

## **A Nuclear Disarmament Laboratory's full research agenda**

### **A. Changing legal status**

*A.1. How can an acknowledged nuclear weapon State Party to the NPT unambiguously and irreversibly acquire the status of a non-nuclear weapon state under international law:*

- a) when the NPT is in force;
- b) when the NPT is being displaced by a Nuclear Weapons Convention (NWC)?

Requirements/options for assessment under a) above include:

- = negotiation and implementation of a full-scope safeguards agreement between X and the IAEA, subsequent to termination of the voluntary offer agreement;
- = formal declaration before the UN Security Council of the state's renunciation of the right to possess nuclear weapons, affirmation of its obligations henceforth to honour Articles I, II and III of the NPT;
- = UN Security Council Resolutions i) initially noting the state's intention to renounce nuclear weapons, and ii) eventually confirming that its complete verified disarmament has been achieved.

If b) applies, the NWC's provisions would define the renunciation. How to manage the transition from the NPT's legal sway to the NWC's entry into force would still have to be addressed. If the NPT were to remain in force until all states had ratified & complied with the NWC, each NWS Party to the NPT might still have to follow the steps under a) above.

*A.2 How can a nuclear armed state outside the NPT unambiguously and irreversibly acquire the status of a non-nuclear weapon state under international law:*

- a) when the NPT is in force;
- b) when the NPT is being displaced by a Nuclear Weapons Convention?

Presumably this would be achieved under a) by the said state simply by joining the NPT as a non-nuclear weapon state, with all that is routinely entailed by this step. If under b), the Convention's provisions would again define steps to be taken.

### **B. Security assurances**

During the process of disarmament, would the disarming NWS be covered by nuclear security assurances currently extended to non-nuclear weapon states? If not, should the remaining nuclear-armed states extend those assurances to the affected state? Would the assurances have to be adapted to circumstance?

### **C. The disarming state's need to know**

C.1 *What would the government of the state have to identify and confirm for itself?*

- a) The number, type and location of:
  - a.1: still deployed operational warheads, on delivery vehicles and in store;
  - a.2: complete warheads held in reserve and/or in store;
  - a.3: warhead components and sub-assemblies held in store;
  - a.4: nuclear capable delivery vehicles.
- b) Inventories of fissile material held outside safeguards:
  - b.1: in each of the categories a.1-a.4;
  - b.2: in store i) as 'pure' material (by type and form), and ii) in scraps and wastes;
  - b.3: located in another state
- c) Items/inventories unaccounted for under b) and c), or regarding which information is incomplete; procedures for minimizing uncertainties about items/inventories where they exist. What is an acceptable error margin?
- d) Physical security arrangements regarding identified sites, facilities, items and inventories (including arrangements for transit).
- e) The necessity (legal or otherwise), means and plans for dismantling/destroying items in a.1-a.4; and for closing, decommissioning or converting pertinent facilities.
- f) The location, occupation and obligations of personnel possessing knowledge of nuclear weapon design, manufacture and operation;
- g) The nature and extent of codified knowledge of weapon design, manufacture and operation, held on paper, in computer files etc. How should this knowledge be eliminated or controlled?

### **D. The verifying agency or agencies**

- i) Which international agency or agencies would be responsible for verification of the state's disarmament?
- ii) What internal processes & procedures would have to be established for carrying out verification? What would be the relationship between the verifying agency and the state's implementing agencies?

iii) How can verification of steps entailing knowledge of weapon design be carried out, by whom, where and when? What new or improved techniques would have to be developed to achieve verification? What would be the role of nuclear archaeology/forensics?

iv) What knowledge of and information about a state's current and previous capabilities is required to verify disarmament? What should be transmitted, and when, by the state to the verifying agency? If complete knowledge and information is unattainable, what knowledge and information is *sufficient* to justify a declaration of confidence in the state's disarmament?

v) How should verification be phased?

vi) How and by whom would the verification of disarmament be financed?

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