Life, Liberty and the Pursuit of Fissile Material?

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Assessing the Ability of the IAEA
To Safeguard Peaceful Nuclear Energy

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IAEA Chief Calls Nuclear Fuel-Makers "Virtual Nuclear Weapon States."

Nuclear fuel-making "creates many new challenges, both for the international community and for us, because verifying enrichment facilities or reprocessing facilities is quite difficult and the so-called conversion time is very short. So we are dealing with what I call 'virtual nuclear-weapon States.'"

-- Mohamed ElBaradei in Vienna (Oct. 2006)

Problem: The Spread of Nuclear Fuel-Making Fundamentally Challenges…

- The Nuclear Nonproliferation Treaty (NPT), the goal of which is to block the spread of nuclear weapons,
- The safeguards system of the International Atomic Energy Agency (IAEA), which inspects and verifies the peaceful nuclear activities and materials of non-nuclear-weapon states, and
- The security of both nuclear-weapon states and non-nuclear-weapon states.

Why Does the IAEA Safeguard?

- NPT's Article III requires all non-nuclear-weapon states to submit to IAEA safeguards.
- IAEA safeguards system aims to prevent the diversion of peaceful nuclear activities and materials to bomb-making or purposes unknown.
- IAEA safeguards through (1) materials accountancy, (2) inspection, (3) containment and (4) surveillance.

Safeguards Problem: IAEA Cannot Always Detect Military Diversions in a Timely Manner.

- Military diversion can take place in a very short amount of time, sometimes a matter of months or – when it comes to weapons-usable fissile material in metallic form – even days.
- IAEA defines safeguarding goals in terms of inspecting frequently enough to detect the diversion of a significant quantity of special nuclear material before it has been, or can be, converted into a bomb.
- But the IAEA – especially at "bulk" nuclear fuel-making facilities – cannot always meet such goals.

One Problematic Indicator: IAEA's Estimated Fissile Material Conversion Time vs. IAEA's Timeliness Detection Goal.

Material	Conversion Time	Detection Goal
Unirradiated Direct-Use	7 - 10 days (7 - 21 days)	1 month (1 month)
Irradiated Direct Use	1 - 3 months	3 months
Indirect Use	3 - 12 months	12 months

What New Inspection Authorities Should the IAEA Consider to Strengthen Nuclear Nonproliferation?

IAEA should:

- Candidly admit what dangerous nuclear activities (*e.g.*, nuclear fuel-making) and materials (*e.g.*, direct-use materials such as HEU, MOX and Pu) it cannot effectively safeguard, and
- Make a point of describing and identifying its accountancy, inspection, containment and surveillance of these activities and materials as "monitoring" rather than "safeguarding."

NPT's Alleged "Loophole" Prevents IAEA from Fully Admitting its Safeguarding Shortfall.

- NPT's Article IV affirms the "inalienable right" of all signatories to "develop research, production and use of nuclear energy without discrimination" and "in conformity with Articles I and II."
- NPT does not expressly affirm a *per se* right to enrichment, reprocessing, or other dangerous civilian nuclear fuel-making activities.
- But Article IV is read through an "explosive lens" as affirming a *per se* right to any and all nuclear technology so long as the nuclear technology

  (a) has any conceivable "civilian" application, and

  (b) is declared to and inspected by the IAEA.

Is this a Sound Reading of Article IV and the NPT?

NO.

NON.

NEIN.

NPT Negotiators' Intent: No Loopholes.

- General Assembly Resolution 2028 (XX) – which called for an NPT with "mutual responsibilities and obligations" – also called for an NPT "void of any loop-holes which might permit nuclear or non-nuclear Powers to proliferate, directly or indirectly."
- NPT negotiators repeatedly referenced this resolution as they negotiated the NPT.
- NPT negotiators affirmed that they had concluded a treaty which was, and could later be interpreted to be, "void of any loop-holes."

NPT Negotiators Explicitly Rejected *Per Se* Rights Language.

During NPT negotiation, ENDC delegates soundly and collectively rejected proposals to affirm a *per se* right to enrichment, reprocessing and nuclear fuel-making from:

- Mexico (Sep. 1967)
- Romania (Oct. 1967)
- Brazil (Oct. 1967)
- Spain (Feb. 1968)

An "Inalienable Right," But To What Specifically?

"To develop research, production and use of nuclear energy for peaceful purposes" under three conditions:

- Condition (1): without discrimination and
- Condition (2): in conformity with Articles I and II.
- Condition (3): in conformity with Articles I and II also means in conformity with Article III, according to the Final Documents of the 1995 and 2000 NPT Review Conferences.

These Three Conditions Clarify the Meaning of "Nuclear Energy for Peaceful Purposes."

Properly understood, these conditions restrict the "nuclear energy for peaceful purposes" to which NPT signatories have an "inalienable right."

When a civilian nuclear activity or technology cannot be effectively safeguarded, then

- neither the unsafeguardable activity or technology
- nor the peaceful applications of this unsafeguardable activity or technology,

should be made available.

NPT's Preamble Defines Article IV's "Without Discrimination" Condition:

"Affirming the principle that the benefits of peaceful applications of nuclear technology, including any technological by-products which may be derived by nuclear-weapon States from the development of nuclear explosive devices, should be made available for peaceful purposes to all Parties of the Treaty…"

-- Preamble, Paragraph 7

NPT Only Guarantees the Benefits of Peaceful Applications of Nuclear Technology.

- NPT's Preamble, which Articles IV and V elaborate, says this explicitly.
- "Benefits" refers only to economical peaceful applications of nuclear technology – not to money-losers.
- Benefits of peaceful applications can be shared both without discrimination and without total technology transfers.

Article V Views Nuclear Explosive Technology Through "Nondiscriminatory-Benefits" Lens:

- NPT denies both peaceful applications of nuclear explosive technology, and nuclear explosive technology,
- But outlines ways to access the "potential benefits" of peaceful applications of nuclear explosive technology.

During NPT Negotiations, Many NNWS Did Not View Article V as Discriminatory (I):

"There is no question in this case of denying a right; nor should the prohibition of all activity of this nature be regarded as an infraction of that right. Account is taken of a state of facts which, for reasons which cannot be refuted and which have been explained here at length, renders the manufacture of nuclear devices incompatible with a non-proliferation treaty."

-- Bulgarian delegate K. Christov to ENDC (Jan. 1968)

During NPT Negotiations, Many NNWS Did Not View Article V as Discriminatory (II):

"I should like once again to stress that the right of all countries to conduct peaceful nuclear explosions is not at stake. The only matter to be settled is the procedure and the conditions to be observed so that countries which forgo the manufacture of nuclear devices shall not be deprived of the benefits that may be derived from the use of nuclear explosives."

-- Polish delegate M. Blusztajn to ENDC (Jan. 1968)

We Can Apply the "Nondiscriminatory-Benefits Lens" to Nuclear Fuel-Making.

- The acquisition and use of nuclear explosions for peaceful purposes was viewed as "virtual" nuclear-weapons making.
- ElBaradei has called nuclear fuel-making "virtual" nuclear-weapons making.
- NPT negotiation history provides support for using "nondiscriminatory-benefits" lens to prevent "virtual" nuclear-weapons making.

During NPT Negotiations, Some NWS Identified Nuclear Fuel-Making as Potentially "Manufacturing" Nuclear Weapons:

"The thing which is unique to a nuclear weapon is its warhead. And what is there in a nuclear warhead that is found in no other weapons? … It is the fissile material in the warhead; that is to say, the plutonium and uranium-235, the two fissile materials now most commonly used in nuclear weapons.

"If we are to deal effectively with nuclear weapons we must concentrate on the fissile material which every nuclear weapon has and which no other weapon has."

-- British delegate Sir Michael Wright to ENDC (Sep. 1962)

During NPT Negotiations, Some NNWS Identified Nuclear Fuel-Making as Potentially "Manufacturing" Nuclear Weapons (I):

"[To block the road to nuclear weapon development as early as possible… we are facing is a long ladder with many rungs, and the practical question is: on which of these is it reasonable and feasible to introduce the international blocking?

"… To prohibit just the final act of "manufacture" would seem to come late in these long chains of decisions… Could a middle link be found on which the prohibitory regulation should most definitely be focused?"

-- Swedish Delegate Alva Myrdal to ENDC (Feb. 1966)

During NPT Negotiations, Some NNWS Identified Nuclear Fuel-Making as Potentially "Manufacturing" Nuclear Weapons (II):

"An undertaking on the part of the non-nuclear weapon Powers not to manufacture nuclear weapons would in effect mean forgoing the production of fissionable material … and such production is the first essential step for the manufacture of these weapons and constitutes an important dividing line between restraint from and pursuit of the nuclear path."

-- Burmese delegate U. Maung Maung Gyi to ENDC (Mar. 1966)

Therefore A Sensible and Sustainable View of Article IV Affirms…

… The “inalienable right” of treaty signatories to nuclear energy for peaceful purposes that:

- Is beneficial and economical (Preamble’s Principle)
- Has acceptably low danger of proliferation (Articles I and II), and
- Is effectively safeguardable (Article III)

If IAEA Believes that Nuclear Fuel-Makers are "Virtual Nuclear-Weapon States," Then…

With this sensible and sustainable NPT interpretation, the IAEA now can and should

- Candidly admit what dangerous nuclear activities (e.g., nuclear fuel-making) and materials (e.g., direct-use materials such as HEU, MOX and Pu) it cannot effectively safeguard, and
- Make a point of describing its accountancy, inspection, containment and surveillance of these activities and materials as "monitoring" rather than "safeguarding."

Even UN Chief Recognizes Dangers Posed by a Nuclear-Fueled Crowd:

"The [non-proliferation] regime will not be sustainable if scores more states develop the most sensitive phases of the fuel cycle and are equipped with the technology to produce nuclear weapons on short notice … This would increase all the risks—of nuclear accident, of trafficking, of terrorist use, and of use by states themselves."

-- Kofi Annan, May 2005

Fin.

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