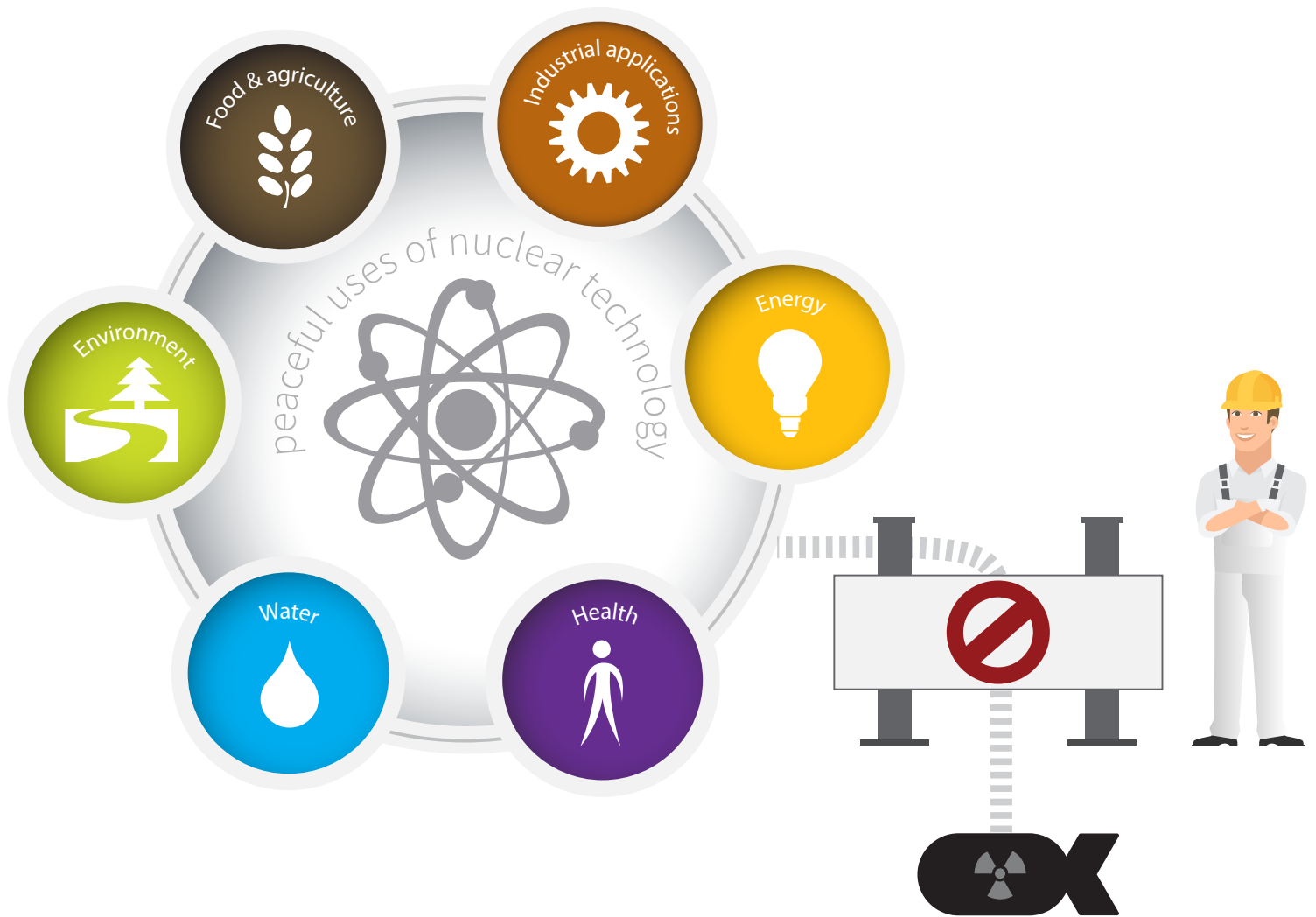


IAEA safeguards: serving



Through safeguards, the IAEA provides credible assurances that States are honouring their international obligations to use nuclear material and technology only for peaceful purposes.

(Infographic: R.Kenn/IAEA)

nuclear non-proliferation

The objective of IAEA safeguards is to deter the proliferation of nuclear weapons through the early detection of the diversion of nuclear material or the misuse of nuclear technology and by providing credible assurance to the international community that States are honouring their safeguards obligations to use nuclear material and other nuclear-related items subject to safeguards only for peaceful purposes.

The number of nuclear facilities and the use of nuclear material continue to grow. With new nuclear power reactors under construction and a steady growth in the use of nuclear science and technology, the amount of material and number of facilities under IAEA safeguards is steadily increasing. In 2015, the IAEA safeguarded 1286 nuclear facilities and locations outside facilities, such as universities and industrial sites. IAEA inspectors carried out 2118 inspections in the field.

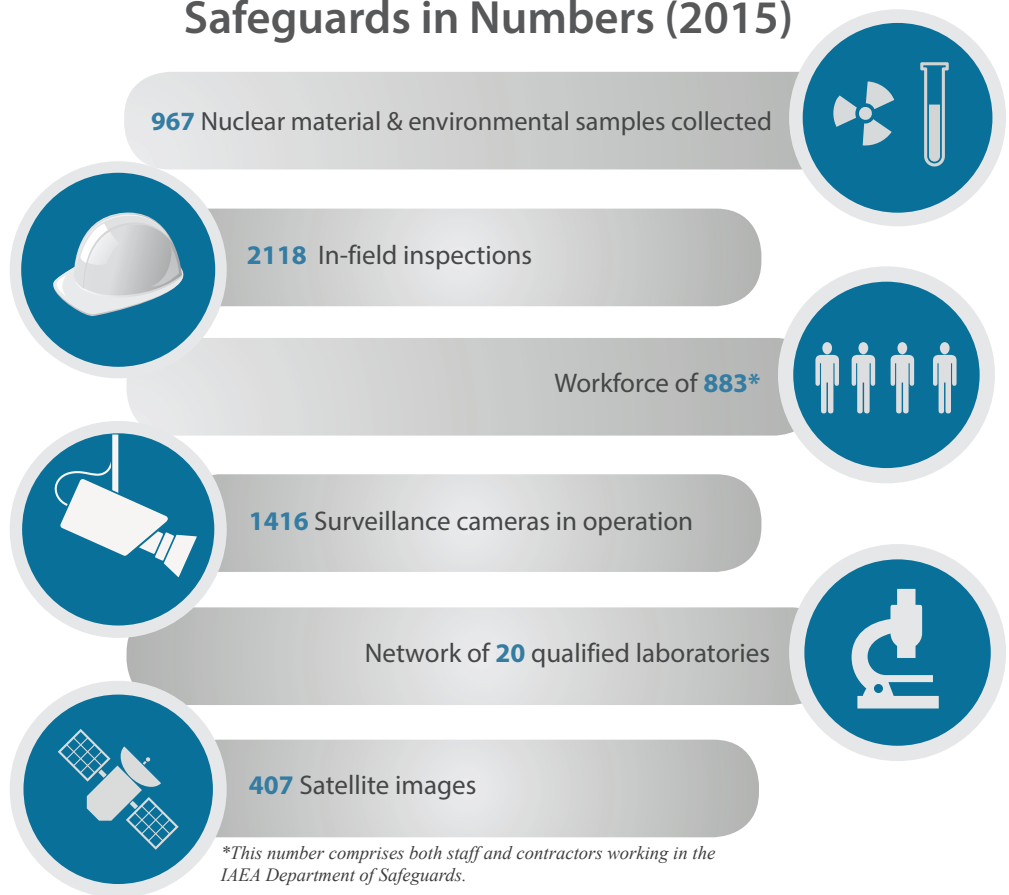
This article provides an overview of the legal framework for IAEA safeguards, their implementation and the safeguards conclusions the IAEA draws.

The web of safeguards agreements

The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) requires non-nuclear-weapon States (NNWSs) party to the Treaty to enter into legally binding agreements with the IAEA, known as comprehensive safeguards agreements (CSAs). Like the NPT, regional nuclear-weapon-free zone treaties also require their States Parties to conclude CSAs with the IAEA. Under a CSA, the State undertakes to accept IAEA safeguards on all nuclear material in all peaceful activities in the State, and the IAEA applies safeguards to verify that the nuclear material is not diverted to nuclear weapons or other nuclear explosive devices.

Under the NPT, there are also five nuclear-weapon States (NWSs) — China, France, Russia, the United Kingdom and the United States of America — each of which has entered into ‘voluntary offer agreements’ (VOAs) with the IAEA. Under a VOA, the IAEA applies safeguards to nuclear material in facilities that the NWS has ‘offered’ for

Safeguards in Numbers (2015)



safeguards and that have been selected by the IAEA for this purpose.

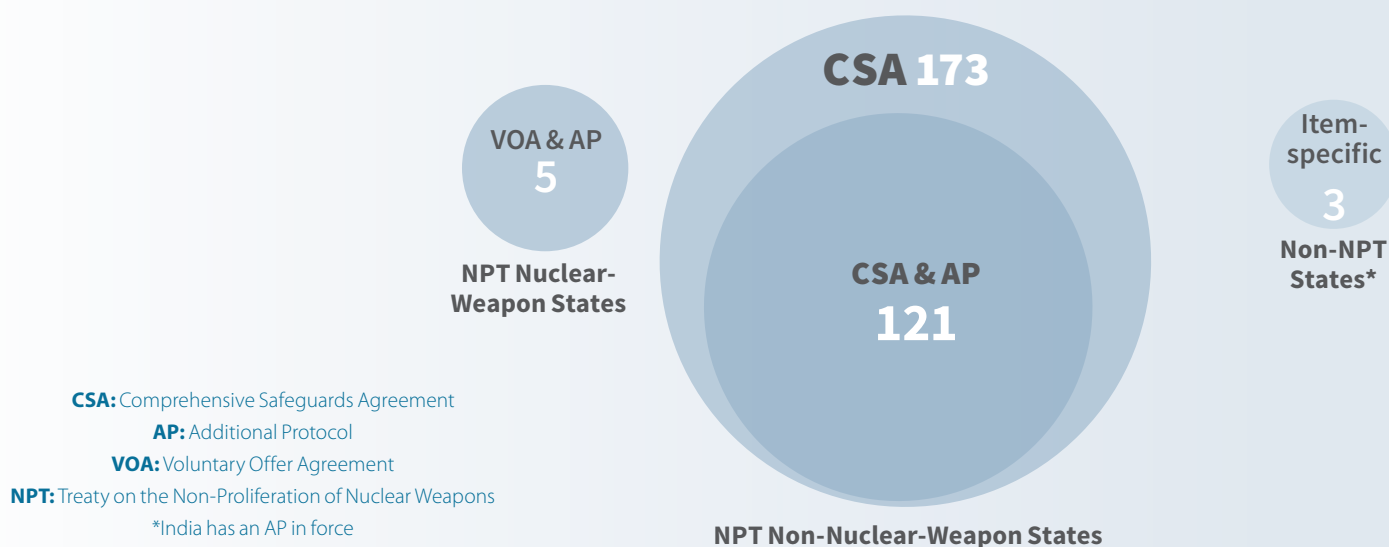
A third type of safeguards agreement is known as an ‘item-specific safeguards agreement’, under which the IAEA applies safeguards to nuclear material, facilities and other items specified in the agreement. Item-specific safeguards agreements are currently implemented by the IAEA in three States, which are not party to the NPT — India, Israel and Pakistan.

The vast majority of States in which IAEA safeguards are applied are NNWSs party to the NPT. For these States, safeguards are applied under their CSAs. In 2015, 174 NNWSs had a CSA in force with the IAEA. In 2015, 12 States Parties to the NPT had yet to bring into force CSAs with the IAEA as required under the Treaty (see illustration on page 6).

Among States with a CSA in force, 121 also have in force additional protocols to their CSAs. An additional protocol grants

Safeguards Agreements Implemented

(per State, as of December 2015)



the IAEA broader access to information and locations in a State, increasing the IAEA's ability to verify the peaceful use of all nuclear material in that State. An additional protocol may be concluded for all types of safeguards agreements.

Implementing safeguards

Safeguards implementation, based on safeguards agreements, is a continuing process involving four steps:

1. Collection and evaluation of safeguards relevant information about a State to verify its consistency with the State's declarations about its nuclear programme.
2. Development of a State-level safeguards approach consisting of establishing key objectives for identifying plausible paths through which nuclear material suitable for use in a nuclear weapon or a nuclear explosive device could be acquired and selecting applicable safeguards measures for attaining such objectives.
3. Planning, conducting and evaluating safeguards activities both in the field and at IAEA Headquarters through an annual implementation plan.
4. Drawing a safeguards conclusion for each State in which the IAEA has implemented safeguards.

While demands on IAEA safeguards are growing and becoming more complex, the Agency's budget for safeguards implementation remains largely static. Against this background, it is essential that safeguards implementation be

cost-effective, productive and efficient, without compromising the credibility and quality of safeguards conclusions. Use of modern technology, smart and efficient work at headquarters and in the field, and increasing support and cooperation from States in safeguards implementation are three avenues through which the IAEA aims to maintain and strengthen the effectiveness of safeguards.

Safeguards conclusions

The IAEA draws safeguards conclusions annually for each State for which safeguards are applied. The conclusions are based on the IAEA's independent verification and findings, and are presented every year to the IAEA's Board of Governors in the Safeguards Implementation Report.

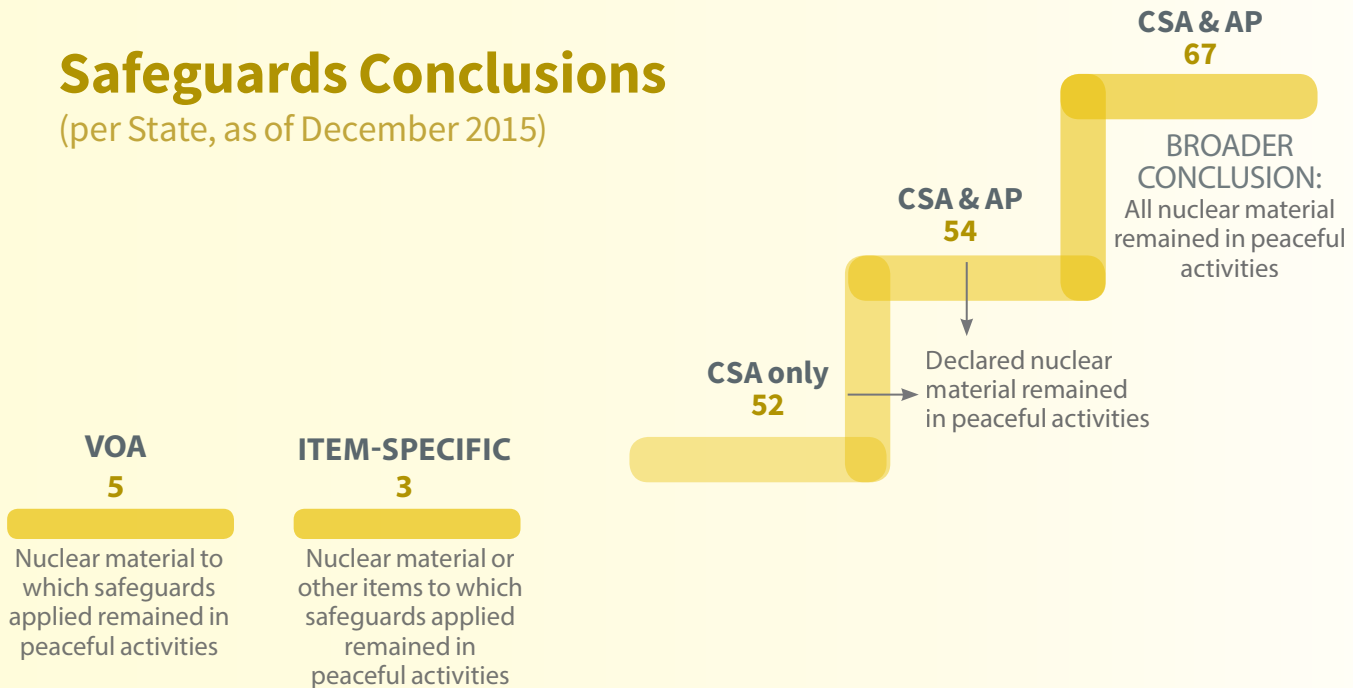
The type of conclusion that the IAEA is able to reach with respect to a State varies according to the type of safeguards agreement the State has in place with the IAEA, which specifies the State's undertaking and the IAEA's rights and obligations, including the level of access to nuclear material and information (see illustration on page 7).

States with both CSA and AP in force

In 2015, for 67 of the 121 States with both a CSA and an AP in force, and for Taiwan, China, the IAEA found no indication of the diversion of declared nuclear material from peaceful nuclear activities and no indication of undeclared nuclear material or activities in the State as a whole and concluded that all nuclear material in those States remained

Safeguards Conclusions

(per State, as of December 2015)



in peaceful activities. This is referred to as the ‘broader conclusion’. It is typically after a number of years of verification activities under the CSA and the AP that the IAEA is able to reach such a broader conclusion with respect to a State.

In States for which the IAEA has drawn a broader conclusion, the IAEA implements ‘integrated safeguards’ which leads to an optimization of verification efforts and, where possible, a reduction of in-field inspection efforts. Such cooperative and mutually trusting relationships can help to lower inspection costs, while also resulting in less interference with the operation of nuclear facilities. Of the 67 States for which a broader conclusion had been reached in 2015, 54 and Taiwan, China were already under integrated safeguards.

For the 54 CSA States that have an AP in force but for which no broader conclusion has yet been reached, the IAEA found no indication of the diversion of declared nuclear material from peaceful nuclear activities, while evaluations regarding the absence of undeclared nuclear material and activities remained ongoing. For these States, the IAEA drew the conclusion that declared nuclear material remained in peaceful activities.

States with CSA but no AP

As of the end of 2015 there were 52 States with a CSA, but no AP in force. For these States, the IAEA found no indication of the diversion of declared nuclear material from peaceful nuclear activities. This is because it is only for States with both a CSA and an AP in force

that the IAEA has sufficient tools for broader access to information and locations to provide credible assurances that all nuclear material remained in peaceful activities.

States Parties to the NPT with no CSA

In 2015, for the 12 States Parties to the NPT that had yet to bring into force CSAs the IAEA did not apply safeguards and could not draw any safeguards conclusions.

NWSs and States with item-specific safeguards agreement

For the five NWSs, in 2015, the IAEA concluded that nuclear material to which safeguards were applied in selected facilities remained in peaceful use or had been withdrawn from safeguards as provided for in the agreements.

For the three States with item-specific safeguards agreement, the IAEA found no indication of the diversion of nuclear material or of the misuse of the facilities or other items to which safeguards had been applied and, on this basis, concluded that such items remained in peaceful activities.

Note: The designations employed and the presentation of material in this document, including the numbers cited, do not imply the expression of any opinion whatsoever on the part of the Agency or its Member States concerning the legal status of any country or territory or of its authorities, or concerning the delimitation of its frontiers. The referenced number of States Parties to the NPT is based on the number of instruments of ratification, accession or succession that have been deposited.