a vicious circle emerges (c.f. Sheehan 1996). This increase is being determined by military power accumulation, from which nuclear power serves as the most effective mean.

Ad vocem intra-state (state) level motivations, they mostly refer to domestic incentives [Khan 2002:17] and bureaucratic politics [Khan 2002:19]. Forwarding Khans’ idea these can include military and public opinion influence, internal lobbies for development of scientific and technological capabilities, and economic factors. Domestic politics refers to possible intra-state upheavals, which lead the state leader to shift internal public attention to international affairs [Khan 2002: 17], for example through a nuclear test. This presentation of power may be also focused on the citizens themselves in order to either intimidate the turmoil leaders or bolster public support for the government. Changes within the political scene may also trigger a state’s withdrawal from or increased interest in nuclear testing. The state’s bureaucratic politics is a “key domestic variable in the complex decision-making surrounding nuclear choices” (Campbell 2004: 24). Public opinion also might be a factor influencing a state’s decision on testing nuclear weapons. The technological-scientific issue indicates the acquisition of the knowledge needed for testing and the willingness to demonstrate success. The economic issue refers to a situation when expenditure costs of conventional armament exceed the potential costs of nuclear weaponry and thus the second may be considered as a cheaper option, thus creating an incentive for developing and testing (Khan 2002: 18).

State level motivations leading towards nuclear weapons and/or to subsequent nuclear testing match with the neoclassical realist theory and liberalism. One version of neoclassical realism assumes that leaving domestic affairs out of the judgment of state behavior within the intra-state frame is a mistake. States are incoherent, and their external policy is determined by internal factors including “social fragmentation”, “government or regime vulnerability”, “elite fragmentation”, “elites’ preferences and perceptions of the external environment”, “domestic political risk associated with certain foreign policy choices” etc. (Schweller 2004: 169-170). This level of intra-state analysis can also be found in some versions of liberalism, as it values individual actors as being “rational, ethical and moral creatures capable of controlling their basic impulses” (Shimko 2005: 51.). Summing up, both theories can “explore the ‘internal processes’ by which states ‘arrive at policies and decide on actions’ in response to the pressures and opportunities in their external environment” (Schweller 2003: 320).

The individual actor level refers to the peculiarities of individual decision makers, which directly influence foreign affairs and security related decisions. In the case of the research object examined here, however, the sole beliefs and attitudes of one leader often do not appreciably influence the final outcome, given the long lead time needed for developing nuclear weapons. Decisions on going nuclear might be made by a strong leader with high authority, but testing of nuclear weapons involves many actors, who often influence the decision making process. This is why any case to be described at this level here, although it is understood that in some cases the attitudes of particular influential individuals could have some impact on decisions on whether a country decides it wants to conduct a nuclear weapons test.

1.5. Methodology

The present work uses comparative foreign policy analysis method (c.f. Stahl 2006). Taking the political, geographical and economic differences of the hold-out states into account, the hypothesis examined here is that each of the states’ reasoning is driven by factors peculiar to its own situation. This suggests first looking at all state-cases one-by-one before trying to come to a conclusion on the coherence of the overall argumentation against CTBT. Nine different state-cases will be examined in order to search for possible commonality in the explanation of their CTBT rejection. Moreover, two empirical methods are used: assessment of primary and secondary sources (c.f. Behnke et.al.2006) as well as interviews. Primary sources refer to states’ official statements on the research objective.

Secondary sources contribute additional insights from scientists and experts. Interviewed were state officials and experts. Every state-case description has an introductory part, followed by the level analysis and a summary. The introduction briefly outlines what is going to be described, i.e. which questions are to be answered in this particular case. It will also provide basic information on the states' current attitude towards the treaty. Afterwards, the reasons for the CTBT rejection will be examined. As previously mentioned, only those analysis levels will be described that suit each particular case. Every case is going to describe the states' perception of its security environment and present subjective state arguments on why it is opposing the CTBT. At the end of each case study, a brief summary will outline the most important outcomes from the research. A critical and comparative analysis of the findings will be discussed in chapter IV.

1.6. Sources

Literature used in the study consists of primary statements from the Conference on Facilitating the Entry into Force of CTBT as well as transcripts, unclassified hearings referring to the subject matter, and governmental statements. Secondary literature comprises articles written by diplomats, who took part in the CTBT negotiations representing a hold-out state (like Ms. Ghose representing India; Ms. Zou Yunhua representing China), as well as other articles and books on the hold-out states politics written by experts and scientists etc. However, it has to be emphasized that the hold-outs differ in their openness in revealing information. There is plenty of publicly available information concerning the United States, while the opposite is the case for North Korea. Several unclassified Congressional hearings, Congressional Research Service reports and analyses on the American case made it easy to undertake U.S.-related research on the subject. North Korea does not even mention the CTBT in its statements. Furthermore, most secondary literature on the DPRK is based upon intelligence and predictions, thus presenting a different value as source of reliable information. Additionally, a few interviews have been conducted – mostly during the 2010 NPT Review Conference in New York. They served as basic information providers, giving incentives for further research.

CHAPTER 2. CTBT CURRENT LIMBO STATUS

2.1. CTBT – what is it?

The main aim of the CTBT is that state party members “undertake not to carry out any nuclear weapon test explosion or any other nuclear explosion” (CTBT art. I). This means that after its entry into force even underground nuclear explosions, allowed by the Partial Nuclear-Test-Ban Treaty (PTBT), will be prohibited. As testing is needed for sophisticated modernization of existing stockpiles or the development of new nuclear devices, the CTBT would substantially inhibit further vertical nuclear proliferation. Universal observance of the CTBT probably would not fully stop the horizontal spread of nuclear weapons directly, as the implosion type device can be built by a non-weapon state and used without being tested due to the relatively “simple” design.

The idea of a CTBT was proposed in the 1950s by India and Japan simultaneously (Johnson 2009: 2). As a first successful formal treaty step, the Partial Test Ban Treaty (PTBT) entered into force in 1963. It indefinitely prohibits nuclear weapons tests or any other nuclear explosion in the atmosphere, in outer space, and under water. It does not ban underground testing as such, but does prohibit explosions that cause "radioactive debris to be present outside the territorial limits of the State under whose jurisdiction or control" the test was conducted (PTBT Art. I par.1b). The decision to start broad international negotiations of the Comprehensive Nuclear Test Ban Treaty was the consensus test ban resolution adopted by the United Nations General Assembly in 1992. The step has been made due to several unilateral testing moratoria, resulting from the end of the Cold War, that improved the international cooperation ambience as well as a result of continuous pressure demanding a CTBT during previous NPT Review Conferences (particularly in 1985 and 1990). Negotiations were held at the Conference on Disarmament (CD) in Geneva starting on January 25, 1994. As India blocked the consensus required for reporting the text of the CTBT out of the CD, Australia bypassed the CD by taking the text directly back to the United Nations. The treaty was opened for signature in New York on September 24, 1996. The final document of the 2000 NPT Review Conference made the CTBT entry into force a legally binding obligation for states parties to the NPT. States not party to the NPT were also encouraged to ratify the CTBT.

A Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization was established to prepare to implement the treaty and to supervise the International Monitoring System (IMS), composed of 337 international verification facilities as of 2010. After the entry into force a

Conference of the States Parties (the principal organ to consider any questions or issues within the treaty per CTBT art. II B24) and an Executive Council (the executive body of the treaty per CTBT art. II C37-38) will be created. Important for further reading is to understand the composition of the latter. The Executive Council will be a body consisting of 51 members representing six geographical entities (1) Africa, (2) Eastern Europe, (3) Latin America and the Caribbean, (4) Middle East and South Asia, (5) North America and Western Europe, and (6) South East Asia, the Pacific and the Far East. The problem is that these groupings consist of states that do not necessarily recognize each other's right to sovereignty, like the Iran-Israel case within the Middle East grouping. If this situation persists it might make the operations of the Executive body very difficult. However, a necessary condition for the CTBT to enter into force may be a considerable easing of tensions involving countries that have nuclear weapons and other countries in their region.

2.2. Status of the treaty

After opening for signatures, the treaty collected 182 signatures and 153 ratifications as for July 15, 2010. However, its entry into force is conditioned by Article XIV, which requires ratification of all states listed in Annex 2 to the treaty. The list consists of 44 names and refers to states with nuclear capability at the time of the treaty negotiation (see Annex 1). Today we face a situation in which three Annex 2 governments did not sign or ratify the treaty (India, North Korea, Pakistan) and six Annex 2 states that have signed but not ratified it (China, Egypt, Indonesia, Iran, Israel and United States).

The entry into force clause had to ensure that all state parties with nuclear potential will agree to the treaties purpose and obligation, and was an outcome of tough negotiations. An interesting idea of how the clause shall be interpreted has been presented by a member of the Permanent Representation of the Federal Republic of Germany to the Conference on Disarmament (Interview 2010). He sees the entry into force clause as a security guarantee for all state parties, a parallel to the “trust” principle. Like on the housing market, the “deal” will not run unless the buyer gives “earnest” money, and the seller becomes legally obligated to complete the transaction by giving the keys to the commodity to the “trustee”. Only when both parties fulfill their transactional obligations, the “trustee” gives the money to the seller as part of the purchase settlement, and the trustee gives the keys to the buyer. The “trust” principle has to make sure that the transaction is safe for both sides, so that no party can escape without exchanging its “deal instrument”. The CTBT entry into force shall

be seen in the same way. According to Annex 2, 44 states have to deposit their ratification instruments at the “depository” in order for the treaty to enter into force. The ratification of the CTBT presents the “deal”. As such, the parties can be understood as being the buyers and sellers, while the “depository” plays the role of the “trustee”. This theory is build upon the premise that states do not trust each other and are afraid of the consequences of their ratification in case other states will not join the CTBT club. The entry into force clause responds exactly to this fear. Therefore, the treaty provisions are not legally binding unless the treaty enters into force – also for states that already ratified it.

It is a bit more complicated with states that did not even sign the CTBT. Signing a treaty is giving a signal to the world community that a country supports the principles and objectives of a treaty. According to the Vienna Convention on the Law of Treaties, Article 18 “[a] state is obliged to refrain from acts which would defeat the object and purpose of a treaty” (Vienna Convention on the Law of Treaties 1969), already when it has signed, ratified or expressed its consent to be bound by the treaty. States that reject signing, have to be seen as opposing the idea of the treaty. It might be a signal of disappointment with the negotiated treaty text or a signal of potential upcoming nuclear weapons programs and subsequent testing. Those state parties will be the toughest to convince.

The clause also has a side-effect. Most of the listed states probably would not like to be responsible for holding CTBT ratification in limbo. They also fear international isolation. Therefore, the clause puts pressure on them as the whole international community watches them and judges according to their behavior. Thus further ratification by some may accelerate ratification by others.

At present the CTBTO works towards operational treaty timeliness, meeting the treaties requirements (Interview 2010a). For example, the United Nations Security Council Resolutions after both North Korean nuclear tests in 2006 and 2009 relied on data provided by the IMS. However, the entry into force of the CTBT foresees that the “verification regime shall be capable of meeting the verification requirements of this treaty” (CTBT art. IV A1). As for today, the verification regimes operational readiness is being assumed to be at the level of 83%. (Interview 2010a). The CTBT entry into force will bring important changes: the Executive Council starts working and on-site inspections will be possible.

2.3. Article XIV Conference

The Article XIV Conference, the official name of which is the Conference on Facilitating the Entry into Force of the Comprehensive Nuclear Test Ban Treaty, is a meeting held every two years by the treaties member states. It is held once in Vienna and another time in New York. Its aim is to work towards an early entry into force of the treaty (CTBT art. XIV par. 2.). Only member states, which ratified the treaty, can actively participate. States that did not ratify, NGOs and special agencies take part with an observer status.

Member states present their statements and try to achieve a final document with suggestions on how to encourage the hold-out states to become members with ratification. The document underlines the assurance of the CTBT signatories and ratifiers to pursue general and complete disarmament under strict and effective international control. Measures that promote the treaty include e.g. selecting coordinators to enhance cooperation through informal consultations with all interested countries, aimed at promoting further signatures and ratifications; maintain a contact list of countries among ratifiers which volunteer to assist the coordinators in various regions; organizing workshops, seminars and training programmes in the legal and technical fields; and close cooperation with non-governmental bodies to raise awareness on the treaty. All activities undertaken by signatory and ratifying states in the previous year to assist in promoting the goal are presented in a report.

The hold-out states can present their position papers and thus explain their viewpoint on the CTBT. Position papers often explicitly address concerns towards the impact a CTBT might have on their security. Most of the hold-out states use this possibility to express conditions under which they might consider ratifying the treaty.

To date six Article XIV Conferences took place (1999, 2001, 2003, 2005, 2007, and 2009). The conference serves as a barometer for CTBT support. Hold-out state's attendance gives a clue on the importance their current governments attach to the treaty. China, Egypt, Israel and Iran took part in every conference. Indonesia failed to attend once in 2005, probably due to be preoccupied with the 2004 devastating Indian Ocean earthquake. Pakistan attends every two years – in 1999, 2003 and 2007. The Bush Administration did not send any representatives to the conference, thus the United States attended twice – in 1999 and 2007. India and North Korea never took part in the conference.

CHAPTER 3. CASE STUDIES - FINDING OUT STATES MOTIVES

3.1. China

The People’s Republic of China (PRC) is a NPT nuclear weapon state that signed the CTBT, but did not ratify it yet. According to official Article XIV Conference statements, the treaty has been submitted to the Standing Committee of the National People’s Congress (Statement 2005 and 2007) for ratification in early 2000 (Gill 2010: 11). To deal with ratification, a preparatory office has been established at the People’s Liberation Army (PLA) General Armaments Department (China’s National Defense in 2006). China continuously reiterates its support for the CTBT principles and objectives (China’s National Defense in 2008). As the PRC is a nuclear weapons state, its reasons for keeping open the possibility of further testing has to be examined.

Inter-state level

The Chinese security perception is shaped by its geostrategic position, historical experience, growing technological and economic capabilities and its cultural footprints (Swaine 1999). “Historically, China’s stated purpose for developing nuclear weapons was to guard itself against nuclear coercion and blackmail” argues Hui Zhang, a physicist and specialist in Chinese nuclear policy issues from the Harvard University (Zhang 2010: 140). Zhang argues that the PRC is a “responsible power” dealing with its “peaceful rise” (Shirk 2008: 107-108): an extreme economic growth, step-by-step becoming a power in the Asian-Pacific region and aspiring to become the world’s leading economy. It is protective of its national sovereignty and lives the words of Deng Xiaoping that “only with a peaceful environment can [economic] development be accomplished smoothly” (Zhu 1997: 44). According to the Chinese thinking, this condition is being secured by its nuclear capability. A stronger argument, however, is that the government in Beijing claims on neighboring territories, a reference to Taiwan, and wants to be prepared to defend its possession. While in principle the PRC has not ruled out the use of force to impose its administration on Taiwan, in practice the PCR slogan of “one country, two systems” has meant simply dissuading Taiwan from declaring independence. Another factor is the perceived threat of a possible interference of another power into Chinese politics. This mainly reflects a concern about the United States. Based on the doctrinal text “China’s National Defense and World Military Affairs” published 1999, General Zhang Wannian, Chief of the General Staff Department of the PLA, argued that “forces of hegemony in the world will use nuclear

weapons to dominate other nations” (Wortzel 2007: 5). This perception did not change over time and is still visible in official documents: “[T]he United States is accelerating its realignment of military deployment to enhance its military capability in the Asia-Pacific region” (China’s National Defence in 2006). The topic also appeared at the CTBT negotiation table, with Sha Zukang, serving as Chinese Ambassador to the Conference on Disarmament (CD), reiterating concerns about “hegemonic ambitions [of other states] and the habit of interfering with other countries’ international affairs” (Statement 1996b). Having nuclear weapons is apparently seen in China as validating its great power status and securing its territorial policy.

Taken from the statement upon Chinese signature of the CTBT, Beijing appeals for abandoning nuclear deterrence policies. It calls for nuclear stockpiles reductions by the biggest nuclear powers, withdrawing nuclear weapons from foreign soil, refraining from first-use-policy, and no use or threat of use of nuclear weapons against no-nuclear weapons states (Statement 1996a). In the statements given at the Conference Facilitating the Entry into Force of the CTBT, Beijing reiterates the need to “establish a new international security concept centering on mutual trust, mutual benefit, equality and cooperation” (Statement 2001a, 2003, 2005 and 2007). China also calls for a prompt nuclear disarmament process (Statement 2007) and for countries to “refrain from researching into and developing new types of nuclear weapons, further reduce reliance on nuclear weapons, lower the status of such weapons in national security strategy and unconditionally undertake not to use or threaten to use nuclear weapons” (Statement 2005). Moreover, China favors an international legal instrument aimed at the prohibition and destruction of nuclear weapons (Zhang 2010: 146). Beijing plays these cards of demand at the table in order to press for a “new nuclear security order” build upon conditions described above.

State level

Although the PRC restates its commitment to its unilateral moratorium on nuclear testing from 1996, its 44 test explosions is the lowest number amongst NPT nuclear weapons states (see Annex 2). According to Senior Colonel Zou Yunhua, Arms Control Program Coordinator at the PLA Foreign Affairs Bureau at the General Armaments Department who served as a negotiator and expert on the Chinese delegation at the CTBT negotiation table, “the CTBT negotiations caught China in the middle of its nuclear weapons program, whereas the United States, Russia, and Britain had completed several development cycles” (Yunhua 1998: 4). Beijing used the last moment before finalizing the CTBT negotiations and conducted eight nuclear explosions; although apparently it has

never aspired to match the quantity or complete level of refinement in quality achieved by other nuclear weapon states (Yunhua 1998: 5). Moreover, it currently “is in the midst of a significant modernization program for its nuclear force, particularly its means of delivery” (Gill 2010: 4). “From a purely technical perspective, China needs to conduct more nuclear tests” (Yunhua 1998: 26). Stockholm International Peace Research Institute (SIPRI) Director Bates Gill notes though that Chinese economic development allowed huge investments in the past decade in up-grading and improving its outdated nuclear arsenal (Gill 2010: 4). Moreover, it currently “is in the midst of a significant modernization program for its nuclear force, particularly its means of delivery” (Gill 2010: 4). According to Pugwash member PLA Major General Pan Zhenqiang, China is extremely concerned about U.S. reticence on the CTBT, as it still perceives threats from that “superpower” (Zhenqiang 2009: 33), especially in light of U.S. missile defense plans. The Director of the Newly Independent States Nonproliferation Program at the James Martin Center for Nonproliferation Studies predicts that those fears could make Chinese ratification of the CTBT problematic in case its nuclear experts decide that PRC needs “maneuvering warhead to evade missile defence interceptors” and thus will need testing of lighter weight and thus redesigned warheads (Hansell et.al. 2009: 143).

Summary

The explanation for China’s reluctance on CTBT ratification might be found at the inter-state and state levels. Unless Beijing’s “biggest threat” makes improbable changes and modernization in its stockpiles, making Chinese weapons obsolete, China probably will not test further. Of all the NPT nuclear weapons states, it has the most modest intercontinental nuclear arsenal and limited testing program, thus it does not want unilaterally close any options for further nuclear developments of its stockpiles. Chinese CTBT policy seems to be U.S.-reactive. A glimpse of hope might thus occur with Washington ratifying the CTBT as an incentive for Beijing to follow (Zhang 2010: 148). There are predictions that China has already ratified the CTBT and only waits for the United States to do the same before submitting ratification instruments to the depositary (Interview 2010b). By doing this it might be living Deng Xiaoping’s famous maxim “[h]ide our capacities and bide our time, but also get some things done” (Shirk 2008: 105).

3.2. Egypt

Cairo signed the CTBT, but did not ratify it yet. As a NPT non-nuclear weapons state, Egypt supports, according to what it claims at the Article XIV Conference, the principles and objectives of the CTBT (Statement 2005a). While pledging for nuclear disarmament, the government in Cairo is being influenced by the unstable security situation in the Middle East and uses the treaty as a bargaining instrument to finally achieve the long promised Middle East Nuclear Weapons Free Zone (ME NWFZ). Therefore, based on its consequent policy line, an assumption can be made that an important reason for Egypt rejecting the CTBT ratification is to bargain for a nuclear weapons free zone in the region due to its concerns about the ambiguous Israeli case and Iran’s nuclear intentions.

Inter-state level

Egypt demands a Middle East Nuclear Weapons Free Zone. The idea is not new and was mentioned by Egypt already in the 1970s. This project is being driven by two potential threats to regional stability: Israel and Iran. According to James Leonard, a former American Deputy Special Representative for Middle East peace negotiations, in terms of security concerns Cairo mostly struggles with Israel’s clandestine nuclear weapons, claiming their destructive influence on the regional security environment and creating global inequality within the non-proliferation regime (Leonard 1995: 2).

“This concern appears to have two aspects. One is fear that if another war were to break out, even one that did not involve Egypt, the possible use by Israel of nuclear weapons elsewhere would create a situation that could not fail to affect Egypt. The second concern relates, not to any Israeli use of a nuclear weapon, but rather to the likelihood that the indefinite retention by Israel of its nuclear capability, however ambiguous, will lead some other country in the region to ‘go nuclear’ with grave damage to Egypt’s security situation” (Leonard 1995: 2).

This perception is also indirectly visible in Egyptian statements to the Conference on Disarmament (CD Statement 2007, 2009a). Thus its nuclear agenda’s primary aim is to eliminate all security asymmetry, “gradually conditioning all progress on Israel’s accession to the NPT” (Horovitz 2010: 11). The canvas for the Arab-Israeli conflict lies much deeper and refers to territorial disputes over the Sinai Peninsula dating back to the creation of the state of Israel (Khan 2002: 248). Although Jerusalem withdrew from the Egyptian territory after the 1979 Camp David Peace Accords (except

for Gaza, which Egypt does not want back), hostility towards a nuclear Israel remained. As long as Israel will not enter into internationally binding obligations concerning nuclear weapons, Egypt will also restrain itself from doing so. Cairo leads a coherent and consequent policy in that matter and rejects membership in other treaties, like the Biological Weapons Convention or the Chemical Weapons Convention, unless Israel will join the NPT as a non-nuclear-weapons state. This is also due to balancing Israeli power by keeping chemical stockpiles. However, Cairo is a signatory state of the Pelindaba Treaty and within its Article 5 it supports - in good will - the principles and objectives of the treaty and refrains from testing of nuclear explosive devices (Pelindaba Treaty 1996). In principle this clearly indicates its positive attitude towards the CTBT idea. The Egyptian NPT ratification in 1981 has been only possible due to the finished territorial conflict with Israel and was a step aimed at better international relations with the United States in particular, shedding a light onto Israel's refusal, and the desire to develop civil nuclear energy, which would be difficult to achieve indigenously. Apparently a "U.S. promise that Israel would sign it as well" (Khan 2002: 257) was also in the game. As Israel still did not join the NPT regime, as a precaution Cairo will probably wait for Israel to ratify the CTBT first. According to Mahmoud Karem, the Egyptian Ambassador to the EU, "[p]eace has to be through equality. Peace should not allow any party to practice hegemony. [...] Any security with weapons of mass destruction is not acceptable" (Khan 2002: 256) – clear reference to Israel. Iran is another security concern for Egypt, mostly connected with the fear of taking over Cairo's previous attempts at regional hegemony, reinforcement of destabilizing revisionist impulses from a nuclear Iran and increased potential for military conflicts provoked by Iran's nuclear aspirations (International Institute for Strategic Studies 2008: 29). Noteworthy, the political and scientific milieus are divided on that matter, with the government in Cairo reestablishing diplomatic relations with Iran in 2008 (after a break of almost three decades). Today Cairo has changed its rhetoric, claiming that the implementation of the 1995 Resolution on the Middle East would "open the doors for a new horizon to the CTBT" (Statement 2009). It seems that Egypt seeks a comprehensive and durable regional security order. A regional nuclear weapons free zone could involve Iran accepting the IAEA Additional Protocol and the accompanying tight safeguards and a monitoring system. For Israel it would mean disclosing its nuclear capabilities in terms of weapons and facilities, and the dismantlement of its nuclear weapons. The outcome of the 2010 NPT Review Conference might be seen as a light in the tunnel in terms of the ME NWFZ. The final document calls for an initial conference in 2012 to discuss the potential implementation of such a zone (Final Document 1995). According to Ambassador Abdel Aziz, head of the Egyptian delegation at the 2010

NPT Review Conference, it is a modest step that requires an extensive “follow-up mechanism”, but is seen as a promising starting point (Grossman 2010). Another issue will be to persuade Israel and Iran to sit at one table, and Israel to appear at all, after it has been mentioned by name in the final declaration and called to join the regime (Final Document 2010).

In order to push the ME NWFZ case forward, Cairo took a more offensive course. It reopened its nuclear option once again and changed its rhetoric to gain more leverage in negotiations. On the 28th May, just after the 2010 NPT Review Conference in New York Abdel Aziz stated in an interview that “an Iranian bomb would prompt Egypt to pull out of the nonproliferation accord and acquire its own nuclear deterrent” (Grossmann 2010). According to Grossmann, however, this appears to be “the impression Cairo seeks to give.” Egypt does not want to just “wait and see” what happens in terms of the ME NWFZ. After almost half a century, it wants some concrete activities aimed at meeting that goal. Egypt already held a nuclear option open in the 1960s (under the rule of President Gamal Abdel Nasser 1954-1970), when it also tried to acquire nuclear weapons directly from China and Russia, but it did not develop any significant nuclear capabilities, apart from two nuclear research reactors. In September 2006 Cairo proudly announced that it would “revive long-dormant plans for nuclear power” (International Institute for Strategic Studies 2008: 17). Ambassador Aziz send a warning signal by saying that “if others will acquire nuclear weapons, and if others are going to use these nuclear weapons to acquire status in the region of the Middle East, let me tell you, we are not going to accept to be second-class citizens in the region of the Middle East” (Grossman 2010). Thus today, by reopening its nuclear option, Cairo tries to put pressure on the international community to accelerate the drive for the ME NWFZ.

State level

It is hard to estimate the current domestic situation in Egypt due to the 2011 uprising. From February 2011 the Supreme Council of the Armed Forces forms an interim cabinet. A new government will be formed after the September 2011 parliamentary elections as well as the October/November 2011 presidential elections. Already for a longer time Egypt has been struggling with domestic security problems concerning the turmoil after the 2005 election campaign, governmental repression and growing internal Islamic challenges to the secularly oriented leadership (International Institute for Strategic Studies 2008: 17). The political transition underway in Egypt implies political instability, not the most propitious time to consider a treaty of this importance. As the country’s

political attention towards nuclear programs is being characterized as “inconsistent” (International Institute for Strategic Studies 2008: 23), some suspicions on its nuclear activities are not surprising.

Summary

Nevertheless the changing political scene, Cairo will probably try to stay a non-proliferation player and stick to its previous position on CTBT. It seems to put everything onto one card: the Middle East Nuclear Weapons Free Zone. However, as Egypt already committed itself to restrain from nuclear testing by accessing the Pelindaba Treaty, it could delink CTBT from the ME NWFZ and thus set an example on regional leadership in non-proliferation.

3.3. India

The “father” state of the CTBT did not yet even sign it. India does not seem willing to consider the treaty text in its current formulation. Instead, New Delhi consistently claims that only when the international community will take a serious move towards a time-framed complete nuclear disarmament, it will consider becoming member. Especially as India is a not a NPT nuclear weapon state, the potential need and utility for further testing by India has to be evaluated.

Inter-state level

India is the originator at the state level of the nuclear test ban idea, as it laid down in four proposals on that matter (Jawaharlal Nehru in 1945, Morarji Desai in 1978, Rajiv Gandhi in 1982 and 1988). By rejecting the CTBT, India wants to safeguard its nuclear option. In order to assess the motives behind India’s reluctant position towards the CTBT, understanding of New Delhi’s argumentation within the treaty negotiations debate is illuminating. Upon entering CD negotiations in 1994, India had two demands. First, it wanted the CTBT to ban all nuclear tests and second, linking it to the complete elimination of nuclear weapons within a time-bound framework. Banning all nuclear tests meant that any qualitative improvement or modernizing of existing weapons would be difficult. However, India was concerned that tight restrictions on activities other than explosives using fissionable material might be needed:

“As the PTBT drove testing underground, we do not wish the CTBT to drive testing into laboratories by those who have the resources to do so. We must ensure that the CTBT leaves no loophole for activity, either explosive based or non-explosive based, aimed at the continued

development and refinement of nuclear weapons....The situation would be untenable where even with a CTBT in place, development, refinement and production of new nuclear weapons continues” (Ghose 1995: 253).

The second concern expressed by India referred to the need to put the CTBT within a time frame for nuclear disarmament. Arundathi Ghose, who served as Ambassador/Permanent Representative of India to the United Nations in Geneva and participated in CTBT negotiations, underlines that India negotiated the CTBT with the presumption that “banning of all testing would lead to their obsolescence and eventual elimination by preventing the qualitative development of the weapons” (Ghose 1995: 5). Negotiation parties did not respond to India’s demands, which lead India to conduct its nuclear tests in 1998 once a party with nuclear testing on its agenda came to power. As former Prime Minister Vajpayee mentioned, “[i]n fact, had their response been positive, we need not have gone in for our current testing program” (Statement 1998). This unserious treatment of India’s demands has been the reason for India to reject the treaty. Already during negotiations, Ghose made clear that

“[t]he CTBT that we see emerging ... (is) not the CTBT India envisaged in 1954. This cannot be the CTBT that India can be expected to accept. Our capability is demonstrated but, as a matter of policy, we exercise restraint. Countries around us continue their weapon program, either openly or in a clandestine manner. In such environment, India cannot accept any restraint on its capability, if other countries remain unwilling to accept the obligation to eliminate their nuclear weapons ... Such a treaty is not conceived as a measure towards universal nuclear disarmament and is not n India’s national security interest. India, therefore, cannot subscribe to it in its present form.” (Statement 1996c).

In this statement New Delhi showed its anger that nuclear weapon states do not really want to give up their nuclear weapons – they do agree on CTBT only because they have found other means and ways to improve their current stockpiles and develop new models of nuclear devices. The 1995 NPT Extension Review Conference already added to New Delhi’s belief that nuclear powers do not really want to disarm. “[T]he NPT has been extended indefinitely and unconditionally, perpetuating the existence of nuclear weapons in the hands of the five countries who are also permanent members of the UN Security Council” (Vajpayee 1998: 5).

Meanwhile, India was trying to trade CTBT for acknowledging its status as a nuclear weapon state, an improved relationship with the United States and eliminating sanctions imposed on India after its

nuclear tests. However, as at the same time, Washington rejected the CTBT, and India took the “wait and see” course on that issue.

According to former Prime Minister Atal Bihari Vajpayee, India’s position on the CTBT was the outcome of an unsuccessful quest for security guarantees among world leading powers. This is from a statement he gave after the Indian underground nuclear tests in 1998 (Statement 1998). St. Andrews University Professor William Walker, who studies nuclear policy issues, points out that New Delhi took the course of realpolitik – “[s]ecurity had to rest on power and power on capabilities” (Walker 1996: 61). The Indian government became convinced that nuclear weapons prevent a state from being pushed around by nuclear powers, assure national security and increase the states prestige. India evolved from an innocent nuclear “non-have” and “fighter for disarmament” to a “nuclear ambiguity” and finally to a de facto nuclear weapon state, although outside the NPT regime. It is notable how its nuclear policy changed over time. The touchstone not to enter the NPT club was to keep “with the basic objective of maintaining freedom of thought and action” (Vajpayee 1998: 5). “Indian nuclear strategy [...] has been an idiosyncratic mix influenced much by Mahatma Gandhi and Nehru’s non-violence and pacifism and battered by contrary ground realities” (Frey 2004: 338). China plays a major role in Indian policy formulation:

“In the mid-1990s, India has watched with trepidation the reform and re-equipment of China’s armed forces, its precipitous economic expansion, its aggressive behavior towards Taiwan, Hong Kong, and territories in the South China Sea, its development of port facilities in Myanmar, and its continuing political repression in Tibet and Xinjiang” (Walker 1996: 63).

Typical thinking of Indian politicians mentions the deployment of the USS Enterprise in the Bay of Bengal in 1971, China’s nuclear tests after the NPT Review Conference in 1995, border disputes with both China and Pakistan as well as a nuclear stronger China as factors determining India’s security concerns over time.

State level

India conducted its Peaceful Nuclear Explosion in 1974 partly to divert public attention from domestic instability. India announced five nuclear tests in May 1998, a development made possible by the rise of the nationalistic Bharatiya Janata Party. According to a SIPRI researcher, today the nuclear debate in India takes place on two levels: political and military-technical (Gopaldaswamy 2010: 2). As research topic, however, the economic level should be added as well.

The political dimension evolved from New Delhi's unilateral and bilateral agreements. Currently, India is bound by its internal ban on nuclear testing (Statement 2008). This, however, can be easily lifted up by the government in the light of a national security need. Another factor is the U.S.-India nuclear deal. A nuclear test conducted by India would terminate the nuclear cooperation agreement, meaning returning all U.S.-origin nuclear materials and technology. New Delhi's audacious interpretation of this issue has been stated by the External Affairs Minister Pranab Mukherjee in October 2008: “India has the right to test while others have the right to react” (Gill 2009). Despite of its offensive rhetoric, New Delhi would probably not bind itself with nuclear testing bans, when having such a test in mind... at least in the nearest future. So what hinders India from ratifying the CTBT?

Currently, it is the ongoing military-technical debate, which influences New Delhi's resistance. It covers the issue of the credibility of India's nuclear weapons. The discussion over India's need for further testing has been heated up in 2009 by the former official with the Defence Research and Development Organisation K. Santhanam, claiming the hydrogen bomb test in 1998 being a “fizzle”. On that ground a group of famous scientists called for more nuclear tests (IANS 2009a). Some scientists believe that India has the needed knowledge and technology in order to improve and modernize its nuclear weapons without testing. This would implicate, that if the United States and China would ratify the CTBT, India might be persuaded to do the same (Rajaraman 2010: 33). Historically, scientists had enormous influence on nuclear policy. They maintained close and “highly secret relationships with a series of successive Indian prime ministers, including at least two (Shastri and Morarji Desai), who were personally opposed to the nuclear option” (Heo et.al. 2003: 150-151). As this pattern still may be valid, the scientific environment might be playing a crucial role in the upcoming debate that will determine New Delhi's position towards CTBT.

The economic dimension arose from economic needs of citizens and is in favor of the treaty. Trade unions recently urged the Indian government to sign the CTBT and “use the trillions of rupees they spend on bomb-making and arms trade for poverty eradication and the welfare of their people” (The Hindu 2010). However, unless this call will not evolve into a national quest for social equality, it is doubtful that society as such will have a deep impact on the governmental decision.

Summary

Although time has passed since 1996, India's position vis-à-vis the CTBT seems to be unchanged. Foreign Secretary Shivshankar Menon stated in 2009 that “[w]e won't stand in the way ... but it

should be a CTBT which actively contributes to nuclear disarmament” (IANS 2009). However, after joining the nuclear weapon “club”, India’s argument on the need to disarm does not seem to be convincing any more. The security-related argument seems to be a more plausible explanation. With New Delhi’s sustained feeling of inferiority versus China and superiority vis-à-vis Pakistan, both of which improve their nuclear capabilities, it does not seem feasible for India to eventually abandon further testing. Thus it is difficult to predict India’s attitude towards the CTBT, as its nuclear policy changed rapidly over the last years and does not seem to be fully expanded and definitive. “For reasons internal and external to the country, India is experiencing extreme difficulty in finding a pathway out of the labyrinth that it has ventured into. It seems unable to advance or retreat. And because India is trapped, the international community is also trapped” (Walker 1996: 61). Taking into account all findings presented above, an internal debate over the CTBT and the utility of nuclear testing has to take place first, before any further steps will be conducted. It is sure that India will not join the CTBT club before China and Washington do.

3.4. Indonesia

At the 2010 NPT Review Conference Indonesia officially announced, that it initiates the process of ratification of the CTBT (Remarks 2010). According to a state official of the Republic of Indonesia, a period of six months for the treaty to be ratified should be enough (Interview 2010c). According to its statement to the Article XIV Conference in 2009, Indonesia has “no difficulty with the provisions of the treaty” (Statement 2009a), no surprising problems should hinder the ratification. Indonesia already fulfilled the obligations of the CTBT within the framework of the South-East Asia Nuclear Weapon Free Zone it is a member of. Jakarta is aware of the advantages the treaty gives. It always reiterated the importance of the global tsunami early warning system within the CTBT (Statement 2003a, 2005b) and in 2008 signed a Memorandum of Understanding on Tsunami Early Warning with the Provisional Technical Secretariat. It thus might be interesting to closely watch the reasons for Indonesia to wait so long with this grand decision. The reluctance against CTBT has its explanation at the intra-state level – searching for an international bargain, as well as at the state level – Indonesia is a country that tremendously has changed within the last 14 years.

Intra-state level

Although continuously stating the treaties importance as a milestone on the way to disarmament, Indonesia underlined the main responsibility for the CTBT early entry into force to lie upon nuclear weapons states (Statement 2005b, 2009a), “who must first and foremost commit to the treaty” (Remarks 2010). As it traditionally tried to stay outside and be independent from global power conflicts and alliances, its ”strategic interests are largely regional” (Vaughn 2009: 25). China, which also is a member of the “hold-outs club”, might have been the only concern for Indonesia in terms of security issues, due to the unresolved “territorial dispute related to the south China Sea” (Vaughn 2009: 25). However, Indonesia having no nuclear weapons and not showing any intent to acquire any could not really put pressure on China to ratify the CTBT.

State level

According to Marty M. Natalegawa, who serves as the Foreign Minister of Indonesia, it was due to the political transition which took time and opportunity capacities that the CTBT was not yet put on the working agenda (Statement 2009a). Already in the 2005 Statement to the Article XIV Conference, it has been mentioned that “at the moment, Indonesia, as a matter of priority, is concentrating its efforts on accomplishing reforms and democratization with a view to creating good governance, fighting corruption, restructuring the economy, creating jobs, eradicating poverty and building the peace in Aceh” (Statement 2005b). Today, however, “progress towards institutionalizing its democracy and [...] establishing civil society” has been made (Vaughn 2009: 9). Nevertheless, Indonesia still struggles with internal security threats coming from autonomous and secessionist movements resulting from Indonesia’s colonial past, which occupies governmental attention at most. As for the moment, this issue has been well handled by the President Susilo Bam-bang Yudhoyono, who is popular for his international and pro-west attitude and is being named the “advocate of soft power” (Ziegenhein 2009: 87). Due to a more stable domestic situation it has been possible to put more attention on international issues, like the CTBT (Interview 2010c). The Foreign Minister Marty Natalegawa submitted a bill on the ratification to the House [of Representatives] (The Jakarta Post 2011) and extensive consultations take part, also in form of parliamentarian visits to the CTBTO (CTBTO 2011). According to Muhammad Najib, Member of the Indonesian House of Representatives, “For the Indonesian Parliament it is not an issue of whether or not to ratify this international treaty, but more about when and how to go about doing it in the best manner possible” (CTBTO 2011).

Summary

Indonesia has lived the purpose of CTBT for a long time, but decided to initiate the ratification process after achieving a stable domestic situation. There has never been opposition towards a CTBT or security related concerns that hindered ratification as Indonesia is not a member of the “nuclear-haves club”.

3.5. Iran

According to a Member of the Permanent Mission of the Islamic Republic of Iran to the United Nations, the reason for Iran’s prolonged ratification process of CTBT lies in the democratic state organization and the way domestic institutions work (Interview 2010d). However, official statements reveal much deeper problems related to Teheran's reluctance. They are mostly connected with the Iranian regional security perception and the “unfair structure” of the international nuclear regime in general. Iran is fed up with double-standard policies of some nuclear weapon states and reacts in a tit-for-tat manner with no transparency in terms of its own nuclear program. In assessing Iran’s attitude towards CTBT it is critical to answer the question why Iran might want to have nuclear weapons and if a potential testing need might be derived from this goal.

Inter-state level

According to Ambassador Soltanieh, who represents Iran in Vienna, “several negative developments jeopardize the treaties entry into force” (Statement 2007a). Foremost, it is presented as being connected with the Israelis clandestine nuclear weapons arsenal. Due to the Iranian believe that the Middle East is threatened and intimidated by the Israeli clandestine nuclear program, it calls Jerusalem to reveal its nuclear capabilities and join the NPT (Statement 2001a, 2007a). The international community is being called to acknowledge that the possession of nuclear weapons by Israel is a violation of international laws (Statement 2007a). Iran’s former deputy president Ayatollah Mohajerani stated in 1991 that “if the Zionist regime has the right to possess nuclear weapons, then all Muslim countries have this right as well” (Feldman 1997: 137) – an indication for Iran’s mistrust in international nonproliferation efforts. Iran particularly states that the “policy of terror” – a clear reference to Israel – is the reason why regional countries do not fully support the CTBT. Teheran claims that another obstacle on the way towards CTBT ratification is the artificial regional grouping system that has been imposed within the organization of the CTBTO. It even goes further by stating

that including “Israel in the Middle East and South Asia Group [...] has caused a deadlock and consequently deprived an important group of countries from active participation in some aspects of the work of CTBTO” (Statement 2001a).

Another reason for Iran to reject the CTBT might be its own nuclear program – which it claims has a peaceful civilian character. However, suspicions over its true intentions shake the international community for a long time already. Transparency in terms of nuclear activities is lacking. Although no evidence on a nuclear weapons program has been disclosed, some facts might serve as indication for a military nuclear project (Kalinowski 2006). Several reasons are being mentioned as possible motivation for Iran to get nuclear. They can be put into the category ‘security’ and ‘status and influence’. As for the security part, Iran’s out-of-date conventional capability could not really deter a potential aggressor or serve its purposes (Chubin 2001: 111). This conventional inferiority is being strengthened by Iran’s tremendously bad experience from the Iran-Iraq war. “Self-reliance and ‘non-dependence’ have since become catchwords in relation to security” (Chubin 2001: 111). However, Iraq does not pose a threat to Iran anymore. There has been a shift in Iran’s insecurity source perception – today the threat is being associated with “the West” and the United States in particular. Iran fears the U.S. dominance in the region, even more after being named together with Iraq and North Korea within the ‘axis of evil’ by President G.W. Bush. The former President stated that the U.S. “goal is to prevent regimes that sponsor terror from threatening America or our friends and allies with weapons of mass destruction. [...] Iran aggressively pursues these weapons and exports terror, while an unelected few repress the Iranian peoples’ hope for freedom” (State of the Union Address 2002). Even if the new American government alleviated its rhetoric, the allegations left a deep scar onto the security perception of Iran, even more as it still is under international fire for its civil nuclear program. Iran consequently underlines that it did not pose any threat to any country for already 300 years. President Mahmood Ahmadinejad reiterated in August 2006 that “Iranians are not a people of aggression and intimidation [and] Iran does not even pose a threat to Israel” (Lotfian 2007: 9). Unfortunately, the same Iranian leader is known for several controversial statements on the right of existence for the occupation regime over Jerusalem (The New York Times 2005; The Guardian 2006; Cole 2006).

Ad vocem ‘status’ issue S. Chubin, from the Geneva Centre for Security Policy, points out reasons for Teheran’s dissatisfaction – “wanting a wider role”, seeking recognition and acknowledgement, wanting equality and parity, being “a state with a sense of mission to act as a ‘role model’ for other (Islamic) states”, thus having a strong incentive to demonstrate leadership qualities (Chubin 2001:

111). Undoubtedly, Iran aspires to become a regional power. As its economic growth has been hindered either by wars or economic sanctions, it might seek nuclear power as regional status reinforcement. In this context, nuclear testing would be crucial. Iran does not have international support in that matter, as there is no state willing to share nuclear know-how that could guarantee Iran's nuclear weapons utility and efficiency, like it probably was the case with Israel. Due to this, testing would be indispensable to achieve reliable nuclear capabilities. Of course, only after taking North Korea's path and withdrawing from the NPT. In that case, however, Teheran would be playing a destructive game, as it officially underlines no interest and the “un-Islamic” character of nuclear weapons. Assuming that Iran decides to develop a nuclear weapon, the question arises why did it sign the CTBT at all? On the one hand, Teheran might have done it in order to temporarily improve its international image, knowing that the chances of the treaties entry into force are very low. On the other hand, the decision might have been a guarantee for further calm work on its civil nuclear program until it acquires nuclear capabilities, takes the decision to develop nuclear weapons and is ready for nuclear testing.

Although Iran participated fully and constructively in the CTBT negotiations (Johnson 2009: 226), it is not satisfied with the final text, as it does not ban all nuclear test explosions, leaving non-explosive nuclear testing allowed (Statement 2001b and 2007a). Iran is disappointed with nuclear powers involved in developing new types and modernizing old nuclear weapons, particularly referring to actions violating NPT article VI. Teheran emphasizes that CTBT has to be a step towards nuclear disarmament. When signing the treaty, it made the declaration that “the Treaty does not meet nuclear disarmament criteria as originally intended” and that it does not see the CTBT “to be meaningful, however, unless it is considered a step towards a phased program for nuclear disarmament with specific time frames through negotiations on a consecutive series of subsequent treaties” (Reservation 1996). It also points out its disappointment that nuclear-weapon states do not do enough to eliminate nuclear weapons and try to keep the status quo instead (Statement 2007a). Iran points to the US rejection of the treaty as a threatening setback that enormously affected the CTBT ratification process (Statement 2001b). Moreover, it also believes that the primary responsibility on CTBT lies upon nuclear weapon states, which have to ratify the treaty first (Statement 2007a).

State level

“Domestically, CTBT does not seem like a hard sell” (Horowitz et.al. 2010: 14). Most Iranian citizens favor nuclear energy for peaceful purposes, but not necessary for nuclear weapons, which

would determine nuclear test explosions. However, increasing repressions against the population that does not favor Presidents Ahmadinejad’s policy, serve as evidence that opposing ideas are not being discussed, but suppressed. It is the “political elites that determine national security policies in the Supreme National Security Council” (Chubin 2006: 31). As, according to Chubin, their majority consists of either pragmatic or ideological conservative hard-liners, their perception of Iran’s security is based on the “no survival without military power” premise (Chubin 2006:31-32). This pessimistic-realistic approach might implicate favoring nuclear weapons as the most reliable ‘deterrent’ and a symbol of power.

Summary

According to the *Report of Pugwash Consultations on CTBT Entry Into Force* “[i]n Iran the issue of the CTBT is not considered separate from nuclear negotiations” (Cotta-Ramusino et.al. 2010: 7). Based upon presented facts, a necessary condition for Iran to consider CTBT ratification is Israel revealing its nuclear program and joining the NPT. Moreover, nuclear weapon states would need to achieve deep cuts in their nuclear arsenals. Another necessary condition would be the improvement of security in the Middle East region. Taking the CTBT as a hostage for bargaining reasons is plausible as Teheran tries to cooperate in terms of its nuclear program (although insufficient in Western eyes) and shows itself eager to avoid international isolation known from the North Korean experience. However, the most probable explanation is that Iran plays with time on the way to its own nuclear program.

3.6. Israel

The reluctance to ratify the CTBT by the non-NPT Israel is a mix of regional security concerns, its nuclear opacity doctrine and domestic hard-liners fighting for freedom of operation. Israel is signatory of the PTBT since 1964 and of the CTBT, and steadily reiterates its “firm” and “unequivocal” support and commitment to the treaties objectives at the Article XIV Conferences (Statement 1999, 2003b, 2005c, 2007b, 2009b). It also considers the prohibition on nuclear testing as part of its national approach to nuclear security and stability (Statement 2005c, 2007b). In order to understand the states position, answers to the following questions have to be given: why did Israel develop its own nuclear arsenal and why does it live the “deterrence through uncertainty” doctrine? Did Israel test its nuclear weapons and may it do that in the future?

Inter-state level

The Nazi Holocaust and the War of Independence in 1948 reassured the Israeli nation that when it comes to secure their existence, there is no better for this job than they themselves. Due to its long term survival concerns, Israel acquired a nuclear deterrent to serve as a national insurance policy. As the state of Israel is not being recognized by its well-armed neighbors and has been involved in several territorial conflicts with Egypt, Iraq, Jordan and Syria (1948, 1967, 1973, 1990-1991), the nuclear weapons program fulfilled the role of a security guarantor. Through this perspective, obtaining a nuclear capability meant getting “deterrence for survival” (Khan 2002: 207) against conventionally superior enemies. Moreover, it did not have security guarantees when taking the decision on starting its own nuclear weapons program. As Israel has never been striving to become a regional or world power, the “prestige” and “searching for hegemony” factors do not seem to be applicable in that case. Further, gaining prestige would require Israel to conduct nuclear explosions, which it never did officially. It is suspected to have conducted a nuclear explosion on September 22, 1979 in the South Atlantic, but there is no certainty about the character of the explosion within the scientific community (for further reading: Ad hoc Panel Report on the September 22 event, 1980; Los Alamos National Laboratory 1982). Israel never admitted this test. Why did Israel never officially confirm its nuclear status through testing? “Opacity has been successful in Israeli eyes, allowing Israel to enjoy a regional nuclear monopoly without incurring the political cost of possessing nuclear weapons” (Cohen 1998: 342). Thus Israelis reluctance vis-à-vis CTBT has to be viewed through a brighter perspective. It is not a member in any treaty considering ABC weapons (CWC, BWC, NPT) and is opposing even the idea of negotiating the FMCT. Israel thus wants to have all security options open, unless its sovereignty is fully accepted by all members of the world community. In this light a question arises: why did Israel sign the CTBT at all? The decision seems to be based on several conclusions: first, the treaty allows Israel to voice its general support for global non-proliferation efforts. It might have been influenced by the American non-proliferation policy and finally, it did not jeopardize the opacity of its nuclear program.

There are three main factors that Israel repeats at every Conference on Facilitating the Entry into Force of the CTBT as necessary prerequisites for the treaties ratification. First, the verification regime has to be fully developed, immune to abuse and ready for operation (Statement 1999, 2003b, 2005c). Apparently, “Israel fears that hostile neighbors will use false charges of nuclear testing as a way to gain access to sensitive Israeli facilities via verification inspections” (Horowitz et. al. 2010: 10). This argument, however, does not seem very convincing. Verification inspections will be

conducted under strong treaty rules - they will need approval of 30 of 51 Executive Council members, explicitly based upon data from the verification system and conducted only in the area of the alleged explosion, so without investigation of other nuclear facilities. Second, at all Article XIV Conferences Israel demands “sovereign equality status” in the decision making bodies of the CTBTO (Statement 1999, 2003b, 2005c, 2007b, 2009b) – within the Executive Council geographical region of the Middle East and South Asia (MESA). This argument refers to Iran making the work of the MESA group impossible for “reasons completely alien to the purposes of the Treaty” (Statement 2005c, 2007b). This is why Israel calls for a depoliticized organizational infrastructure of the CTBTO. “Although Iran’s behavior is unlikely to change dramatically in the near future, this comparatively minor issue is neither likely to force Israel to abandon a treaty it favors nor to provide a plausible excuse for it to remain outside of the CTBT” (Horowitz et.al. 2010: 10). The third factor is the adherence and compliance to the treaty by other states within the Middle East. It is important to view the third precondition through the fact that Israel is not a member of the NPT regime, but sees itself in the position to teach other states “the rules of the game”. Unfortunately, all those preconditions are being called by Israel as “longer term considerations” (Statement 2005c), which might be an indication, that Israel sees no rush in CTBT entering into force.

State level

All Israeli leaders have been “determined to maintain Israel’s nuclear opacity, even though their characteristics and personalities have varied widely” (Khan 2002: 197). The Israeli army has a considerable influence on nuclear decision-taking. However, as a conventional army, it is not interested in shifting budget money from its conventional expenditures towards nuclear projects. Apart from the fact that Israel never officially confirmed its nuclear status, the defense military establishment will probably block any unnecessary spending which might lead to preparing nuclear test explosions, unless it is not triggered by national security needs (Solingen 2007: 210). Although, after India and Pakistan officially entered the nuclear “club”, the world was waiting for Israel to be next, but nothing happened. “Scientific preparations were there, but the decision to nuclearize was not because of the absence of necessity” (Khan 2002: 198). The “absence of necessity” seems weird and might suggest that Israel possess reliable and adequate knowledge on nuclear weapons design and may also indicate that it already obtained computer-simulation capabilities.

As for the highly patriotic citizenry in Israel, they do not play a role within the nuclear policy debate due to the widely accepted “code of silence” (Cohen 1996: 344). Fact is that national security is the

primary concern of the Israeli nation. Due to the persistent Arab-Israeli rivalry and Israel's vulnerability to Arab strikes, it might be assumed that public opinion accepts nuclear weapons. Important to note, however, is the fact that the “ambiguous posture helped arrest the development of a public debate [...], maintained domestic consensus and provided those involved in directing the development of Israel's nuclear potential with high degree of policy autonomy” (Feldman 1997: 99). Instability connected with the Palestinian case also poses an obstacle in the Israel vis-à-vis CTBT case.

Concerning the economic dimension, “Israel's small size, population and resource base make it a weak state when compared to its Arab adversaries, and it might be likely that Israel possesses nuclear weapons to gain leverage in international politics” (Khan 2002: 203). This argument, however, does not seem to be rationale, as Israel has many supporters in terms of military help or economic cooperation, even though it does not play within the internationally acknowledged “system of rules”. There is a better explanation, referring to the “Zionist ethos of science and technology compensating its lack of resources” and pointing to the father of Israel Ben Gurion stating that “we are inferior to other peoples [...] but no other people is superior to us in its intellectual prowess” (Cohen 2006: 34).

Summary

Israel rejects the CTBT, as it does with all other international security treaties, as it wants to have the nuclear option opened as long as its security is endangered. Probably, Israel does not have any intention for nuclear testing, as its political leaders keep stating after the 1961 Prime Minister Levi Eshkol pledge that “Israel will not be the first nation to introduce nuclear weapons to the Middle East” (c.f. Cohen 2006: 35). However, as Israel has never had the need to conduct nuclear testing, it would gain more than risk anything by ratifying the CTBT.

“Overall, Israel's objections to the CTBT are relatively mild, and its posture of ‘nuclear ambiguity’ means that the treaty would not present it with a significant security limitation. Given these facts, Israel may have good reason to try to divert attention from its lack of action in other areas by ratifying the CTBT” (Horowitz et.al. 2010: 10).

Thus the CTBT might one day become a bargaining instrument, used by the world community in the light of Israeli need for something. Meanwhile, by keeping its nuclear supremacy, Israel will do everything to deny Arab states any attempt to acquire nuclear weapons (1981 bombing Iraq's reactor; 2007 bombing Syria's nuclear facility). Unless transparency in the region in terms of weapons of

mass destruction will be introduced, Israel will not see any value added in limiting its freedom of operation. The Middle East Nuclear Weapons Free Zone seems to be a good direction.

3.7. North Korea

North Korea is just at the beginning of its nuclear weapons program development and conducted two nuclear explosions in 2006 and 2009. Pyongyang does not consider the CTBT at that moment, even less as further tests have already been mentioned in political statements (Statement 2009c). The CTBT has not been signed nor ever mentioned in official speeches. In this case it might be conclusive to elaborate the reasons for the two previous nuclear tests – both on the intra-state and state level separately.

Inter-state level

North Korea's (in)security perception diverted from Pyongyang's geo-historical position. DPRK is the outcome of the Cold War ideology struggle between the United States and the Soviet Union. After the end of the Cold War, DPRK lost its most important ally – Russia - and had to face a world driven by capitalism and democracy, which it denied. As the communist government has not been accepted by the world community, North Korea felt into international isolation, which strongly weakened its economy. Today China plays a major role in North Korea, providing the regime with fuel, food supplies, industrial equipment etc. (c.f. Shen 2006; Snyder 2009; Nanto et.al 2010). This attitude descends from Beijing's fear of a potential North Korean regimes collapse and an immense and uncontrolled influx of refugees to China as consequence. This tight relationship makes a coherent international approach to the DPRK difficult (e.g. in the UNSC). Nevertheless, North Korea does not have allies in terms of security and is being more and more isolated on the international scene. By withdrawing from the NPT framework, further work on its clandestine nuclear program and finally, testing nuclear explosions, it only strengthened this state of affairs. The eventual withdrawal from NPT on January 10, 2003 has been motivated as an answer “to the U.S. vicious hostile policy towards the DPRK. [...] After the appearance of the Bush administration, the United States listed the DPRK as a part of an ‘axis of evil’, adopting it as a national policy to oppose its system, and singled it out as a target of pre-emptive nuclear attack, openly declaring a nuclear war” (Withdrawal Statement 2003). In order to bring North Korea back to the NPT regime and establishing a comprehensive approach to the Korean Peninsula, the so called “Six-Party-Talks”

started in 2003 with diplomats from the DPRK, South Korea, Japan, Russia, the United States and China gathering at a table. The Joint Statement from 2005 foresaw Pyongyang giving up its nuclear weapons program in exchange for humanitarian assistance and energy, American security guarantees and normalization of relations with the United States (Joint Statement 2005). The six negotiating parties also agreed to the peaceful denuclearization of the Korean Peninsula, the DPRK returning to the NPT and opening its facilities to IAEA inspectors. A breakdown in negotiations was caused by complications over a release of North Korean assets from a bank in Macao (Chanlett-Avery et.al. 2010: 6). In this international context the first nuclear explosion has been conducted by North Korea on October 9, 2006. What intra-state reasons might be found to explain this test? One of the incentives would be the fear from U.S. expansionism strategy to counter international problems and fight unwanted regimes – the “axis-of-evil”. In order to prevent Japan and South Korea from acquiring nuclear weapons, the United States protects those allies from the North. Thousands of American troops are stationed in the Pacific “within the proven striking range of North Korean missiles” (Chanlett-Avery et.al. 2010: 2). The DPRK might have felt endangered and embattled, thus it conducted the test in order to deter the potential threat. The DPRK strives for normalized relations with neighboring states and the United States. This is why the test might also have been “a desperate effort to secure bilateral negotiations with the United States and, once in negotiations, have more leverage” (Chanlett-Avery et.al. 2006: 5). Moreover, it has been “noted that the day after the test was the 61st anniversary of the founding of the ruling Korean Workers’ Party and that Kim may have intended to use the test to rally public support and stir nationalistic sentiment. October 9 itself was also the day on which the UN Security Council confirmed the nomination of South Korea’s Foreign Minister Ban Ki-moon to succeed Kofi Annan as the U.N.’s new secretary-general, and there was even some speculation the test was in part intended to spoil the South Korean diplomat’s big moment” (Chinoy 2008: 296-297).

Again on May 25, 2009 a test has been conducted by North Korea, followed by an “announcement on April 14, 2009, that it was withdrawing from the six party talks” (Niksch 2010: 3). The pivotal moment came as a result of the UN Security Council condemning Pyongyang’s long-range Taepodong II missile “satellite launch” in April 2009 and sanctions that followed. “The UNSC should promptly make an apology for having infringed the sovereignty of the DPRK and withdraw all its unreasonable and discriminative ‘resolutions’ and decisions adopted against the DPRK”, a spokesman for the regime stated right after the launch (Statement 2009c). Other nuclear tests have been mentioned in case the UNSC does not give an immediate apology. This threat has been carried

out with the second test. A press release from the state news agency of North Korea – the Korean Central News Agency (KCNA) explained the value added by the test as contributing to “defending the sovereignty of the country and the nation and socialism and ensuring peace and security on the Korean Peninsula and the region around it [...]” (KCNA 2009). The statement used the same language as it was the case with the 2006 test, apart from the “defending socialism” part, which indicates that the anxiety over the regimes forth-living is still valid. Worth indication, that the statement “did not mention Kim Jong-il and strongly suggested that the military played a decisive role in North Korea’s decision to withdraw from talks and that the military would control future policy regarding nuclear programs” (Nikitin et.al. 2009: 15). The DPRK explained in the letter to the UN Security Council:

“[h]ad the Security Council, from the very beginning, not made an issue of the DPRK’s peaceful satellite launch, in the same way as it kept silent over the satellite launch conducted by South Korea on 25 August 2009, it would not have compelled the DPRK to take strong counteraction, such as its second nuclear test” (S/2009/443)

– an indication for North Korea’s perception of unequal treatment.

The nuclear weapons program as well as nuclear explosions are important political instruments which North Korea uses in order to secure humanitarian assistance from the international community and gain prestige and recognition. This “guns versus butter” trade-offs secure humanitarian aid from abroad, ensure the regime’s domestic and international forth-living, and strengthen Pyongyang’s international position and the regime’s control over its people. It seems as if North Korea would seek international acknowledgement of Pyongyang’s political system probably more in the Chinese-model direction – according to its premises trade is welcome, but domestic policy is the issue of the government only. DPRK demands go far above the quest for humanitarian assistance. Another factor might be the quest for customers of North Korean nuclear technology. To improve the government’s income, the DPRK might plan to sell its nuclear technology and/or know-how to other states or other actors. There is already evidence of Pyongyang’s deals on missile and nuclear technology with Iran, Syria, and Burma. Test explosions of nuclear devices might thus had to be done in order to prove its nuclear knowledge and technology, which was aimed at convincing potential buyers of the competence of North Korea’s scientists.

State level

In order to understand the complex context of the test, it is important to look at the dynamics within the government and inner affairs. There is another front on which the Stalinist regime in Pyongyang appears to fight to secure its forthcoming existence – its own society, government, and military. North Korea is a “pre-modern dynastic state” (Suk Ahn 2009: 1), a kind of a family-run business. Kim Jong-Il, suffering from health problems, deals with a decision on his succession. None of his three sons gained enough respect within the Confucian standards to directly take their fathers place. Another issue is the weakening economic situation. “The DPRK is really two economies. The first is that of the military, the Korean Workers Party, and the government elite. [...] It lives off the production from the second economy, the rest of the country” (Nikitin et.al. 2009: 6). As over 15% of the state budget is being consumed by military spending, while the society suffers hunger and poorness, “if any meaningful reforms are to take hold in North Korea, the defense budget will have to bear some of the cutbacks” (Gause 2006: 45). Securing humanitarian aid foremost means to “provide a reasonably quality of life for the country’s elite” (Nanto et. al. 2010: 8). While the situation of ordinary people is worsening, the regime sees a greater value in developing effective deterrent on the other hand and is thus reluctant to shift spending into reforms. Thus humanitarian aid has to be secured from abroad – in the worst scenario by bargaining assistance for nuclear issues. Thus can an explanation on the domestic level be found for each of the nuclear tests? The tipping point for Kim Jong-Il to conduct the first nuclear test in October 2006 might come from the need to strengthen his and his successor’s position within the “military-driven” regime. As the regime already before used different “impressive events” to get more leverage in its bargains with the west, the test might be seen as an attempt to obtain more needed humanitarian aid. After the 2006 nuclear explosion, the international community still “provided DPRK with food and fuel assistance in exchange for denuclearization”, however, it is doubtful that it will “buy the same horse twice” (Nikitin et.al. 2009: 7). May 25, 2009 – and again a domestic factor played a role in testing the second nuclear device. “Kim Jong-il had ordered the North’s military, politicians, and officials in overseas missions to swear allegiance to Kim Jong-un [Kims youngest son] after Pyongyang’s May nuclear test” (Suk Ahn 2009: 1). As the future North Korean leader did not manage to consolidate enough support in order to secure his position, ensuring a smooth power transition is considered to be possible only by being accepted by the KPA, KWP and the cabinet – in the majority consisting of hard-liners (c.f. Gause 2006).

Summary

It is very difficult to project the motivation of such a secretive regime. “Fear of nuclear weapons has provided the lynchpin for a strategy of ‘calculated irrationality’ or ‘strategic deception’” (Stratford 2005: 129). The CTBT does not fit into the approach of the Stalinist regime in Pyongyang and further tests have been announced. “If the North cannot secure long-term regime stability by manufacturing external strife to engender internal solidarity, it will do so by continuing its nuclear program” (Suk Ahn 2009: 2). As North Korea restarted the Yongbyon plutonium production, it might be tempted to test another weapon in order to improve its arsenal’s sophistication (Hecker 2009: 5). Its nuclear capability is perceived as a national insurance and it is very unlikely that Pyongyang will give it up until all problems in the Korean Peninsula are solved – the presence of American troops, reunification with South Korea, its relations with Japan and the United States, secured humanitarian aid from Russia and China as well as technological help to effectively restructure the centrally planned market.

3.8. Pakistan

Although it enthusiastically signed the Partial Test Ban Treaty in 1963, Pakistan does not currently consider signing the CTBT (Spokesman Briefing 2009). This reliance is India-reactive and is an outcome of a long lasting territorial dispute with India as well as anxiety of losing its sovereignty. However – according to Ambassador Shahbaz, who serves as Permanent Representative of Pakistan to the International Organizations in Vienna, Islamabad is not “opposed to the objectives and purposes of the treaty [and] will not be the first to resume nuclear testing” (Statement 2007c). Pakistan was already very close to signing the CTBT in March 2001, when “the country's Army corps commanders had given their approval – at a meeting reportedly held on March 19 – for the government to sign the CTBT without waiting for India to make a similar announcement” (The Acronym Institute 2001). According to the Acronym Institute, it unfortunately refrained from taking action after “India conducted a successful test-firing of its Prithvi medium range surface-to-surface ballistic missile, capable of carrying a nuclear warhead” on March 31 (The Acronym Institute 2001). Nevertheless, this incident indicates that Islamabad did not see any legal or technical obstacles with the CTBT. Conditions under which Pakistan would consider signing and ratifying the treaty evolved from waiting for India to do so, towards the demand of a durable structural security in the region.

Inter-state level

After gaining independence in 1947 Pakistan has had to face four wars with India (1947-1948, 1965, 1971, 1999) which resulted in territorial dismemberment of the country. Pakistan faced India's superiority in conventional forces and realized the United States and China did not respond properly to the threat as its security allies. Islamabad concluded that the only way to make sure national sovereignty is being protected will be by establishing its own nuclear program. According to Ambassador Zamir Akram, who represents Pakistan at the Conference on Disarmament, Pakistan based its security policy on the premise that it has to “respond to capabilities and not intentions” (Statement 2010). Islamabad is not bound by the NPT, which it refused to sign due to growing skepticism over New Delhi's nuclear intentions. The rejection to sign the NPT by India was a sign that it is working on a nuclear arsenal. Worth mentioning is the Pakistani Proposal to the General Assembly in 1974 to establish a Nuclear Weapon Free Zone in South Asia (Chakma 2009: 23), which did not find appropriate response. As the world did not react to Pakistani warnings on India getting nuclear, western countries even supporting New Delhi in its nuclear achievements, and Islamabad failing to obtain external security guarantees from nuclear powers, Pakistan entered the era of “new defense thinking” (Chakma 2009: 20). Therefore, a “nuclear option policy” has been adopted and after India conducted its Peaceful Nuclear Test “Buddha Smile” in 1974, Islamabad clandestinely shifted its peaceful nuclear program to a military one. Ambassador Akram explained that Pakistan “did so in the face of discriminatory and arbitrary sanctions which were applied against the victim and not the perpetrator of nuclear proliferation” (Statement 2010). In the aftermath, Islamabad tried to pursue a nuclear test ban treaty in the UN forum, although without success; but rejected a regional test ban treaty proposal offered by India in 1987. The security issue vis-à-vis New Delhi remained tense by rumors of an Indian preemptive strike on Pakistan's nuclear installations in the early 1980s, the “Brasstacks” military exercise along the Pakistani border in 1986-87 (Chakma 2009: 28) and the “Sanghe Shakti” exercise in 2006 (International Panel on Fissile Materials 2010: 70). Islamabad was very ambitious towards its nuclear goal, which was clearly visible in a press conference statement of the former Prime Minister Zulfikar Ali Bhutto held May 1974: “If India developed an atomic bomb, we too will develop one even if we have to eat grass or leaves or to remain hungry because there is no conventional alternative to the atomic bomb” (Chakma 2009: 17). Islamabad took part in the CTBT negotiations, but failed to sign the treaty due to India's “near nuclear test” in late 1995. During negotiations it fought for avoiding any loopholes in the test-ban-regime, wanting a ban on all kind of tests – of either military or “peaceful” character as well as

against subcritical explosions or computer simulations. Afterwards, in a tit-for-tat manner, Islamabad conducted six (and only) nuclear tests on May 28 and 30, 1998 as an answer to India carrying out nuclear explosions on May 11 and 13, 1998. These tests transferred Pakistan into the nuclear power league. Crucial to mention is the moratorium on nuclear testing being published in the aftermath of the tests (Statement 2007c). Within the new reality however, Islamabad did not work out a comprehensive nuclear posture. From official statements it can be concluded that Pakistan maintains an India-reactive minimum credible nuclear deterrence, lives a nuclear first-use policy (after rejecting India’s proposal to establish a bilateral no-first-use arrangement in 1998) and unilaterally restrained itself from further testing, as long as India refrains from testing (Ministry of Foreign Affairs Pakistan 2006, Statement 2007c).

As the India-factor still influences Pakistani security strategy, Islamabad will use the CTBT to promote its concerns and search for international bargains. An official spokesman from the Ministry of Foreign Affairs explained that “[i]t is important that intraregional conventional imbalances and interstate conflicts should be resolved to pave the way for irreversible disarmament” (Spokesman Briefing 2009). The most prominent of all arguments is that “the signing of the CTBT in its present form means that conflicts in South Asia could be ignored as regional in nature since they would be confined to limited conventional war. This would allow the industrialized countries to forget about outstanding issues in that area. Interest in a solution of the Kashmir dispute was aroused as a consequence of nuclear potential of South Asia” (Chakma 2009: 96). Islamabad is convinced that the world community does not put enough focus on the region and downgrades the importance and urgency of the conflicts’ resolution. Although a glimpse of hope appeared on the horizon, when on September 23, 1998 Prime Minister Mohammad Nawaz Sharif “pledged at the UN General Assembly that Pakistan would sign the CTBT before September 1999, so that the treaty comes into force” (Chakma 2009: 95), its rejection in Washington gave Pakistani government justification to take over a “wait and see” policy (Chakma 2009: 98).

External factors other than the leitmotif of India have another important impact on the Pakistani security deliberations. The United States played unfairly during the occupation of Afghanistan by the Soviet Union, when Pakistan again turned out to be of huge geopolitical importance to the American government, but has been abandoned just after the war finished in 1990. Today, the United States tries to stop the Iran-Pakistan-India pipeline project, due to its suspicions over the character of the Iranian nuclear program. “Pakistanis generally assume that Washington will pursue a policy of rollback in relation to Pakistan once the current necessity of using Pakistan as a frontline state in the

global fight against terrorism will be over” (Chakma 2009: 45). Moreover, Islamabad is irritated by NPT nuclear weapons states violating their commitment under Article I, III and VI of the NPT (Statement 2010). Thus, the India-U.S. nuclear deal will not advance Pakistan signing the CTBT, as long as Pakistan won't achieve a similar settlement. The exchange of American nuclear technology against inspections of some nuclear facilities in India enables New Delhi to acquire even more nuclear materials for weapons purposes and strengthens double-standards within the NPT regime. In 2006 – most probably as an answer to the nuclear deal – Pakistan began the construction of a major heavy water nuclear reactor at Khushab, which might increase its weapons-grade plutonium production capabilities (Kronstadt 2009: 64). According to Foreign Minister Quereshi, Islamabad “will not accept foreign boots on its soil” (Statement 2009d), at least for the purpose of war against terror and sees its nuclear deterrent as an important factor in preventing other countries interfering or entering the country.

It is thus clear that neither the American CTBT ratification nor external pressure will play a major role in Islamabad's decision on the treaty. As all Pakistani statements and actions are very India-reactive, it is however assumed that Islamabad would sign and ratify the CTBT after India does. On the other side, India's current deliberations of repeating its 1998 nuclear tests, will definitely impact a mirror action from Pakistan. Meanwhile, Pakistan projected a “Strategic Restraint Regime” (Statement 2007) as a plan to reach durable peace and security in the region through balancing nuclear and conventional capabilities in both states. On behalf of the government, Ambassador Shahbaz explained to the Article XIV Conference that the plan includes: “(i) resolution of all outstanding disputes; (ii) promotion of nuclear and missile restraint; and (iii) maintenance of conventional forces balance” (Statement 2007c). He also openly addressed “motives and compulsions which prompt states to acquire nuclear weapons. These include; (i) threats from non-conventional or superior conventional forces; (ii) the existence of disputes and conflicts with more powerful states, and (iii) discrimination in the application of international laws” (Statement 2007c). This showed the change in Pakistani demands for CTBT ratification – from India ratifying the treaty, to a complex plan resolving regional disputes between India and Pakistan.

State level

Ad vocem domestic political dynamics, it is worth mentioning that former Prime Minister Nawaz Sharifs' “government was ready to sign the treaty” in 1998 (Chakma 2009: 95), but had to withdraw the idea facing internal pressure. It probably has been rejected by the National Command Authority

of Pakistan, the highest decision making body on strategic issues (Statement 2010), that traditionally determined national security issues. At this time all political parties (leading Muslim League and the Jamat-I-Islami as well as all oppositional groupings) favored rejection of the CTBT. However, a debate arose within the society after the Pakistani nuclear tests, which created two adversary groups. CTBT proponents claim that Islamabad would gain diplomatic and political standing on the international arena and would release itself from foreign sanctions imposed as an answer to its nuclear explosions. Additionally, Pakistan would be able to search international understanding and support in resolving security issues vis-à-vis India. The anti-CTBT group reiterates the few nuclear tests being done by Pakistan, that did not give enough knowledge for further computer simulations and which do not guarantee reliability of the nuclear devices. They also suggest using the CTBT to bargain for laboratory simulation technology, as it was the case with China and France (Chakma 2009: 95-96). Other concerns touch the issue of withdrawal difficulties after treaty signature as well as verification of key nuclear facilities after its entry into force, which would not be exempted from international on-site inspections, while Pakistan is labeled as a non-nuclear state according to the NPT regime. It means that CTBT inspectors would have access to nuclear facilities, which Pakistan does not want to disclose - on critique of this argument please refer to comments in 3.6. Interestingly, a break concerning the position on nuclear weapons within the political scene becomes more and more visible. Although the Pakistan Muslim League, Pakistan Peoples Party and Pakistan's Islamist parties, which command the largest public support, still favor nuclear weapons; "Pakistan's minority nationalist parties, progressive civil-society groups and some retired military officers oppose the nuclear program and call for disarmament" (IPFM 2010: 68). Moreover, on February 2008 Asir Zardari, head of the newly elected coalition-leading Pakistan People's Party, "caused a stir when he suggested that Pakistan-India relations should not be hindered by differences over Kashmir [...] [that is] a situation on which we can agree to disagree" (Kronstadt 2009: 44-45).

Summary

Political statements do not brighten the perspective of CTBT ratification by Islamabad – "for signing the Treaty, we still need national consensus, while taking into account the regional security situation" (Ministry of Foreign Affairs Pakistan 2006). According to the Minister of Foreign Affairs Shah Mahmood Quereshi, the decision will be based purely on national security requirements to maintain credible nuclear deterrence (Statement 2009d), which means that Pakistan still does not roll out the option for further testing, if regional circumstances change respectively. "It has also been claimed by

Pakistani sources that at least one additional device, initially planned for detonation on 30 May 1998, remained emplaced underground ready for detonation” (Federation of American Scientists 2010). Further testing might take place if India conducts them. Otherwise, with Indian signature and ratification, Pakistan will probably follow.

3.9. United States

The United States was the first country to sign the CTBT, but still has not ratified it. For the United States there are particular domestic constraints that hinder CTBT ratification. The treaty became a highly debated issue dividing the political scene along hard-line “realist” Republicans and disarmament-progressive Democrats. The timeline discussed here is October 1992 (Moratorium on Nuclear Testing) - November 2, 2010 (2010 general elections for the 112th United States Congress).

Inter-state level

The United States plays its CTBT cards from the position of a nuclear weapons state with the biggest and most modern arsenal, as well as the highest number of conducted nuclear test explosions and the most sophisticated technological capabilities and knowledge. Thus its only concern on the intra-state level might be maintaining fully functioning nuclear capability in order to “balance” potential threats and keep the status of a global power.

State level

The American political system is very election-driven, what explains the character of the CTBT debate in the United States. To define the reasons for which the CTBT is being rejected, the course of the discussions will be presented.

In October 1992 a Moratorium on Nuclear Testing was approved by President George H.W. Bush, who did not support the bill, but signed it “with his eyes on the forthcoming election and the bill’s allocation of funds for several key states” (Johnson 2009: 43). “The original official negotiating position of the Clinton administration in Geneva was to have a treaty which, one, had a definite duration, 10 years; two, permitted low yield tests, 4 pounds, and was also verifiable” (Hearing 2010: 23). As the final outcome did not match the starting point of the United States in the negotiations, it already presented one of the reasons for opponents to criticize it. The treaty has been transmitted by President B. Clinton to the United States Senate for its advice and consent for ratification on

September 24, 1997. In order to appease the GOP Senators, President Clinton conditioned the American ratification of the treaty by introducing the so called “presidential safeguards”. Those conditions require inter alia maintaining nuclear laboratories, holding on the capability to conduct nuclear tests, further R&D activities on nuclear technologies and the possibility to withdraw from CTBT in order to undertake tests in case the reliability of the American nuclear deterrent could no longer be certified (in detail see Annex 4). The Republican-lead Senate blocked considering the treaty for over two years and spent remarkably less time debating the treaty in comparison to other arms control issues being discussed (see Annex 3). The hearings did not cover comprehensive testimonials from nuclear experts, army representatives, NATO allies’ representatives etc. As a consequence, the CTBT has been rejected by 48 votes in favor and 51 against with one senator voting “present” on October 13, 1999 (for details see Annex 4). “The “no” vote was the consequence of the political miscalculations of treaty proponents, the failure of many senators to understand core issues; the deep, partisan divisions in the nation’s capital; and the president’s failure to organize a strong, focused and sustained campaign” (Kimball 1999a).

According to Gen. John M. Shalikashvili, Special Advisor to the President and the Secretary of State for the CTBT, four types of concerns have been most prominent in the debate in 1999: 1) whether the Test Ban Treaty has genuine non-proliferation value; 2) whether cheating could threaten U.S. security; 3) whether the U.S. can maintain the safety and reliability of the its nuclear deterrent without nuclear explosive testing; and 4) whether it is wise to endorse a Test Ban Treaty of indefinite duration (Shalikashvili 2001). The main issues discussed during hearings were nuclear weapons testing as an instrument for building adequate confidence in stockpile safety and reliability, verification, new nuclear weapons (like mini nukes etc., answering new security threats), evasion scenarios, test readiness as a “hedge against stewardship failure and against treaty breakout by another nation” (Hearing 1998a: 5), the topic of rogue states under CTBT and the presidential safeguard on withdrawal.

As background for understanding the 1999 debate on the merits of the CTBT, some facts will be presented. First, the rejection of the CTBT was closely connected with a very active campaign lead as early as the beginning of 1999 by some Republican Senators, like the famous CTBT opponent Senator Jon Kyl (R-AZ), Trent Lott (R-MS, ret.), Jesse Helms (R-NC), and Paul Coverdell (R-GA). Secondly, “many Republican Senators were only too eager to score partisan political points against a President who had so many times defeated their initiatives” (Kimball 1999b). Moreover, one of a big issue has been the possible withdrawal from the treaty, which could wake another country’s attention

as a signal of weakness and lack of confidence in American nuclear weapons. Another point of discussion was the highly controversial Stockpile Stewardship Program (SSP) initiated after announcing the nuclear moratorium. Its aim is to maintain “high confidence in the safety, reliability, and performance of nuclear stockpile indefinitely and without nuclear testing” (Hearing 1998a: 49). The controversy around the SSP refers on one hand to the question, if responsible stewardship of nuclear weapons is possible without testing. On the other hand, it means extending the nuclear weapons life-time, which does not match with the ‘disarmament’ effect expected to accompany CTBT. Records of hearings gave the impression that after the full implementation of the SSP, resistance against CTBT would fall down dramatically. Interestingly, it turned out that testing of nuclear weapons – which has been the most disputed part of the debate – has been done primarily for the purpose “of designing new ones, but less so when [...] in the process of making sure the old ones worked” (Hearing 1998b: 11). Here again lack of scientific knowledge played a vital role. Detailed reasons and circumstances of the CTBT being rejected have been exhaustively described elsewhere (c.f. Kimball 1999b).

After rejection and “at the end of the 106th Congress, pursuant to Senate Rule XXX, paragraph 2, the treaty moved to the Senate Foreign Relations Committee Calendar, where it currently resides” (Medalia, 2010: 2). The Bush Administration did not support the Comprehensive Test Ban Treaty and did not intend to seek Senate advice and consent to its ratification (Medalia 2010: 4). A glimpse of hope for the CTBT occurred with President Barack Obama’s vision of a world without nuclear weapons and his administration “immediately and aggressively “pursuing U.S. ratification (Obama 2009). This attitude found its confirmation at the Article XIV Conference in September 24, 2009; when Secretary of State H.R. Clinton declared that the CTBT contributes to the U.S. non-proliferation and disarmament strategy as well as the President’s long-range vision “without jeopardizing the safety, security, or credibility of our nuclear arsenal” (Clinton 2009). The Nuclear Posture Review 2010 also reiterates that the United States is “pursuing ratification and early entry into force of the Comprehensive Test Ban Treaty” (Nuclear Posture Review 2010: 13).

The domestic political landscape differed from that in 1999. A comparison of the 106th (January 1999-January 2001) and the 111th (January 2009-January 2011) Senate structure is presented in Annex 5. Joseph Jofi, who serves as Senior Advisor in the Office of the Under Secretary for Arms Control and International Security wrote that “a Democrat, with the first clear majority of the U.S. popular vote since Jimmy Carter in 1976, occupies the White House, while Senate Democrats enjoy a 59-seat majority, the largest margin of power since 1980” (Jofi 2009: 85). As of June 2010, the

majority consisted of 58 Democrats and still did not manage to bring CTBT to the Senate. The United States midterm elections, which were held November 2, 2010 pose an obstacle for the ambitious presidential goal. As predicted, Republicans gained the majority in the House of Representatives and received additional seats in the Senate. As for the beginning of the 112th Congress the Democrats have 51 seats, the Republicans 47 and 2 seats go to independent Senators. What has been defined for the Obama Administration at the beginning of the legislation as a point on the roadmap to CTBT is still valid - “the key to success [...] lies in pitching CTBT ratification as a serious national security debate to avoid it becoming a victim of partisan politics. Particular focus should be placed on those Republican Senators who will be exposed to this debate for the first time: [thirty Republican Senators in the 112th Congress] were not members in 1999 and thus ‘will evaluate the merits of CTBT ratification with a fresh perspective’” (Jofi 2009: 86). Meanwhile, the United States Administration tried to educate Senators on the topic via New START hearings at which the modernization of American nuclear stockpiles has been discussed in detail. Various NGOs are of great help as well. Unfortunately, the GOP changed diametrically during the last 10 years and became much more conservative, ideology driven, emphasizing American unilateralism, and showing no interest in the U.S. binding itself with international treaties (Interview 2010e). This might threaten the CTBT ratification in the nearest future.

But how do American decision-makers judge the CTBT today? Former treaty opponents give positive signals towards a renewed ratification process of the CTBT. “[F]ormer Secretary of State George Shultz urged ratification of the CTBT [and stated] that his fellow Republicans may have been right in voting against it some years ago, but they would be right voting for it now based on new facts” (Hearing 2010: 19). However, “Senator Jon Kyl, who led the opposition to the CTBT in 1999, reportedly said, ‘I will lead the charge against it [the CTBT] and I will do everything in my power to see that it is defeated’” (Medalia 2010: 5). Apparently, Senator Kyl will not seek reelection in 2012 (Press release 2011). As for further reading, an interesting example of the current ongoing debate is presented in articles exchanged between Jon Kyl (2009) and Daryl G. Kimball (2009). While Jon Kyl argues with old arguments against CTBT, Daryl Kimball refutes them and concludes that inaction on the CTBT will increase the risk of resumption of testing.

In the meantime several assessments of the consequences of U.S. ratification of the CTBT have been made. The National Academy of Sciences concluded in 2002 “that the United States has the technical capabilities to maintain confidence in the safety and reliability of its existing nuclear-weapon stockpile under the CTBT, provided that adequate resources are made available to the

Department of Energy’s nuclear-weapon complex and are properly focused on this task” (National Academy of Science 2002: 1). This statement responds to the mostly used argument by the treaty opponents from the 1999 debate. However, an initiative for a bipartisan and independent Congressional Commission on the Strategic Posture Review concluded without having an “agreed position on whether ratification of the CTBT should proceed” (Perry et. al. 2009: 87).

Although President Obama planned “to seek Senate approval for ratification as soon as feasible, possibly before the Nuclear Non-Proliferation Treaty (NPT) Review Conference 2010” (Klein 2009: 1), it probably will not happen in the present presidential period, as other important projects are at the Senate desk (Interview 2010b) and the debate on the healthcare reform “has soured an already highly partisan atmosphere on Capitol Hill” (Butcher 2010: 2). As Undersecretary of States for Arms Control and International Security, Ellen Tauscher, pointed out in an interview: “The president has set no specific timeline for achieving ratification. [...] There is a lot of queuing and sequencing going on. [...] There are a number of pieces here that are important to the narrative for the Comprehensive Test Ban Treaty. [...] We [will] have a very, very short window to talk about CTBT. But when we believe that we have the right conditions; we will begin to engage the Senate” (Horner et al. 2007). Right conditions mean being sure that the Senate majority will vote “yes” (Interview 2010e). Another U.S. rejection might pose a risk of many states going nuclear. Moreover, also external factors may influence the next debate round on the CTBT: increased confidence in the International Monitoring System (mostly after the DPRK 2006 and 2009 nuclear tests), the Stockpile Stewardship Program being proved as functioning, an increased number of ratifications and signatory states as well as increasing international pressure aiming at “Global Zero”.

Interestingly overall public opinion does not seem to be taken into account in the CTBT debate, as over 70% of American citizens were in favor of the CTBT in 1998 already. The political dynamics are more determined by processes within the Republican Party that do not simply respond to overall national public opinion on the CTBT in particular.

Summary

The United States is the first world nuclear power with the most nuclear tests done, sophisticated nuclear know-how and record, most modern technology for maintenance of nuclear stockpiles as well as the biggest nuclear arsenal worldwide. Due to its position, the United States can play however it wants on the CTBT issue. Nevertheless, it has always been clear that rejection of the CTBT will diminish Washington’s leadership and moral justification in its international disarmament

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efforts. The GOP will for sure play CTBT to earn more money into nuclear science and feed all three National Nuclear Laboratories, that – unsurprisingly – are located in states with strong Republican votes majority. The Obama administration takes the “step-by-step” approach, trying to prepare “the ground” for further CTBT talks within the Senate. In order to strengthen his domestic position, the President did not permit any remarks abandoning modernization of nuclear stockpiles within the 2010 NPT Review Conference final document (Interview 2010e).

CHAPTER 4. SEARCHING FOR THE COMMON DENOMINATOR

4.1. Summary of findings

The primary aim of this paper was to identify the causal phenomena of the CTBT rejection by the nine outstanding hold-out states. The elaboration of arguments and reasons used by the treaty opponents and abstainers has been primarily based upon official documents. Governmental statements rarely reveal full reasons for states' reluctance concerning the CTBT, but they outline necessary, not to be confused with sufficient, conditions for its entry into force. However, true problems hindering states from signing and ratifying the treaty lie deeper. Therefore, they have been researched within their historical context, security environment and the potential utility of having and/or testing nuclear weapons. The research has been designed using the threefold “level of analysis” approach and divided the framework of work into the inter-state, intra-state and individual level. A possible theory has been attached to each of them - the realist theory of the anarchical system of international relations, neoclassical realist theory and liberalism referring to internal state factors; as well as behavioral theories describing peculiarities of individual decision-makers - respectively, as giving potential theoretical answers to the research question. A summary of reasoning for all hold-out states is being presented in Table 1. Those findings reveal the complexity of the issue and accentuate that most rejections are based upon an interrelation of different arguments.

The classical realist perspective is reflected within the complex regional, security-related interdependencies influencing the decision on the CTBT. Two groups of states emerged from the research, where the decision on the CTBT relies upon the treaty-related action of other actors. Those groups cover the Middle East (Egypt, Israel, Iran) and South-East Asia (China, India, Pakistan). In the Middle East, regional power competition and eliminating Israelis' nuclear capability are major reasons for Egypt and Iran hesitating – picturing a classical realists' balance of power scenario. As both officially refrain from developing and thus testing nuclear weapons due to their obligations within the NPT regime, their CTBT attitude is connected with the bargaining option for a Middle East Nuclear Weapons Free Zone and prompt denuclearization of Israel. And then there is Israel with its concerns over its security in the hostile Arab region and struggling with Hamas in Palestine, which is being strengthened by Iran. The Israeli security concern is being externalized through a deterrence strategy via a clandestine nuclear weapon arsenal. This interdependency presents a vicious circle which has to be resolved as a precondition for any arms control treaties in the region.

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Table 1. State positions on CTBT

State name	Official attitude towards CTBT	Concerns around CTBT
China (S)	CTBT endorsement; Ratification prepared by Standing Committee of the National Parties Congress; Waiting for U.S. to ratify the CTBT	Bargain for a „new international security concept“
Egypt (S)	CTBT endorsement	Bargain to denuclearize Israel and include it as a non-nuclear weapons state into the NPT regime Bargain for a ME NWFZ Keeping the nuclear option open
India	No acceptance for current CTBT text “Will not stand in the way, but it should be a CTBT which actively contributes to nuclear disarmament”	Bargaining for complete nuclear disarmament Loopholes within the test-ban-regime Keeping the nuclear option open Uncertainty over credibility of previous nuclear tests
Indonesia (S)	CTBT endorsement	None – ratification postponed due to political transition
Iran(S)	Involvement in the CTBT process but without ever officially endorsing it Prolonged ratification process	Western double-standard policies Bargain for including Israel as a non-nuclear weapons state into the NPT regime Keeping the nuclear option open Majority of political hard-liners Modernization of nuclear weapons
Israel (S)	„Firm“ and „unequivocal“ support for CTBT	On-site inspections being too intrusive No full readiness of the verification regime Struggles in the MESA Group within the Executive Council Keeping the nuclear option open
North Korea	No official statements on CTBT	Speculations: Securing internal power/power transition Testing used to show dissatisfaction Keeping the nuclear option open Bargaining for better relationship with U.S. Bargaining for regional security
Pakistan	Not opposed to the CTBT	Waiting for India to ratify first Bargaining for durable structural security in the region – the „Strategic Restraint Regime“ Bargaining for better relationship with India Loopholes within the test-ban-regime U. S. double-standard policies Majority of political hard-liners Keeping the nuclear option open
U.S. (S)	Administration strongly endorses CTBT, but needs Senate approval for ratification.	Divided political scene No definition of what a „nuclear test“ is Questionable effective verification through the IMS Maintenance of nuclear weapons security and utility without testing Development of new nuclear weapons

(S) – signatory

Similar reasoning is to be derived from the Asian case, where it is about the search for stability – a classical security dilemma scenario. All *Annex-2* hold-out states in the region already possess nuclear weapons and made it official by testing. Regional insecurity perceptions are the outcome of territorial disputes between states. Transparency, territorial sovereignty acknowledgment and confidence building measures would change security perceptions, ensure trust between states and make a precondition to consider CTBT.

The neoclassical realism made an important point in adding internal state affairs as a factor explaining the way decisions on foreign politics are being made. The study disclosed that power competition is a very important factor on the state level. In the United States the CTBT presents a campaign between local priorities and national security interests – an internal power struggle between the GOP and the Democrats. Ratification is therefore due to the GOP trying to squeeze the Administration for continuous money flow into its electorate states and reluctance to give up nuclear testing in general. In North Korea power struggle exists in terms of succession. In this case, testing symbolizes power and assures the state leaders ability to rule the country. Nuclear testing is a brand new topic for the DPRK and it does not seem to be willing to even talk about a nuclear test ban. CTBT has never been mentioned in official statements and the DPRK did not take part in any Article XIV Conference as for today. CTBTO made some attempts to attract North Korea, however, unsuccessfully (Interview 2010a). As further nuclear tests have been announced, it might be inferred that CTBT would only present an obstacle for the regimes plans. Other states face the economic factor influencing the CTBT debate with parts of society starting to play a slightly more intense role. The Pakistani political scene seems to be more and more divided. However, as for the moment only small opposition parties demand a nuclear test ban. The same in case of India, where workers parties suggested putting nuclear testing money into the states’ development.

At the individual level there are no findings made, because the decision on nuclear testing is largely collective and influenced by several key political and technocratic voices. Within the given time frame and financial resources available for this study, no field analysis could be done which might have shed some light on the decision-makers’ personal characteristics.

In general it is possible to divide all arguments against the CTBT into four categories: 1. technical, 2. security-related, 3. arms-control-related and 4. domestic-policy-related (see Table 2.). This, however, indicates, that theories proposed at the beginning do not fully explain the research inquiry. The distinction is relevant for policy-oriented suggestions.

Table 2. Main arguments against CTBT

<p>Technical reasons</p>	<p><u>Referring to CTBT:</u></p> <ul style="list-style-type: none"> · Loopholes within the test-ban-regime (e.g. definition of a „nuclear test“) · Struggles within the MESA Group in the Executive Council · Questionable effective verification through the IMS · On-site inspections being too intrusive · Lack of full readiness of the verification regime <p><u>Referring to nuclear weapons:</u></p> <ul style="list-style-type: none"> · Maintenance of existing nuclear weapons without testing · Concerns over credibility of previous nuclear explosions · Development of new nuclear weapons
<p>Security-related arguments</p>	<ul style="list-style-type: none"> · Nuclear testing as effective deterrent · Wish to keep the nuclear option open · Signature/ratification relies upon another countries’ steps · Bargaining for the Middle East Nuclear Weapons Free Zone (ME NWFZ) · Bargaining for a better relationship with other countries · Bargaining for improved regional security
<p>Arms-control-related reasons</p>	<ul style="list-style-type: none"> · Inequality of the international non-proliferation regime · Non adherence to international treaties by other states · Lack of universality of the NPT · Lack of reference towards complete disarmament within the CTBT
<p>Domestic-policy issues</p>	<ul style="list-style-type: none"> · Political transition correlated with other priorities · Divided political scene · Majority of political hard-liners · Securing internal power/ securing internal power transition · Testing used to show dissatisfaction with other states behaviour

Several scientists predict that U.S. ratification could immensely change the course of events. A causal chain can be derived from the study showing the interdependency of states decision. The U.S. ratification might have a trigger effect, entailing further decisions on ratification by China. The U.S. decision, followed by China would influence India and then also Pakistan. By resolving the ambivalent Israeli nuclear weapons case, Egypt and – maybe – Iran would follow. Teheran’s resistance to ratify the CTBT in that case might give insight into the real purpose of the Iranian nuclear program. More persistent opponents might be persuaded to join the treaty after the U.S. ratification, as they will see an immense potential for bargaining. If the international community could make them a good offer, they might be willing to trade CTBT. However, as the CTBT entry into force is related to security issues, it will not be possible to change states decision, if they are not convinced to do it. Moreover, it is important to bear in mind that any bargaining with CTBT might

generally have a weakening effect on voluntary participation in future agreements.

Further on, states need to be convinced that the “trust” principle build into the treaties entry into force mechanism works in favor for them. A joint or regionally-collective signing and ratification process may pose not only a confidence building measure between state parties, but overcome regional security imbalances that block CTBT ratification. After simultaneously signing and ratifying the treaty by e.g. India and Pakistan, their bilateral security balance dilemma will remain. The whole security situation for both states, however, will increase. Ad vocem logistics only, signed copies might be given to a third state both India and Pakistan trust, so they will be given to the depositary only together with both ratification instruments. This approach, though, will most probably not work for the Middle East case as Iran does not recognize Israel. However, the same reciprocity principle might have some window of opportunity here. The 2012 conference might serve as a platform for Egypt, Iran and Israel to talk about reciprocal CTBT ratification as a confidence building measure. A logistic principle similar to the one proposed for the Asian case might be used here. For the United States and Indonesia there are national level considerations that matter. In the case of the United States it is inevitable to work on convincing thirty Senators, who did not have the chance to vote on the issue in 1999, to the value added CTBT presents. Indonesia does not seem to have negative CTBT related considerations, but needs time to stabilize its internal situation and solve more urgent problems before ratifying. Even in a case when North Korea will reject the CTBT, every state party to the treaty will gain security rather than lose it. This is due to the fact that North Korea will not develop tremendously bigger arsenals endangering its neighbors more than it does today.

The 2010 NPT Review Conference called all nuclear weapons states to ratify the treaty as being mostly responsible for accelerating CTBT’s entry into force (Final Document 2010). Moreover, all NPT member states committed to refrain from nuclear test explosions and from the use of new nuclear weapons technologies. They also agreed to maintain all existing moratoriums on nuclear testing. Accelerated work on the Middle East Nuclear Weapons Free Zone presents a central part of this year’s agreement. However, before exploding with naïve exaggeration and hope for a big change within the international non-proliferation regime, and the CTBT in particular, one has to bear in mind past “promises” and action plans. The 2000 NPT Review Conference with its 13-Steps plan has been abandoned by some states and has not been carried out. Nevertheless, the international community is obliged to make the CTBT entering into force. NPT article VI demanding each of the parties to the treaty to pursue “negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete

disarmament under strict and effective international control” (NPT 1970) is being strengthened by the opinion of the International Court of Justice in 1996 on the existing „obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control” (International Court of Justice 1996). The international norm banning nuclear tests remains fragile as long as the CTBT does not get a legally binding dimension.

At an official event at the 2010 NPT Review Conference, Tibor Toth, who serves as the Executive Secretary of the Preparatory Commission of the Comprehensive Nuclear-Test-Ban Treaty Organization mentioned that the window of opportunity to join the CTBT will not be open indefinitely. According to an External Relations and International Cooperation Representative of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization, this statement means that it is crucial for the CTBT entry into force to use the momentum that has been created by President Obama’s famous Prague speech (Obama 2009) in order to accelerate the ratification processes (Interview 2010a). It is also related to the Indonesian promise to ratify the treaty soon. With time passing by, the U.S.-leverage on other countries will become less. It will be tougher and tougher to get North Korea and Iran on the boat (Interview 2010a).

Important to notice is the idea of a CTBT provisional entry into force, which has been introduced in 1997 by Wolfgang Hoffmann, who served as Executive Secretary of the Comprehensive Test Ban Treaty Organization (Parachini et.al. 1999:116). The idea is that if most hold-outs ratify the treaty, but e.g. one will still refuse it, states may join together in an informal agreement for a provisional entry into force – a case tailored for North Korea being the toughest antagonist. However, there are no such considerations neither within the CTBTO or the scientific milieu (Interview with an External Relations and International Cooperation Representative of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization, 2010). This alternative entry into force procedure would have an overt effect by weakening the incentives to join the CTBT, offering a backdoor and thus giving signatory states the feeling of being a “cheap treaty” (Interview 2010a).

4.2. Conclusions

The ratification of the CTBT is in limbo due to nine *Annex-2* hold-out states. The treaty negotiation and ratification process has encountered increasing disappointment over the international nuclear regime, which is seen as being unequal, unfair and not fitting into the reality forty years after it has

been commenced. This frustration is loudly expressed within the CTBT debate. However, reasons for CTBT refusal also respond to unresolved disputes between the hold-outs. State security and further possible nuclear testing concerns pose a stumbling block, creating a vicious circle. Hold-outs will consider CTBT for ratification only when perceiving it is in their security interest. The CTBT itself does pose a hurdle as it leaves some terms undefined, thus creating loopholes in the texts interpretation. The arms control "market" is a vibrant one and states also use the CTBT to bargain on the international scene.

Restraint is being shown by North Korea which did not comment on the treaty at all. This might be a strong indication of further plans for nuclear testing by the regime. It has been already confirmed with the 2006 and 2009 nuclear explosions. Iran and Pakistan lack an enthusiastic attitude towards the treaty, but do not reject it completely. For the world community the CTBT ratification by Iran would act as an immense confidence building measure showing willingness for cooperation. Restraint only puts additional doubts on the character of the Iranian nuclear program. Pakistan is bound to its security balance with India, which mostly determines its reluctant position.

CTBT entry into force would clearly be a win-win situation for the whole international community. It seems that there are some policy related opportunities for the treaty. US ratification might trigger other states to follow. If not voluntarily, a bargaining option might be taken under consideration. However, this would need wide international approval as it might endanger incentives for future treaty ratification processes. Thus, the primary window of opportunity is building mutual trust within regional groupings by using the 'escrow principle'.

As for further research, the issue of CTBT as a confidence building instrument between states on the basis of neoliberal institutionalism might be of great interest. Technical cooperation, institutional framework and political considerations might be explored in order to find out the CTBTs' impact on international cooperation patterns.

As many obstacles stay in the way to achieve the CTBT prompt entry into force, some scientists argue that it might be more effective to concentrate on decreasing nuclear stockpiles first and putting CTBT at the end of the path to a sustainable "Global Zero". This is an interesting idea which shall be elaborated in further studies. However, without the CTBT, that was negotiated and gained wide international support, no international norm against nuclear testing would emerge so fast. The question, therefore, is if the profit and loss balance in terms of the CTBT pays off, if the international community has to wait for the Annex-2 hold-outs to sign and/or ratify the treaty.

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Annex 1 - List of the Annex 2 hold-out states

State	Signature date	Ratification date
China	24 September 1996	-
Egypt	14 October 1996	-
India	-	-
Indonesia	24 September 1996	-
Israel	25 September 1996	-
Iran	24 September 1996	-
North Korea	-	-
Pakistan	-	-
United States	24 September 1996	-

List of Annex 2 states which ratified the treaty:

Algeria, Argentina, Australia, Austria, Bangladesh, Belgium, Brazil, Bulgaria, Canada, Chile, Colombia, Finland, France, Germany, Hungary, Italy, Japan, Mexico, Netherlands, Norway, Peru, Poland, Romania, Republic of Korea, Russian Federation, Slovakia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom of Great Britain and Northern Ireland, Viet Nam, Zaire.

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Annex 2 - Comparison of nuclear test explosions numbers

Comparison of the number of nuclear test explosions conducted by the CTBT hold-out states. Additionally other NPT nuclear weapon states are mentioned as well.

CTBT hold out state	Number of nuclear tests
USA	1032
China	44
India	5
Pakistan	6
Indonesia	0
North Korea	2
Israel	?
Iran	0
Egypt	0
Russia	715
Great Britain	45
France	210

Annex 3 - Senate Consideration of Major Arms Control and Security Treaties 1972-1999

Anti-Ballistic Missile Treaty/ SALT I (approved 1972)

- 8 days of Foreign Relations Committee hearings
- 18 days of Senate floor consideration

Intermediate Nuclear Forces (INF) Treaty (1988)

- 23 days of Foreign Relations Committee hearings
- 9 days of Senate floor consideration

Conventional Forces in Europe (CFE) Treaty (1991)

- 5 days of Foreign Relations Committee hearings
- 2 days of Senate floor consideration

START I Treaty (1992)

- 19 days of Foreign Relations Committee hearings
- 5 days of Senate floor consideration

START II Treaty (1996)

- 8 days of Foreign Relations Committee hearings
- 3 days of Senate floor consideration

Chemical Weapons Convention (1997)

- 14 days of Foreign Relations Committee hearings
- 3 days of Senate floor consideration

NATO Enlargement (1998)

- 7 days of Foreign Relations Committee hearings
- 8 days of Senate floor consideration

Comprehensive Test Ban Treaty (submitted 1997)

- 1 day of Foreign Relations Committee hearings

Source: Hearing IV; Final Review of the Comprehensive Nuclear Test Ban Treaty (Treaty Doc. 105-28); Hearing before the Committee on Foreign Relations United States Senate One Hundred Sixth Congress; First Session; October 7, 1999; S. Hrg. 106-262; U.S. Government Printing Office; Washington 2000; pp. 81.

Annex 4 - U.S. Presidential safeguards

In August 1995, when President Clinton first announced that the United States would pursue a zero-yield CTBT, he declared that U.S. adherence would be predicated upon six safeguards:

- (A) The conduct of a Science-Based Stockpile Stewardship program [...] to ensure a high level of confidence in the safety and reliability of our nuclear weapons stockpile.
- (B) The maintenance of modern nuclear laboratory facilities and programs in theoretical and exploratory nuclear technology;
- (C) The maintenance of a basic capability to resume nuclear test activities prohibited by the CTBT should the United States cease to be bound to adhere to the Treaty;
- (D) A continued comprehensive research and development program for treaty verification and monitoring operations;
- (E) The continued development of a broad range of intelligence gathering and analytical capabilities; and
- (F) The understanding that if the President is informed by the Secretaries of Defense and Energy as advised by the Nuclear Weapons Council, the Directors of the nuclear weapons laboratories, and Commander of U.S Strategic Command that a high level of confidence in the safety and reliability of a nuclear weapon type which the two secretaries consider critical to our nuclear deterrent could no longer be certified, the President, in consultation with the Congress, would be prepared to withdraw from CTBT under the supreme national interest clause.

Source: Hearing I; Comprehensive Test Ban Treaty Hearing before a Subcommittee of the Committee on Appropriations United States Senate One Hundred Fifth Congress, First Sessions; Special Hearing - Department of Defense, Department of Energy; October 29, 1997; S. Hrg. 105-480; U.S. Government Printing Office; Washington 1998; pp. 12-13.

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Annex 5 - Comparison of the 106th and the 111th Senate structure

106th Senate			111th Senate		
In favor	Against	Answered 'Present'	In favor	Against	Unknown
Akaka (D-HI)	Abrahan (R-MN)	Byrd (D-WV)	Akaka (D-HI)	Bond (R-MO)	Barrasso (RN-WY)
Baucus (D-MT)	Allard (R-CO)		Baucus (D-MO)	Brownback (R-KS)	Brown (RN-MS)
Bayh (D-IN)	Ashcroft (R-MO)		Bayh (D-IN)	Bunning (KY)	Burr (RN-NC)
Biden (D-DE)	Bennett (R-UT)		Begich (DN-AK)	Cochran (R-MI)	Chambliss (RN-GA)
Bingaman (D-NM)	Bond (R-MO)		Bennet (DN-CO)	Crapo (R-ID)	Coburn (RN-OK)
Boxer (D-CA)	Brownback (R-KS)		Bingaman (D-NM)	Grassley (R-IO)	Corker (RN-TN)
Breaux (D-LA)	Bunning (R-KY)		Boxer (D-CA)	Gregg (R-NH)	Cornyn (RN-AR)
Cleland (D-GA)	Burns (R-MO)		Brown (DN-OH)	Hutchinson (R-AR)	DeMint (RN-SC)
Conrad (D-ND)	Campbell (R-CO)		Burris (DN-IL)	Inhofe (R-OK)	Ensign (RN-NV)
Daschle (D-SD)	Cochran (R-MI)		Byrd (D-WV)	Murkowski (R-AK)	Isakson (RN-GA)
Dodd (D-CO)	Collins (R-ME)		Cantwell (DN-WA)	Roberts (R-KS)	Johanns (RN-NE)
Dorgan (D-ND)	Coverdell (R-GA)		Cardin (DN-MD)	Sessions (R-AL)	Lamar (RN-TN)
Durbin (D-IL)	Craig (R-ID)		Carper (DN-DE)	Shelby (R-AL)	LeMieux (RN-FL)
Edwards (D-NC)	Crapo (R-ID)		Casey (DN-PA)		Lieberman (I-CO)
Feingold (D-WI)	DeWine (R-OH)		Conrad (D-ND)		Risch (RN-ID)
Feinstein (D-CA)	Domenici (R-NM)		Dodd (D-NJ)		Sanders (I-VT)
Graham (D-FL)	Enzi (R-WY)		Dorgan (D-ND)		Thune (RN-SD)
Harkin (D-IA)	Fitzgerald (R-IL)		Durbin (D-IL)		Vitter (RN-LA)
Hollings (D-SC)	Frist (R-TX)		Enzi (R-WY)		Whitehouse (DN-RI)
Inouye (D-HI)	Gorton (R-WA)		Feingold (D-WI)		Wicker (RN-MI)
Johnson (D-SD)	Gramm (R-TX)		Feinstein (D-CA)		
Kennedy (D-MS)	Grams (R-MA)		Franken (DN-MA)		
Kerrey (D-NV)	Grassley (R-IA)		Gillibrand (DN-NY)		
Kerry (D-MS)	Gregg (R-NH)		Hagan (DN-NC)		
Kohl (D-WI)	Hagel (R-NE)		Harkin (D-IO)		
Landrieu (D-LA)	Hatch (R-UT)		Inouye (D-HI)		
Lautenberg (D-NJ)	Helms (R-NC)		Johnson (DN-SD)		
Leahy (D-VT)	Hutchinson (R-AR)		Kaufman (DN-DE)		

CTBT Hold-out States.

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106th Senate			111th Senate		
In favor	Against	Answered 'Present'	In favor	Against	Unknown
Levin (D-MN)	Hutchinson (R-TX)		Kerry (D-MS)		
Lieberman (D-CO)	Inhofe (R-OK)		Klobuchar (DN-MA)		
Lincoln (D-AZ)	Kyl (R-AZ)		Kohl (D-WI)		
Mikulski (D-MD)	Lott (R-MI)		Landrieu (D-LA)		
Moynihan (D-NJ)	Lugar (R-IN)		Lautenberg (D-NJ)		
Murray (D-WA)	Mack (R-FL)		Leahy (D-VT)		
Reed (D-RI)	McCain (R-AZ)		Levin (D-MN)		
Reid (D-NV)	McConnell (R-KY)		Lincoln (D-AR)		
Robb (D-VI)	Murkowski (R-AK)		McCaskill (DN-MO)		
Rockefeller IV (D-WV)	Nickles (R-OK)		Menendez (DN-NJ)		
Sarbanes (D-MD)	Roberts (R-KS)		Merkley (DN-OR)		
Schumer (D-NJ)	Roth (R-DE)		Mikulski (D-MD)		
Torricelli (D-NJ)	Santorum (R-PA)		Murray (D-DC)		
Wellstone (D-MA)	Sessions (R-AL)		Nelson (DN-FL)		
Wyden (D-OR)	Shelby (R-AL)		Nelson (DN-NE)		
1 Independent	Smith (R-NH)		Pryor (DN-AR)		
Bryan (R-NV)	Snowe (R-ME)		Reed (D-RI)		
Chafee (R-RI)	Stevens (R-AK)		Reid (D-NV)		
Jeffords (R-VT)	Thomas (R-WY)		Rockefeller (DN-WV)		
Smith (R-OR)	Thomson (R-TX)		Schumer (DN-NY)		
Specter (R-PA)	Thurmond (R-SC)		Shaheen (DN-NH)		
	Voinowich (R-OH)		Specter (DN-PA)		
	Warner (R-VA)		Stabenow (DN-MN)		
			Tester (DN-MO)		
			Udall (DN-CO)		
			Udall (DN-NM)		
			Warner (DN-VI)		
			Webb (DN-VI)		
			Wyden (D-OR)		
			McCain (R-AZ)		
			Snowe (R-ME)		
			Collins (R-ME)		
			Bennett (R-UT)		
			Hatch (R-UT)		
			Lugar (R-IN)		

CTBT Hold-out States.

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(RN-XX) or (DN-XX) - the letter “N” which appears after the party names (D-Democrats, R-Republicans) indicates that it is the first term of the particular Senator in the Senate, which means that he/she did not take part in the 1999 CTBT voting.

List of Abbreviations

ABC	Weapons of Mass Destruction (Atomic, Biological, Chemical)
BWC	Biological and Toxin Weapons Convention
CD	Conference on Disarmament
CFE	Treaty on Conventional Armed Forces in Europe
CTBT	Comprehensive Nuclear-Test-Ban Treaty
CWC	Chemical Weapons Convention
DPRK	Democratic People's Republic of Korea
EIF	Entry Into Force
FMCT	Fissile Material Cutoff Treaty
GATT	General Agreement on Tariffs and Trade
GOP	Grand Old Party (U.S. Republican Party)
IAEA	International Atomic Energy Agency
INF	Intermediate Range Nuclear Forces
IMS	International Monitoring System
ME NWFZ	Middle East Nuclear Weapons Free Zone
MESA	Middle East and South Asia
NATO	North Atlantic Treaty Organization
NGO	Non-Governmental Organization
NPT	Nuclear Non-Proliferation Treaty
PL	People's Liberation Army
PRC	People's Republic of China
PTBT	Partial Test Ban Treaty
SALT	Strategic Arms Limitation Talks
SIPRI	Stockholm International Peace Research Institute
SSP	Stockpile Stewardship Program
START	Strategic Arms Reduction Treaty
TNT	Trinitrotoluene
U.S.	United States
UN	United Nations
UNSC	United Nations Security Council

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