

Integrated safeguards involve two distinct approaches. The first involves decreasing reliance on traditional labour-intensive OSIs through increased use of remote sensing devices and automated systems, as well as by refining verification modalities and techniques. The second seeks to 'customise' verification for individual states by identifying redundancies and consolidating and rationalising measures, thereby reducing the verification burden for both the state and the IAEA. This includes minimising, wherever possible, the effort expended on verifying previously verified material.<sup>16</sup> For instance, the Agency has decided to reduce the frequency of inspection of Japan's light-water nuclear power reactors from quarterly to annually. Integrated safeguards will only be applied to states that have both a full-scope safeguards agreement and an Additional Protocol, since both are needed before the Agency can identify potential verification synergies, and which annually fulfil other conditions.

### **Progress and problems in implementing strengthened safeguards**

After a decade of efforts, the record of strengthened safeguards is mixed. Enhanced safeguards that fall under the IAEA's existing authority have only slowly supplemented classical safeguards. Progress has also been slow in terms of the negotiation, signing, ratification and entry into force of Additional Protocols. As of August 2004, a decade after '93+2' began, only 90 Additional Protocols had been approved by the Board of Governors, only 84 had been signed and only 59 had been brought into force.<sup>17</sup> Integrated safeguards have proceeded even more slowly: as of June 2004 they were being implemented in only four countries: Australia, Indonesia, Japan and Norway,<sup>18</sup> although the Agency expects to begin implementing them in the near future in Canada, Hungary, Poland, Slovenia and Uzbekistan.

Among the key NPT states parties that do not yet have Additional Protocols in force are two NWS, Russia and the United States, which have signed but not yet ratified (the US Senate approved ratification in March 2004, but ratification is awaiting the passage of national implementation legislation). Iraq and North Korea, which have been found in non-compliance with both the NPT and their nuclear safeguards agreements, have not signed an Additional Protocol. Iran and Libya have now done so, with the former pledging to act as if the agreement were already in force.

The failure of particular states to adopt strengthened safeguards does not necessarily indicate an intent to acquire nuclear weapons. It may simply result from preoccupation with other priorities, legislative or other technical difficulties, political or bureaucratic indifference or incompetence in the state concerned. Some hold-outs, such as Brazil, that are in full compliance with their existing obligations, resent being pressed to accept increased verification when other countries retain nuclear weapons, despite being bound under Article VI of the NPT to work towards their elimination, or when others have attempted to acquire nuclear weapon capabilities under cover of safeguards.

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<sup>16</sup> Scope for the harmonisation of safeguards in particular cases will depend on factors like the state's nuclear fuel cycle, the relationship between nuclear facilities, the effectiveness of the state's accounting and control system for nuclear materials and the IAEA's ability to conduct unannounced inspections successfully. See 'Strengthening the effectiveness and improving the efficiency of the safeguards system and application of the Model Additional Protocol', IAEA document GC(45)/23, 17 August 2001, p. 6.

<sup>17</sup> See [www.iaea.org/worldatom/programmes/safeguards/sg.protocol.html](http://www.iaea.org/worldatom/programmes/safeguards/sg.protocol.html).

<sup>18</sup> [Http://www.iaea.org/Publications/Reports/Anrep2003/safeguards.pdf](http://www.iaea.org/Publications/Reports/Anrep2003/safeguards.pdf) and <http://www.iaea.or.at/NewsCenter/Statements/2004/ebsp2004n003.html>.