

## Prospects for US Ratification of the Comprehensive Test Ban Treaty, and Implications for the 2010 NPT Review Conference

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### Introduction

Entry-into-force of the Comprehensive Nuclear Test Ban Treaty (CTBT) is essential to the future of the global nonproliferation regime. A CTBT was promised as part of the deal for indefinite extension of the NPT in 1995, and that pledge was renewed at the 2000 NPT Review Conference. In his April 5, 2009 speech on disarmament, President Obama said his administration will “immediately and aggressively pursue U.S. ratification of the Comprehensive Test Ban Treaty.”<sup>2</sup> This paper reviews key points on US CTBT ratification including:

- The Obama administration’s first priority is a follow-on to the START agreement. Negotiations with the Russians over the new treaty have taken longer than the Obama administration had originally hoped. The CTBT ratification will come after START and neither will come up for U.S. ratification until mid-2010;
- Careful groundwork is needed to answer technical objections to the CTBT raised in the 1999 ratification debate by Treaty opponents, but that these obstacles are now surmountable;
- The argument will be made by American nuclear weapons advocates that the trade-off for the CTBT should be revival of the Reliable Replacement Warhead or similar programme, but that this ‘deal’ is unnecessary and should not be accepted;
- Congressional politics, and US electoral politics, mean that the optimum time for a vote ratification is likely to be before the 2010 mid-term elections, although between 2010 and 2012 Senate elections the situation will not change significantly,
- Ratification by China, or at least a firm commitment to follow U.S. ratification, would significantly enhance the chances of US ratification;
- The process should not be rushed to try to provide a boost to the 2010 NPT Review Conference as the risks of failure are too high. Rather, the process of ratification and a positive vote before 2012 should be used to give positive impetus to the Review Conferences of 2010 and 2015.

An important part of the ratification process will be to answer technical questions raised by CTBT opponents in 1999. These include verifiability of the Treaty and the ability of the United States to maintain its arsenal without testing. An important political issue is whether the US will ratify, even if

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<sup>2</sup> President Obama, Speech in Prague, April 5 2009. Available at [http://www.whitehouse.gov/the\\_press\\_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/](http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/).

other Annex 2 states<sup>3</sup> refuse to follow suit. These issues, and background politics in the Senate and in the Republican Party, will have to be overcome by the Obama administration if its drive for ratification is to be successful. The outcome of the debate will have a profound impact on the non-proliferation regime, and potentially on the 2010 and 2015 NPT Review Conferences. The sorry history of the CTBT in the US Senate means that it is vitally important that US ratification is done right, rather than hurried.<sup>4</sup>

### **Administration Priorities and a Likely Timeline**

The CTBT is clearly a priority for the Obama administration, but not its first arms control priority. The first order of business is to negotiate a START follow-on agreement. This is still the case, since the agreement to maintain verification mechanisms of START on a voluntary basis since START I expired in December. Negotiations for the START follow-on have been tough, and the necessary Senate hearings and floor action will also be challenging. A successful and strong ratification vote (perhaps with well over 70 Senators supporting START) will be a necessary precondition to an attempt to ratify the CTBT. The START vote is likely to come in the early Summer of 2010. This means that there is no realistic prospect of action on the CTBT before September 2010. The Obama administration informally told other nations, including China and Russia, that it wished to ratify the CTBT before the NPT Review Conference in May 2010, but given the delays in negotiating a new START agreement, that is now impossible.

Vice-President Biden is taking a major role in working with the Senate to get the Treaty ratified. As a former Chair of the Senate Foreign Relations Committee this makes good sense, and is also a sign of the administration's commitment to the issue. His aide Jon Wolfsthal will run Treaty work day-to-day, and is already consulting Senate offices on ratification issues. Jofi Joseph joined the State Department to run their effort.

Politically, the administration has signaled its serious intent by sending Secretary of State Hilary Clinton to participate in the CTBT Article XIV conference in New York in September 2009. She was accompanied by Under Secretary of State for Arms Control Ellen Tauscher, who held bilateral consultations with other Annex 2 countries. Secretary Clinton reiterated President Obama's intent to ratify the Treaty and added that the US would also seek "to secure ratification by others so that the treaty can enter into force."<sup>5</sup>

However, the President's legislative capital in 2009 was almost entirely devoted to healthcare reform, which has soured an already highly partisan atmosphere on Capitol Hill. At such a time, rushing CTBT

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<sup>3</sup> The CTBT will enter into force 180 days after the 44 states listed in Annex 2 of the Treaty have ratified it. These "Annex 2 states" are states that participated in the CTBT's negotiations between 1994 and 1996 and possessed nuclear power reactors or research reactors at that time.

<sup>4</sup> In 1999 the CTBT was defeated as part of a partisan attack on President Clinton. Having negotiated and signed the CTBT, President Clinton turned his attention elsewhere, and did nothing about ratification until his hand was forced by Senate Democrats (led by Senator Dorgan (D-ND) intent on bringing the Treaty to the Senate floor in 1999. Unfortunately, this meant the necessary groundwork for success had not been laid. President Clinton didn't even appoint a CTBT co-ordinator (General Shalikhshvili) until after the failed vote in 1999. Republican opponents of the Treaty had organized enough votes to defeat the Treaty even before Senator Dorgan (D-ND) launched his drive to bring the Treaty to the Senate floor. Hearings were cursory, and the floor debate truncated. Republican resentment over the tactics used to ratify the Chemical Weapons Convention in 1997 were also a significant factor in Republican opposition to the CTBT. Under the Bush administration the CTBT fared even worse. Vice-President Cheney instigated a research effort by administration lawyers to examine the legal basis for withdrawing the US signature from the CTBT. This failed since, once sent to the Senate, an administration cannot withdraw a signature from a treaty unless the Senate votes to return a treaty to the administration. Unless that happens, a treaty remains before the Senate for ratification indefinitely.

<sup>5</sup> Secretary of State Hillary Clinton, Speech to CTBTO Article XIV Conference, September 24 2009. Available at <http://www.state.gov/secretary/rm/2009a/09/129703.htm>.

ratification would risk a catastrophic failure or entail a very high political cost for success. Delaying the ratification effort until the autumn of 2010, or even into 2011, will allow the administration to complete START negotiations and ratify the treaty, and also to finish the Congressionally-mandated Nuclear Posture Review, and therefore to thoroughly prepare the ground on all technical issues concerning the future of the US arsenal before engaging the Senate.

## Technical Issues

There are two principle technical issues which even Republicans inclined to vote for the CTBT felt were inadequately answered in 1999. These concern the verifiability of the Treaty and ability of the United States to maintain its current stockpile safely without future testing. A recent high-profile Wall Street Journal article by Henry Kissinger, Sam Nunn, George Schulz and William Perry addressed some of these issues head-on. They wrote that US scientists have made “..important advances in the scientific understanding of nuclear explosions and obviated the need for underground nuclear explosive tests.”<sup>6</sup> This is likely to be influential in the Senate debate. The National Academies of Science have been mandated to prepare a report on technical issues relating to the CTBT, and work began in September 2009. Their work will be based on a 2002 report by NAS, and is likely to report in the first half of 2010 and to conclude that the technical problems raised in 1999 have been solved.

### - *Stockpile Safety and Reliability*

Opponents of the Treaty argued strongly in 1999 that it is impossible to maintain the safety and reliability of the current arsenal without explosive testing. They further argued that it may well be necessary to develop new nuclear weapons in future, and this is impossible with nuclear testing.

One factor that featured large in 1999 was that the national laboratories had relatively little experience of certifying the arsenal without testing. They now have over a decade of such experience, and no-one is arguing that the arsenal is unsafe or unreliable, or that it is likely to become so in the future. Moreover, the B61-11 (an earth-penetrating nuclear weapon adapted from the B61-7) was deployed in the 1990s without being tested, and no problems have been experienced. In addition, Sandia National Laboratory now has access to immensely greater computing power for modeling and simulation than was the case in 1999. This gives greater confidence in stockpile maintenance.<sup>7</sup> However, as Senator McConnell made clear in an April 2009 Senate speech, this argument will be central to CTBT opponents’ case:

America needs assurances that our nuclear stockpile is both reliable and safe. As our nuclear stockpile ages, the assurance becomes increasingly important. There are only two ways to ensure the safety of our nuclear stockpile: through actual tests or by investing in a new generation of warheads. At the moment, the administration is not willing to do either. When it comes to deterrence, this represents a serious dilemma. As Defense Secretary Gates has said: There is absolutely no way that we can maintain a credible deterrent and reduce the number of warheads in our stockpile without resorting [either] to testing our stockpile or pursuing a modernization program.<sup>8</sup>

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<sup>6</sup> Schulz et al, “How to Protect Our Nuclear Deterrent”, *Wall Street Journal*, January 19, 2010. Available at <http://online.wsj.com/article/SB10001424052748704152804574628344282735008.html>.

<sup>7</sup> See *The New Republic* blog, The Vine at <http://blogs.tnr.com/tnr/blogs/environmentandenergy/archive/2008/06/12/a-big-accomplishment.aspx>.

<sup>8</sup> Senator Mitch McConnell, *ibid*.

It seems that the Defense Secretary and Senator McConnell take roughly the same position. Will Secretary Gates openly oppose the President when the ratification debate comes to the Senate? In 1999 the national laboratory directors were lukewarm in their support for the CTBT, sending a clear political signal to Republicans that the administration could not rely on the unequivocal support of the labs for Treaty ratification. At the time, there were significant voices inside the labs arguing for the development of a range of new nuclear warheads for the purposes of tailored deterrence. The CTBT would have made this impossible, so they hedged their support, perhaps convinced that a future Republican President would allow the resumption of nuclear testing. This opposition significantly undermined the case for the Treaty.

It is likely that for those Republicans that can be persuaded on the merits of the argument to support the Treaty, the evidence of the past decade that the current arsenal can be maintained without testing will be sufficient. In short, the technical issues that impeded ratification in 1999 are unlikely to stand in the way at the next vote, except for political reasons.

- *Verifiability*

The debate in the Senate in 1999 centred on the ability of the International Monitoring System (IMS) to detect very low yield tests which could, despite their small size, provide militarily useful information. Senators proved very skeptical about the possibility of doing so reliably. Indeed, this is still the case. Senate minority leader Senator Mitch McConnell (R-KY) said in the Senate on April 27, 2009 that “any arms control agreement sent to the Senate must be verifiable and clearly in the national interest.”<sup>9</sup>

Scientifically, this is now a non-issue. When the DPRK conducted its nuclear test in October 2006 the yield was very low. The DPRK told China in advance that the test would be of a 4 kiloton (kt) device. The eventual yield is estimated to have been lower than 1kt, probably around the 500 to 800 ton TNT equivalent mark. Despite this, the independent geological monitors of many nations, as well as the incomplete IMS, comfortably detected a test so small that no-one was sure it had been a nuclear explosion until radioactive isotopes were later detected over the Sea of Japan.

It is likely that the data from the DPRK test, with the extra assurance that will be provided by a fully functional IMS, will be enough to convince any open-minded senator that the CTBT is fully verifiable. Experts extrapolate from current data that with the IMS fully functioning, it will be possible to detect any test of military significance. Indeed some say that a test as small as 10 tons TNT equivalent would be detectable.<sup>10</sup> Support for construction of all IMS facilities from non-nuclear weapon States due to host seismic or other verification stations would send a strong signal of international support for the Treaty to the US Senate and facilitate ratification.

### **Ratification by Other Annex 2 States**

One political issue of great significance is the potential ratification by other Annex 2 countries, those that must ratify for the Treaty to enter into force. These countries are China, DPRK, Egypt, India, Indonesia, Iran, Israel and Pakistan.

This issue can play both ways. If some of these countries, especially China, Iran and Israel, were to ratify before the United States (or even to signal that they will ratify immediately after the US acts), it

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<sup>9</sup> Senator Mitch McConnell, *Congressional Record*, April 27 2009, pp S4726-S4727.

<sup>10</sup> See the CTBTO web page on the IMS at <http://www.ctbto.org/press-centre/highlights/2009/fact-sheet-tremendous-progress-in-the-build-up-of-the-ctbts-verification-regime/>, and [http://www.globalsecuritynewswire.org/gsn/nw\\_20090422\\_2550.php](http://www.globalsecuritynewswire.org/gsn/nw_20090422_2550.php).

would give a strong impetus to US ratification. Ratification by China would counter fears of CTBT opponents that the US might be left behind in future efforts to miniaturise warheads, or to weaponise new warhead concepts. Chinese ratification would also undoubtedly have by far the most influence on the US Senate. It is thought in Washington DC that if China would ratify the CTBT, but withhold deposition of the ratification until the US ratifies, then that would give China maximum political leverage to ensure US ratification. Even a clear Chinese public statement that their ratification would follow US ratification swiftly would have an extremely positive effect. The same applies to other Annex 2 states.

There are concerning signs that India might be recalcitrant on the CTBT. K Santhanam, the most senior scientist in the Indian nuclear weapons programme, has said that the 1998 thermo-nuclear tests fizzled and that India should stay outside the CTBT, maintaining its ability to conduct future tests. This appears to be part of an effort to head off Prime Minister Manmohan Singh, who is thought to be willing to sign and ratify the Treaty. Indeed, he has recently repeated the 1999 Indian position that Indian support for the Treaty would await US and Chinese ratification.<sup>11</sup> However, India maintains a testing moratorium, and under the terms of their nuclear cooperation agreement with United States, is bound to do so or lose all benefits of that very important deal. Privately even Indian CTBT opponents recognize that ratification by the United States would result in pressure for India to reciprocate that could not likely be resisted. Pakistan also maintains a moratorium, and this and the Indian moratorium are underpinned by an MOU attached to the 1999 Lahore Declaration. The opinion has been expressed that this is as good as a mini-CTBT as it has treaty status, but in any case it has significant political value.<sup>12</sup>

Ratification by Iran and Israel is also important for different reasons. Ratification by Iran would go a long way to convince US opinion of the peaceful intentions behind the Iranian nuclear programme. Israeli ratification is thought to be important for Middle East stability, for a Middle East WMD Free Zone, and because it would help persuade Egypt to ratify. Indeed, Egypt told the Article XIV Conference on CTBT Entry-Into-Force in September 2009 that they see the NPT and the CTBT as being inextricably linked, and that it will be of “.. paramount importance to move our agenda together, to implement the 1995 Resolution on the Middle East, which will open the doors for a new horizon on the CTBT.”<sup>13</sup> The ratification of the other Annex 2 countries also matters (and Indonesia has said it will ratify as soon as the US does and is in discussions with the CTBTO about an earlier ratification), but China, Iran and Israel are thought to be the most significant three in political terms for the US ratification process.

Conversely, if there is no sign that any other Annex 2 countries will ratify in the near future then Treaty opponents will be able to argue that there is little point in the US ratifying and thereby restricting its own future options. They will also argue, as with China, that ratifying in a vacuum will leave the US exposed to future threats.

## **New Nuclear Weapons**

Finally, there is one issue that goes to the heart of the purpose of the CTBT. Will the US develop new nuclear warheads in the absence of testing? The administration has recognised the dangers of proceeding with the development of a new nuclear weapon, and terminated the RRW. One main reason

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<sup>11</sup> Siddharth Varadarajan and K.V. Prasad, “Manmohan signals return to Vajpayee line on CTBT”, *The Hindu*, Wednesday, Dec 30, 2009. Available at <http://www.hindu.com/2009/12/30/stories/2009123057570100.htm>.

<sup>12</sup> Prof. Paolo Cotta-Ramusino, Sandra Ionno Butcher, Report of Pugwash Consultations on CTBT Entry Into Force, January 2010.

<sup>13</sup> Statement of Egypt at the Conference on Facilitating Entry-into-Force of the CTBT, UN, New York, 25 September 2009. Available at [www.ctbto.org/fileadmin/user\\_upload/Art.../250909\\_Egypt.pdf](http://www.ctbto.org/fileadmin/user_upload/Art.../250909_Egypt.pdf).

for this was that it "... is not consistent with Presidential commitments to move towards a nuclear-free world."<sup>14</sup>

Certainly India, which ties the purpose of the CTBT firmly to nuclear disarmament, would see that as negating its worth. John Holdren, the President's Science Advisor, told *AAAS Science Insider* that:

"My personal view is that designing a nuclear warhead and deploying it would throw out a good part of the baby with the bathwater. It negates a substantial advantage to ratifying the test ban Treaty because it would send a message to the world that the United States still thinks that it can and should design and deploy new warheads when circumstances require it. If that's the case, what have you accomplished with CTBT?"<sup>15</sup>

However, if the administration attempts to rush CTBT ratification, they may be forced to try to buy some Senate votes with a revived Reliable Replacement Warhead (RRW) programme. This argument is ultimately political, as those that support the development of new nuclear weapons generally oppose CTBT ratification. They also sometimes argue that continued warhead development and nuclear testing are needed to maintain the skills base within the national laboratories, and to continue to attract the best brains to work there. All these arguments are specious (there is no evidence that the quality of science has dropped at the national laboratories, and indeed Dick Garwin and others say it is better than it once was), and there is no evidence at the moment that such a move would attract the extra votes needed for ratification. No Republican senator has said they would actually support the CTBT if the RRW programme returns. There is, on the other hand, good evidence that it would alienate India sufficiently to make entry-into-force unlikely in the foreseeable future. A concession along these lines would make little sense in terms of a Senate vote – as well as damaging the NPT review process.

### **The Current Political Situation in the Senate**

As with all votes of this kind, domestic politics will play a large role in CTBT ratification. The Democrats hold 59 seats (including independents who caucus with them). The Republicans hold 41 seats since Scott Brown's dramatic capture of the Massachusetts seat vacated by Ted Kennedy's death. This is a major difference from 1999, when Republicans held a narrow majority.

After mid-term elections, the political balance is likely to remain roughly the same since 18 Republicans are up for re-election and only 17 Democrats. Moreover the Democrats represent broadly 'blue' states, while several Republicans are defending more marginal seats. Also, several Republican Senators are retiring, there are five currently Republican seats that will be 'open' in 2010. However, this will only marginally change Senate dynamics on the CTBT as these gains are likely to be at the expense of more moderate Republicans.

The political atmosphere is not conducive to bipartisan cooperation. In 1999 the Republican caucus contained a significant moderate minority, which has been winnowed almost to nothing as the party has been forced back into its heartlands. The remaining Republicans are mostly ideologically sympathetic to the John Bolton 'arms control is dead' school of thinking. Another major shift in the political backdrop is the partisan atmosphere on Capitol Hill. Since President Obama took office, Republicans have opposed Democrats solidly on all major votes, seemingly as an attempt to build morale in a badly depleted caucus. This is likely to hold good for the CTBT unless serious efforts are made to reach across the aisle. So the best window of opportunity for ratifying the CTBT is between

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<sup>14</sup> Terminations, Reductions and Savings, p55. Budget documentation released to Congress in May 2009.

<sup>15</sup> *ScienceInsider* blog accessed at <http://blogs.sciencemag.org/scienceinsider/2009/04/in-full-intervi.html> on April 14, 2009.

now and the end of 2012. After that the Republicans will start to regain seats, and the balance will shift against the Treaty.

US NGOs began working with the Obama administration to lay the groundwork for CTBT ratification even before Obama's inauguration. The feeling is that this will be a much more difficult process than people had first imagined. While it can be more or less assumed that all Democrat senators will vote for the Treaty, it is very difficult to see where the seven necessary Republican votes will come from. Senator Kerry (D-MA) as chair of the Senate Foreign Relations Committee has indicated that he is willing to hold a long series of detailed hearings on the Treaty. These would answer all the technical questions raised during the 1999 Senate debate. However, he doesn't want to hold the hearings unless he has the support of the ranking Republican on the committee, Senator Richard Lugar (R-IN). It is not clear that support is yet there, Lugar himself recently said that the administration needs to build its case and should not move forward on CTBT ratification until later in 2010. Senate Minority Leader Mitch McConnell (R-KY) has staked out a Republican position in opposition to ratification.

Most of the Republicans who have joined the Senate since 1999 are on the right-wing of the party, and are likely to vote reflexively against ratification. Conservative Republicans are being organized by Senator Jon Kyl (R-AZ), an outspoken opponent of arms control under any circumstances. He has recently said that all the 1999 objections to the Treaty still pertain, and that he will fight hard to prevent ratification. However, there are several Republican senators who were members in 1999, and are thought to be sympathetic to ratification in some ways. They all signed a letter asking for a delay in the ratification vote in 1999, after it had become clear that the Treaty would fail, thereby hoping to avoid Senate action to actually defeat the CTBT. They are: Bennett (UT) (sensitive to testing issues because of high incidences of cancer and other conditions for Utah citizens from atmospheric testing); Brownback (KS); Collins (ME) (has voted against new nuclear weapons during the Bush administration, and her state leans Democrat.); Grassley (IA); Gregg (NH) retiring and immune to pressure; Hatch (UT) (sensitive to testing issues for the same reason as Bennett); Lugar (IN) (has built his international reputation on non-proliferation issues, and is unlikely to stand in the way of a well presented case for ratification); McCain (AZ); Sessions (AL) (although his position has hardened and he is thought to oppose the Treaty); Snowe (Her state leans Democrat)(ME); Voinovich (OH) – (retiring, therefore immune to pressure).

Of these, Collins, Snowe, and Voinovich are the most likely to support the Treaty. Senator McCain has said he no longer opposes the Treaty, but has not offered support. There is a concern that independent Senator Joe Lieberman might demand a high price for his vote, as although he caucuses with the Democrats he has become increasingly aligned with Republican hawks on national security issues. The final few necessary votes after that will be hard to get. The President will need to invest significant time and effort in persuading hold-out Republicans to vote for ratification. That said, it is widely thought that if McCain and Lugar support the Treaty it will pass, if not, it will fail. At the present time, their support cannot be guaranteed.

### **The CTBT in the NPT Review Process**

There has long been a strong relationship between a healthy NPT regime and the CTBT. The extension of the NPT in 1995 was, in part, conditioned on the Nuclear Weapons States agreeing to conclude a CTBT, which happened in 1996. Entry into force of the CTBT continues to be a main disarmament and non-proliferation priority for many NPT States. At the 2009 NPT PrepCom working papers were introduced by the New Agenda Coalition (NAC), Japan, the 'Vienna Group' of ten nations, and the EU calling for CTBT entry-into-force. Many nations also emphasize the need for testing moratoria currently in force to be maintained until EIF is achieved. The NAC recognized the recent reaffirmation

of these goals by the United States and China. While the CTBT is important in the NPT review process, its ratification by the US or EIF are far from the only factors in a successful conclusion to the Review process in 2010. A strong statement of intent from the US to ratify quickly is likely to be enough in 2010 as most NPT members are well aware of the political difficulties that President Obama will face in persuading the Senate to support the Treaty.

## **Conclusion**

It is imperative that US CTBT ratification vote is well prepared. On the last vote, the Treaty failed to achieve a majority in the Senate, let alone the 67 votes necessary for ratification. This cannot be allowed to happen again. If the CTBT falls on the next vote in the US Senate, it will be dead. In order to avoid this, its supporters will need to build an unassailable technical and political case in support of ratification.

The CTBT will not be ratified by the time of the 2010 NPT Review Conference. There is a good possibility that significant preparations will be underway, and even that some hearings may have begun (or be about to begin) in the US Senate. It makes little sense to pressure the Obama administration to move any quicker, since laying the necessary groundwork will take considerable time, and the consequences of failure would be so grave. In 2010 NPT States Parties should welcome the US priority on maintenance of the START provisions, and negotiations on follow-on deep cuts. They should also welcome the commitment of the Obama administration to CTBT ratification. These moves should help improve the atmosphere for 2010. And a successful 2010 Review Conference will help improve support for arms control, non-proliferation and disarmament in the US – making CTBT ratification more likely.

The Obama administration should not move too far too fast, but should rather work assiduously to ensure that ratification of the CTBT can be successfully achieved in the US Senate before 2012 elections. The prospects for that, if the technical and political groundwork is well done, are good. That process, and then ratification, can impact positively on both the 2010 and 2015 NPT Review Conferences.