Inclusion of pre-existing stocks of weapons fissile materials in the FM(C)T: Challenges for Declaration and Verification

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Declarations

Declarations are a starting point and an integral part of application of any verification arrangements.

Requirements for Declaration:

- ***Correctness;***
- ***Completeness.***

What Materials to be included in baseline declarations?

Baseline declaration should include materials defined for arms control and disarmament purposes as being *weapons-usable: -* ***HEU, plutonium and uranium-233***

Information on their total *production* and *inventory changes:*

- ***total current inventory (Z);***
- ***total production (P);***
- ***wastes (W);***
- ***tests (T)***
- ***non-weapons use and disposition (NW).***

Z = P – (W+T+NW)

Should declaration include materials and their quantities in particular uses?

- ***Nuclear material contained in warheads;***
- ***Weapons-usable materials in naval propulsion programs;***
- ***Weapons-usable materials in civil programs***.

Baseline Declarations **–** what are **Challenges?**

- ***long period of weapons nuclear material production;***
- ***changing of production technology;***
- ***changing of material accounting methods;***
- ***loss (lack of) of material accounting records;***

***Resistance of nuclear armed states to declare information on the amount of material in the weapons*.**

A step-by step aproach should be accepted. In short term negotiating parties would accept a lower level of completeness.

Verification

Verification must be an integral part of the FM(C) Treaty. It is intended to protect against the risk that some party retains a secret and strategically significant stockpile of material.

Verification addressing ***Correctness and Completeness of Declarations.***

Assessing completeness

- ***is the history as declared consistent with the current situation as observed by inspectors?;***

- how well can past records (P, T ,W and NW) be validated?;

- could anomalies conceal material withheld from the verification process?;

- could there be material entirely outside the declarations?.

Verification challenges

Factors making achievement of completeness problematic:

- ***duration and complexity of the production programs*** *(long period, many sites and facilities, many forms of materials, changing of production technologies);*

- ***shortages (absence) of some original production and operating records.***

These factors gives ground to believe that **completeness of verifications will never be achieved.**

Uncertainties

Uncertaities associated with:

- ***existence (non-existence) of historic records;***
- ***inherent uncertainties of accounting records, due to practical factors in making measurements;***
- ***possible measurement errors,***
- ***accounting errors in processes of material handling.***

Uncertainties - a problem both for the preparation of declarations and for their verification.

Conclusions

1. There is a need in ***international scientific cooperation*** that will address all technical and (political) obstacles related with development of mechanisms for recording and sharing of material inventories and detailed provisions for their verification.

2. Given the political and technical challenges it would be reasonable to expect a ***phased approach to declarations*** *and* ***verification would not be necessarily apply immediately to all holdings but would be phased in as detailed arrangements are agreed upon for each step.***

3. It makes no sense to believe that the verification procedures can provide ***one hundred percent confidence*** in the reliability of the submitted declarations.

Thank You!