

# Drawing Safeguards Conclusions

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**IAEA**

International Atomic Energy Agency

# Nuclear Non-Proliferation Treaty

- Article III.1
  - Each non-nuclear-weapon State Party to the Treaty undertakes to accept safeguards, as set forth in an agreement to be negotiated and concluded with the IAEA in accordance with the Statute of the IAEA and the Agency's safeguards system, for the exclusive purpose of verification of the fulfillment of its obligations assumed under this Treaty with a view to preventing the diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices.

# Significant Quantity



Approximate quantity of nuclear material in respect of which the possibility of manufacturing a nuclear explosive device cannot be excluded

# Significant Quantity



$\text{Pu, } ^{233}\text{U}$	8 kg
$\text{U with } ^{235}\text{U} \geq 20\% \text{ (HEU)}$ $^{235}\text{U}$	25 kg
$\text{U with } ^{235}\text{U} < 20\% \text{ (LEU)}$ $^{235}\text{U}$	75 kg
$\text{NU } (^{235}\text{U} \approx 0.72\%)$	10 t
$\text{Th, DU}$	20 t

# Detection/Conversion Time



<b>Un-irradiated Direct-use Material</b>	<b>1 month</b>
<b>Irradiated Direct-use Material</b>	<b>3 months</b>
<b>Indirect-use Material</b>	<b>12 months</b>

*This generally indicates the time required for detection and conversion of nuclear material to an explosive device – it also determines the frequency of inspections*

# Drawing Conclusions

Under a comprehensive safeguards agreement, the Agency has the right and obligation to ensure that safeguards are applied, **on all source or special fissionable material** in all peaceful nuclear activities within the State, under its jurisdiction or carried out under its control anywhere (para. 2 of INFCIRC/153(Corr.)).

# Drawing Conclusions – cont'd (2)

- To be able to draw an overall conclusion that all nuclear material has been placed under safeguards and remains in peaceful nuclear activities or has been otherwise adequately accounted for, the Agency must draw conclusions of *both* the non-diversion of declared nuclear material and the absence of undeclared nuclear material and activities *for the State as a whole*.

# Drawing Conclusions – cont'd (3)

- For a State with both a comprehensive safeguards agreement and an additional protocol in force, the measures provided under an additional protocol have increased the Agency's ability to detect undeclared nuclear material and activities.

# Conclusion: Non-Diversion of Declared Nuclear Material

- The conclusion relating to the non-diversion of declared nuclear material which has been placed under safeguards also relates to the absence of undeclared production or separation of direct-use material at reactors, reprocessing facilities, hot cells and / or enrichment installations under safeguards. For States with both comprehensive safeguards agreements and additional protocols in force, the measures included in the additional protocol strengthen the confidence basis upon which this conclusion is drawn.

# Non-Diversion of Declared Nuclear Material – cont'd (2)

To draw such a conclusion,

- **Agency evaluates the results of its verification activities:** it compares the verification results with the requirements set out in the Safeguards Criteria
- **determines the extent to which the quantity and the timeliness components of the inspection goal – the safeguards performance targets – have been attained.** (However, non-attainment (or partial attainment) does not, in itself, constitute evidence of diversion of declared nuclear material or of undeclared production or separation of direct-use material at a declared facility. In cases of non- or partial attainment, the Agency examines the facility evaluation to confirm the result, and then extensively reviews the reason(s) for failure and calls for corrective action by the State.)

# Non-Diversion of Declared Nuclear Material – cont'd (3)

## The Agency, furthermore:

- evaluates all the information available, not only about the declared facilities but also about the State as a whole.
- reviews the quantitative and the qualitative evaluation results in order to determine whether there is any indication of diversion of nuclear material placed under safeguards, of undeclared production or separation of direct-use material at declared facilities, or of other undeclared nuclear material or activities.
- Only when there are no such indications, that are of proliferation concern, the conclusion is drawn for the year that the nuclear material placed under safeguards, in that State has remained in peaceful nuclear activities or has been otherwise adequately accounted for.

# Absence of Undeclared Nuclear Material and Activities

To draw a **conclusion of the absence of undeclared nuclear material and activities for the State as a whole**, the Agency:

- evaluates not only the results of its verification activities under the comprehensive safeguards agreement
- but also the results of its broader, more qualitative, evaluation and verification activities under the additional protocol.
- To enable the Agency to draw such a conclusion for a State as a whole, the State needs to have fully complied with the terms of its safeguards agreement and additional protocol. In addition ...

# Absence of Undeclared Nuclear Material and Activities – cont'd (2)

In addition, the Agency needs to have:

- Conducted a comprehensive State evaluation based on all information available to the Agency about that State's nuclear and nuclear-related activities (including the declarations submitted under the additional protocol, information collected by the Agency through its verification activities and other sources of information);
- Drawn a conclusion of non-diversion of declared material for that State; and
- Implemented complementary access, as necessary, in accordance with that State's additional protocol.

# Absence of Undeclared Nuclear Material and Activities – cont'd (4)

- Taken together, the two conclusions (of the non-diversion of declared nuclear material and of the absence of undeclared nuclear material and activities) enable the Agency to draw the broader conclusion for the year, that all nuclear material within the territory of a State, under its jurisdiction or carried out under its control anywhere has been placed under safeguards and remains in peaceful nuclear activities, or has been otherwise adequately accounted for.

# States with CSA but without an Additional Protocol in force

- Under a comprehensive safeguards agreement (CSA), the Agency has the right and obligation to ensure that safeguards are applied, **on all source or special fissionable material** in all peaceful nuclear activities...
- Safeguards strengthening measures have increased the Agency's ability to detect undeclared nuclear material and activities ... but

# States with CSA but without an Additional Protocol in force – cont'd (2)

- The conclusion drawn for the State relates to the non-diversion of nuclear material which has been placed under safeguards and to the absence of undeclared production or separation of direct-use material under safeguards.
- [NOT for the State as a whole.]

# Nuclear-Weapon States: Voluntary Offer Agreements

- **Voluntary offer safeguards agreements are in force with each of the five nuclear-weapon States.**

# Nuclear-Weapon States with Voluntary Offer Agreements – cont'd (2)

- **All five nuclear-weapon States have signed additional protocols with the Agency.**
- **Additional Protocols (APs) are in force in only one NWS. (APs for two NWS will enter into force tomorrow, according to announcements made here today.)**

# Nuclear-Weapon States with Voluntary Offer Agreements – cont'd (3)

- The conclusion for a nuclear-weapon State in which safeguards are applied to nuclear material in selected facilities, irrespective of whether or not the State has an additional protocol in force, **relates to non-diversion only** - i.e. no withdrawal of nuclear material which has been placed under safeguards except in accordance with the safeguards agreement , and the absence of undeclared production or separation of direct-use material at reactors, reprocessing facilities, hot cells and enrichment installations that are under safeguards.

# States without Safeguards Agreements in Force

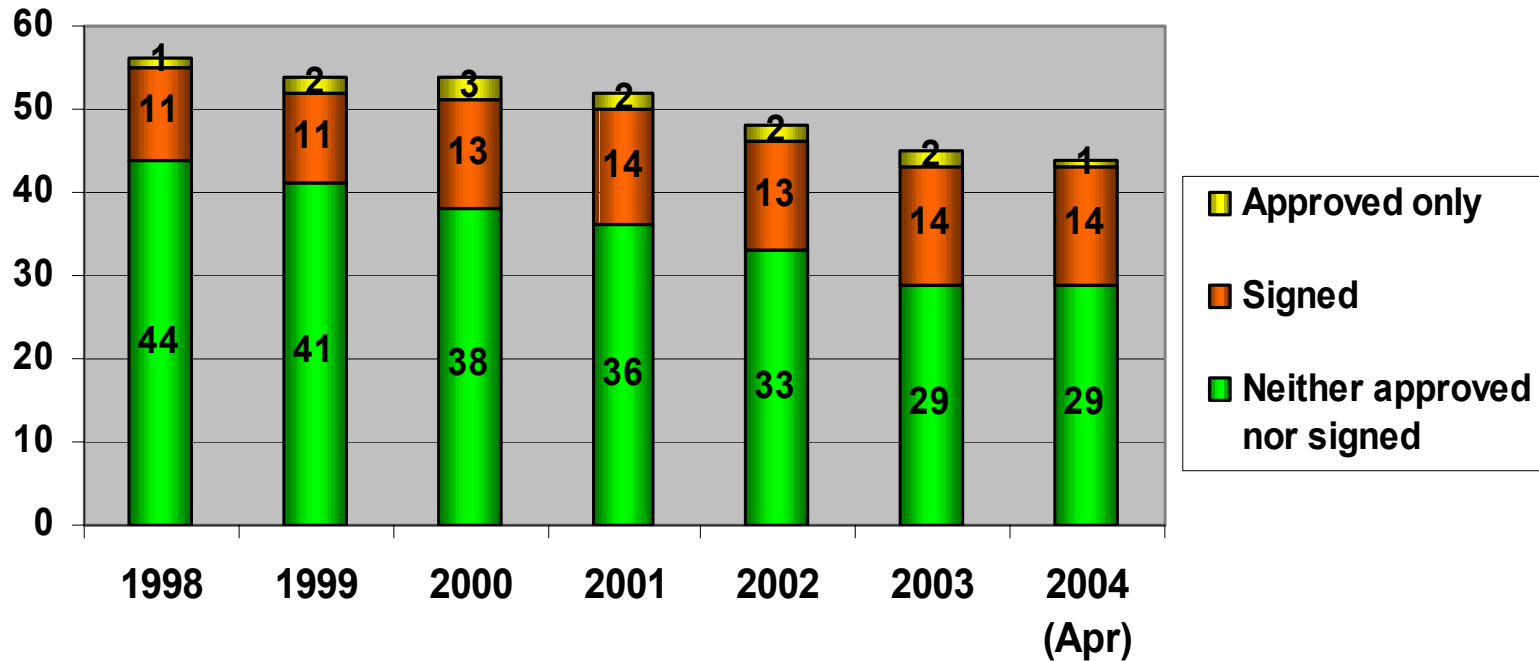
- As of 29 April 2004, 44 non-nuclear-weapon States party to the NPT had yet to bring into force safeguards agreements pursuant to the Treaty.
- As verification activities cannot be performed in States without safeguards agreements in force, therefore safeguards conclusions cannot be drawn for such States.

# Current Status of Comprehensive Safeguards Agreements (as of 29 April 2004)

- **140 NPT NNWS have comprehensive safeguards agreements in force**
- **44 States have outstanding legal obligations to conclude an NPT safeguards agreement with the Agency**
  - **14 States have signed a safeguards agreement but have not yet brought it into force**
  - **1 agreement approved by the Board of Governors, has not yet been signed**
  - **29 States have yet to conclude a CSA pursuant to the NPT**

# Conclusion of Outstanding Comprehensive Safeguards Agreements, 1998-2004 (cumulative)

**Conclusion of Outstanding Comprehensive Safeguards Agreements, 1998-2004 (cumulative)**  
*(States yet to conclude Agreements Pursuant to the NPT)*



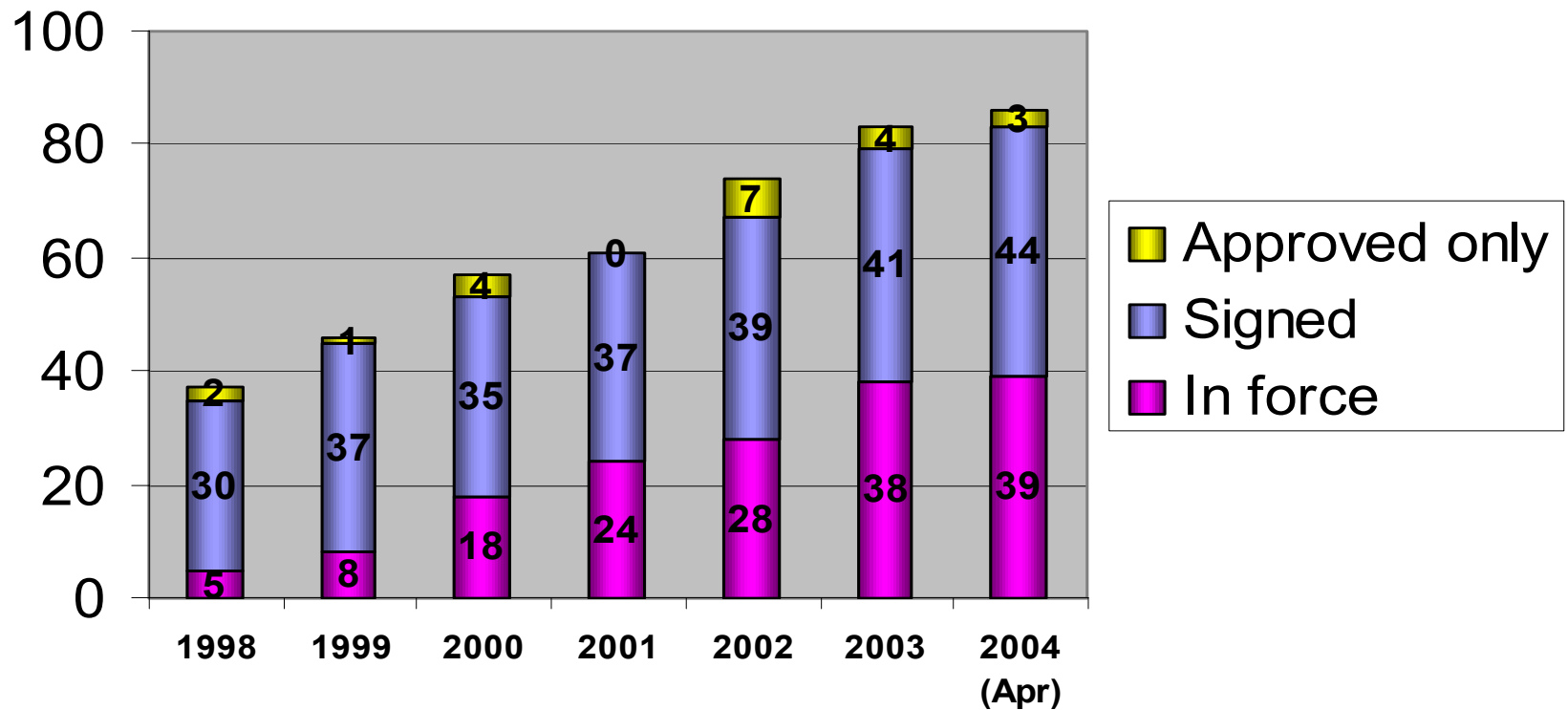
# Current Status of Additional Protocols (as of 29 April 2004)

- **The Board of Governors has approved Additional Protocols for 86 States**
- **39 States have an Additional Protocol in force**
- **44 States have signed an AP but not yet brought it into force**
- **3 Additional Protocols are being provisionally applied, pending ratification (Ghana, Iran, Libya)**

# Conclusion of Additional Protocols

## 1998-2004 (cumulative)

### Conclusion of Additional Protocols, 1998-2004 (cumulative)



# Conclusions: 29 April 2004

- **44 NPT Non-Nuclear-Weapon States need to bring NPT safeguards agreements into force**
- **146 NPT Non-Nuclear-Weapon States need to bring Additional Protocols to their NPT safeguards agreements into force**
- **4 NPT Nuclear-Weapon States need to bring Additional Protocols to their Voluntary Offer Safeguards agreements into force**

# Conclusions

- **Without an additional protocol in force, the Agency has limited ability to provide comprehensive and credible assurances about the peaceful nature of States' nuclear programmes - particularly about the absence of undeclared nuclear material and activities.**
- **For the Agency to provide the required assurances under the NPT, it must be provided the required mandate and powers.** It is important, therefore, that the NPT States make every effort to achieve the universality of comprehensive safeguards agreements and additional protocols.

# Contact Information

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