FMCT – Significance, scope, and verification

2010 Moscow Nonproliferation Conference

Moscow, March 4-6, 2010

Annette Schaper, PRIF
Why a treaty is important

Goal 1: Irreversibility of nuclear disarmament and implementation of Article VI of the NPT

Goal 2: Reducing the discrimination of the NPT

Goal 3: Drawing in states outside the NPT

Goal 4: Reducing the risk of nuclear terrorism and promoting a culture of "international responsibility"
1: Irreversibility of nuclear disarmament and implementation of Article VI of the NPT

- Both CTBT and FMCT are “nuclear disarmament measures” (Art. VI, Principles and Objectives of NPT extension)
- CTBT ends *qualitative* arms race, FMCT *quantitative* arms race
- At minimum, FMCT would cap nuclear materials
- Critics: too large stocks would enable rearmament
2. Reducing the discrimination of the NPT

- Same rights and duties for all
- NNWS: no change in duties beyond those of the NPT
- Appeasement of complaints of nuclear industry in NNWS
- Critics: discrimination not abolished, Treaty serves only as alibi
3 : Drawing in states outside the NPT

- Major motivation for some states
- Caution: Do not repeat mistake of CTBT (EIF)
- Offer incentives to these states
- Accept initial abstention of these states
4 : Reducing the risk of nuclear terrorism - promoting a culture of "international responsibility"

- Verification triggers better material accountancy
- Attitudes are changed: “International responsibility” instead of “national concern”
- Internationalization of security standards, more cooperation
- Reduction of diversion risks
Why a treaty is important

Goals are not contradictory,
instead they reinforce each other!
Variations of scope

- No regulations at all on materials produced prior to EIF
- Comprehensive disarmament
- Irreversibility by a ban on redesignation to explosive needs
- Declarations of excess fissile material
- Safeguards on declared excess fissile materials
- A ban on production of HEU for submarines and naval vessels
No regulations at all on materials produced prior to EIF

- NWS will deal at their pleasure with their stocks
- Theoretically, they could use these stocks for future armament beyond the maximum of the Cold War.
- Criticism at future NPT Review Conferences to be expected
The other extreme: Comprehensive disarmament

- ban of all fissile material for explosive use
- unlikely to be accepted today
Irreversibility by a ban on redesignation to explosive needs

- Material that is civilian, must remain so forever
- Material that is under safeguards, must remain so forever
- These demands are easy to comply with
Declarations of excess fissile material

- Some NWS possess large quantities of excess material.
- Broad variations of transparency of stocks:
  - quantities of excess materials, of materials in the processing for explosive needs, and of civilian material
  - Isotopics, physical properties, locations, future plans, etc.
- The U.S. and Britain have provided information
- Delegations who call for the inclusion of materials fabr. prior to EIF should make such declarations
Safeguards on declared excess fissile materials

- “Civilian material” in terms of the NPT is material under safeguards.
- Technical disposition methods will take decades
- Excess weapons material under international safeguards would be quicker
- Variant: commitment to set high standards of physical protection and material accountancy
A ban on production of HEU for submarines and naval vessels

• Verification of the use of HEU not for explosives would be difficult, not the least because of extreme secrecy

• Submarine reactors could be converted to LEU

• HEU stocks would be sufficient for many decades, inbetween new reactors could be developed

• Major role of military submarines is deterrence of nuclear first strikes
  - Do we need nuclear deterrence after many decades?
  - Who believes this does not believe in nuclear disarmament
Problems of FMCT verification

1. Discovery of clandestine production?
2. Plants that are not suitable for verification?
3. Secrecy?
4. Production of HEU for submarines?
5. How to distinguish between material produced prior or after EIF?
Detection of production at clandestine facilities

**Wanted:**

- special managed access procedures
- acceptance of higher transparency
- measurement of isotopes
2 Plants that are not suitable for verification

Historic lesson: British reprocessing plant B205 (Sellafield) under Euratom Safeguards 20 years after it was designed

Wanted:

- subsequent implementation of key measurement points
- transparency of design information
- transparency of operating history
- initial acceptance of inaccuracy
- refinement of secrecy
- studies of such plants
3 Secrecy

Wanted:

- reform of secrecy regulations of the NWS, model: „Trilaterale Inititative“ of the Clinton administration
- studies of „managed access“-procedures
- initial verification at facilities containing material produced prior to EIF: „Information barieres“
- national technical means
4 HEU for naval propulsion

Extreme secrecy (why?)
So far no precedents of verification of HEU for naval propulsion

But: - huge stocks (hundreds of tons)
- current international efforts to end the civil use of HEU

In case of new production of HEU:
Contradiction to Art. VI of the NPT, if the negotiators don‘t believe that the existing stocks are sufficient.

Wanted:
- conversion of naval reactors to
- use of existing HEU