



# Improving Nuclear Security Governance in the Asia–Pacific

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## Summary

*Compared with nuclear safeguards, international arrangements for nuclear security are weak. The relevant treaties are far from universal, there are no binding international standards, no international inspections, and no international reporting and accountability mechanisms. Pending global consensus on meeting these shortcomings, many practical steps could usefully be taken on a regional level to increase participation in treaties, provide necessary assurance, extend peer review and generally strengthen cooperation. Informal mechanisms may have a significant role to play in encouraging and facilitating this action.*

## Shortcomings in nuclear security governance

1. The strong international interest in nuclear security is reflected by the preparedness of heads of government to participate in the Nuclear Security Summit process.<sup>1</sup> The saying for nuclear safety – that “an accident anywhere is an accident everywhere” – is also true of nuclear security. Whether directly or indirectly, a major nuclear security failure anywhere has the potential to impact everywhere. Every state benefits from assurance that nuclear security in other states is implemented at a high standard. Yet today there is a substantial lack of transparency in how well states are performing in nuclear security.

2. Compared with the system of safeguards applied by the International Atomic Energy Agency (IAEA), international governance arrangements for nuclear security are weak. Participation in the relevant treaties is far from universal, there are no binding international standards, no international inspections, and no international reporting and accountability mechanisms. Currently the IAEA’s authority is limited to making recommendations and providing advice. There is consensus amongst experts that peer reviews and sharing of best practices are essential, but states are not yet prepared to agree to any mandatory measures, and action in this regard is entirely voluntary.

3. Reaching global consensus on addressing these shortcomings is likely to be difficult and time-consuming. In the meantime, there are some practical steps that can be taken in the near term. It should be easier to develop solutions on a regional basis, where a smaller number of states are involved and common interests are more apparent. Pending agreement on formal arrangements, practical steps may be possible through informal arrangements.

4. Given that Asia is the largest growth area for nuclear power, the Asia–Pacific region should be considered a priority area for efforts to develop regional arrangements of this kind.

## What Needs to be Done

### *Participation in Treaties*

5. The international nuclear security conventions are far from universal. The principal convention, the 1980 Convention on the Physical Protection of Nuclear Material (CPPNM), ap-

1. Nuclear Security Summits were held in Washington in 2010 and Seoul in 2012, and preparations are under way for a further summit in the Netherlands in 2014.

plies primarily to protection of nuclear material in international transport. The CPPNM has 148 parties, a sizeable number but well short of universality.

6. The 2005 Amendment of the CPPNM, which will extend the CPPNM's application to protection of nuclear material in domestic use, as well as protection of nuclear facilities against sabotage, is not yet in force. Today, almost eight years after the Amendment was opened for signature, little over two-thirds the number of ratifications required for its entry into force have been obtained (68 of the required 99)<sup>2</sup> – a poor reflection on the attitude of many states towards their international responsibilities.

7. The 2005 International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT) has 86 parties, a long way short of universality.

8. States that remain outside these conventions should make it a priority to join. Those that are already parties should do all they can to encourage others to join, and where necessary should provide support to this end – for example technical and legal advice, training and capacity-building, and so on.

#### *Providing Assurance to Other States*

9. The importance of international assurance and accountability needs to be recognised. International assurances involve activities undertaken, information shared or measures implemented that can build the confidence of others (other governments, international organisations, the public, etc.) about the effectiveness of nuclear security in a given state.

10. International assurance can be provided through measures such as providing information on the state's regulatory framework, participation in external review mechanisms, and engagement in international cooperation, including training, certification and sharing best practice.<sup>3</sup> A number of activities are outlined in the following sections of this paper that would benefit participating states and at the same time would contribute to assurance.

2. As at 22 May 2013 (most recent status report issued by the IAEA) the CPPNM Amendment had 68 parties. The Amendment will enter into force when ratified or accepted by two-thirds of the parties to the CPPNM. Based on the CPPNM membership of 148, entry-into-force of the Amendment requires 99 ratifications/acceptances.

3. Discussion papers elaborating the concept of international assurances can be found on the Nuclear Threat Initiative (NTI) website, [www.nti.org](http://www.nti.org).

11. One essential component of assurance is the availability of relevant information. For example, states could derive a certain level of assurance about the nuclear security performance of other states through reporting that covers matters such as:

- Is the particular state a party to the key conventions?
- Does the state apply the current version of the IAEA's nuclear security recommendations?
- Does the state publish details of its national regulatory regime, and sufficient information to gain an understanding of how its nuclear security system works in practice?
- Does the state invite external reviews, and apply the recommendations of these?
- Is the state active in other relevant forms of international engagement, for example cooperation on development of best practice, training and capacity-building, development of security cultures, etc?

12. The problem currently is that not all of this information is readily available, and there is no established mechanism for making such information available. More fundamentally, there is no requirement for states to take any of these actions. States willing to do so could work together to develop a common format for national reports, covering matters such as those outlined above. The reports could be published by each state, or they could be submitted to and published by the IAEA in its role as depositary for the CPPNM.<sup>4</sup> A further approach would be publication of relevant sections of national reports made pursuant to UN Security Council Resolution 1540.

#### *External Review*

13. It is important to appreciate that external review is not simply about checking on compliance, but can be vital in identifying overlooked vulnerabilities. External review not only provides assurance about standards in other states, but can reassure governments and the public that their own national performance reflects best practice.

4. Article 14 of the CPPNM requires each party to inform the IAEA as depositary of its laws and regulations which give effect to the Convention, and for the IAEA to communicate such information periodically to all parties. Article 14 could be used for reporting on the matters discussed here, but to date there has been no use of this provision.

14. Today the idea of international nuclear security inspections seems anathema to many national officials. For the future, states should seriously consider how an international inspection process could be developed that would operate to mutual benefit. For the present, however, international peer review may be the most that can be achieved.

15. Unlike in nuclear safety (see below), there is no form of mandated peer review process. There are two peer review mechanisms – provided by the IAEA and more recently by the non-government World Institute for Nuclear Security (WINS). Both are entirely voluntary, as to whether the state invites review and whether it follows review recommendations. The drawback with these voluntary mechanisms is that they are only taken up by the willing, and not necessarily by those who may be in greatest need of assistance and support.

16. Peer review is a powerful mechanism for ensuring good security performance. Peer review should be established as a regular process for all states, with each state committed to inviting peer reviews commensurate with the nature and scale of its nuclear activities.

17. The need to avoid compromising security should not be used as an excuse for avoiding external review. The managed access concept is well established, and governments can readily establish appropriate procedures. It is notable that the members of the World Association of Nuclear Operators (WANO) have endorsed mandatory peer review for power reactor safety. It is to be hoped that the members of WINS, which in many cases are also members of WANO, will adopt mandatory peer review for nuclear security. In addition, states should make good use of the peer review mechanisms made available by the IAEA.

18. To the extent compatible with protecting sensitive information, the peer review process should be transparent, with states reporting on reviews undertaken and whether recommendations are followed. Transparency would help to ensure that reviews are taken seriously. Transparency would also help identify where international cooperation should be focused, in areas such as training and capacity-building.

19. Another potential review process is through regular conferences under the CPPNM. The Convention on Nuclear Safety requires each party to submit a report on national implementation for review by regular confer-

ences of the parties. These are held every three years. By contrast the CPPNM does not even have regular meetings of the parties.

20. The CPPNM provides<sup>5</sup> that the IAEA shall convene a review conference if requested by a majority of parties. The interval between conferences is to be not less than five years. CPPNM parties should consider establishing regular CPPNM conferences similar to those under the Convention on Nuclear Safety, that is to review national implementation reports – it is not clear from the wording of the Convention<sup>6</sup> whether regular conferences could be held on a standing basis or a separate request would be required for each conference. Also the five year minimum interval might be considered too long, in which case the Convention would require amendment. Initially, interested parties might meet informally, perhaps through the auspices of the IAEA, to consider these matters.

#### *Strengthened Cooperation*

21. International cooperation and support, including sharing of best practice, are particularly important for nuclear security. A state cannot operate effectively in isolation, it needs to look beyond the domestic, to understand international practice. As a cross-check for the state as a whole, for national authorities and operators alike, international engagement is essential. Without substantial international engagement those involved in nuclear activities are not in a position to know what best practice is and whether they are acting consistently with it.

22. One objective is to ensure optimal targeting of cooperation and support, which requires a level of information-sharing to help identify needs. This points to the need for an international reporting mechanism, discussed above.

23. States should work together on collaborative programs for promoting best practice, sharing of information and experience, training and capacity-building, and so on. These programs could be pursued through bilateral and regional arrangements, the IAEA, and WINS. Much of this is happening already, but largely on an ad hoc basis. More permanent arrange-

5. CPPNM Article 20.

6. Convention on Nuclear Safety Article 16.

ments could be developed, for example through existing or new regional networks.

### A Regional Approach

24. Pending the achievement of global consensus on strengthening the international governance system for nuclear security, consideration could be given to regionally-based approaches. Regional solutions could contribute towards reaching global consensus by demonstrating that stronger governance actually benefits national interests and can be achieved without detriment to these interests.

25. The Asia-Pacific seems well placed to take the lead in the development of a regional approach on these issues, for two reasons: (a) the region is the largest growth area for nuclear power, including in several prospective newcomer states; and (b) governments and publics in the region are increasingly concerned to ensure that nuclear programs meet the highest standards security (and safety), both in their own and neighbouring states.

26. The need for regional collaboration has been emphasised by the Asia-Pacific Economic Cooperation (APEC) forum, for one. The APEC Energy Ministerial Meeting in St Petersburg on 24–25 June 2012 recognised the importance of safe and secure uses of peaceful nuclear energy, and called on economies with nuclear power programs to share expertise, knowledge and best practices at the request of economies interested in developing such programs. Energy Ministers instructed APEC's Energy Working Group to prepare a list of measures and recommendations for organising regional cooperation in the peaceful use of nuclear energy.

27. Each of the necessary steps outlined above can be significantly advanced through regional coordination and collaboration, both formal and informal, along the following lines.

28. *Participation in treaties.* A number of Asian states, including some with significant nuclear programs, have yet to join the key nuclear security conventions.

29. Especially noteworthy is the 2005 CPPNM Amendment, where ratifications by Asian states are not only important in their own right but could help to bring the Amendment into force. States that have not joined the CPPNM include Malaysia, Thailand, and the Democratic People's Republic of Korea (DPRK). Those that have not ratified or acceded to the 2005

Amendment include Bangladesh, Japan, Malaysia, Pakistan, Philippines, the Republic of Korea (ROK – host of the 2012 Nuclear Security Summit), Thailand, and the DPRK.

30. States not party to ICSANT include Malaysia, Philippines, Singapore, the ROK and Thailand, which have all signed but not yet ratified, and Indonesia, Pakistan, Vietnam, and the DPRK.

31. Encouragement and support for further states to join these conventions should be coordinated on a regional basis. A goal could be set to achieve full regional membership by a certain date.

32. *Providing assurance.* A number of activities can contribute to international assurance, including external review and strengthened cooperation. On informational aspects of assurance, one activity could be coordination on a regional basis of a common format for national reports and the public release of these reports.

33. *External review.* The peer review process could be strengthened, to the mutual benefit of all in the region, through a commitment by governments – encouraged and coordinated through regional consultation and collaboration – to seek more regular and in-depth peer review, and to implement peer review recommendations. As another action under this heading, regional states could collaborate on building support for regular CPPNM review conferences.

34. *Strengthened cooperation.* Collaborative programs can be developed and implemented through regional networks and other mechanisms.

35. How might regional initiatives in these areas be developed, promoted and coordinated? A number of organisations and networks already exist, through which specific actions can be coordinated, for example the Forum for Nuclear Cooperation in Asia (FNCA) and the Asia-Pacific Safeguards Network. A comprehensive program along the lines discussed here will require engagement of high-level policy-makers as well as technical agencies, and will also require sustained diplomatic activity. Given APEC's broad regional representation, and the fact that APEC Energy Ministers are seized of the need for regional collaboration, APEC may be an important forum for securing support at the political level.

## **A Role for Informal Mechanisms**

36. In circumstances where governments are yet to be persuaded to take the initiative, there can be a valuable role for informal mechanisms in facilitating cooperation, information-sharing and informal consultations amongst nuclear security authorities and practitioners. Such informal actions can make an important contribution to building wider awareness on nuclear security issues, preparing the ground for the national decisions required to achieve shared regional and global objectives.

37. Such informal mechanisms could involve either non-governmental organisations (NGOs) like WINS, or certain associations of government authorities and officials such as the Asia-Pacific Safeguards Network (APSN) which are established and operate informally, i.e. with participation on a professional or expert basis, not requiring commitment to official national policy positions.

38. In the Asia-Pacific region there is an obvious role for APSN, but the members of APSN have yet to so decide. Currently it has an informal working group on the synergies between safeguards and nuclear security.

39. The principal NGO working in this field is WINS. While WINS is a global rather than regionally-based organisation, it has many members from the Asia-Pacific region and no doubt

could develop a regionally-focused program of activities if there was sufficient demand for this.

40. Other non-governmental entities that could have an important role in this context are the various training centres and centres of excellence for nuclear security that have been or are being established in the region.

41. APSN and relevant NGOs could be active in all of the areas outlined above, viz.:

(a) facilitating participation in treaties through information-sharing, and identifying needs and opportunities for capacity-building and support;

(b) facilitating assurance arrangements, for example through activities as outlined in (c) and (d) and through consultation on information-sharing including a common format for national reporting;

(c) facilitating external review, for example through information-sharing and coordination on requesting of peer reviews by the IAEA and WINS, and through exploration of the establishment of CPPNM review conferences; and

(d) facilitating regional cooperation, including arrangements for sharing of best practices.

### The Author

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### APLN and CNND

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