
*by Matti Tarvainen*

# Unfair Trade

## Nuclear trade analysis may provide early indications of proliferation.

Nuclear proliferation networks have been considered as one the biggest concerns to international safeguards. Even though several well-known players in these networks have been revealed and stopped, there are no indications that covert nuclear trade in proliferation sensitive goods, software and technology is decreasing.

The revelation of the Libyan covert nuclear weapons programme in December 2003 was a surprise to most of the world — but not to all. For some time indicators of undeclared activities had been followed by some States. The International Atomic Energy Agency (IAEA) had also detected weak indications in Libya but there was no clear understanding whether these indicators were important.

Before the Libyan case, the IAEA had gained relevant experience in monitoring and clarifying in detail Iraq's undeclared nuclear weapons programme and verifying the extent of Iran's nuclear programme.

The IAEA General Conference (GC) has recognized the proliferation risks related to the trans-national proliferation networks. Since 2005, the GC has repeatedly passed a resolution which "welcomes efforts to strengthen safeguards, including the Secretariat's activity in verifying and analyzing information provided by Member States on nuclear supply and procurement, taking into account the need for efficiency, and invites all States to co-operate with the IAEA in this regard".

These resolutions mandate the IAEA to investigate covert nuclear related trade to create knowledge of nuclear black markets for safeguards verification purposes. Close cooperation with States providing complementary data is crucial for the success in these efforts.

### Trade Controls Need Strengthening

Verifying the correctness and the completeness of State declarations has always been the objective of the IAEA safeguards system. However, it was the

Shown in the photo is the container storage and holding area of the Port of Singapore's Keppel Terminal.

(Photo: Calvin Teo/Wikipedia)

additional protocol (AP) that improved the IAEA's capabilities to verify that States' declarations are complete. In parallel with the AP entering into force in an increasing number of States, the IAEA has also improved information analysis. The on-going State evaluation process, established in the mid-1990s, has become the main process supporting the drawing of annual safeguards conclusions.

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The AP declarations provide the IAEA with additional information related to manufacturing and construction of sensitive equipment, exports of specialized equipment and material for example, and imports if requested by the IAEA. All this information is useful for verifying that States are fulfilling their safeguards' obligations.

However, the State may not always be aware of all safeguards relevant activities on its territory, for example in so-called free-trade zones, where trade controls may be minimal at best. As well, the State itself may indeed be involved in undeclared nuclear activities and clearly will not declare these to the IAEA.

Export controls are the responsibility of States. Information available from the implementation of the UN Security Council Resolution 1540 reveals that nuclear export controls are not always well developed and not capable of effectively controlling global trade in proliferation sensitive goods, software and technology. Other arrangements to curb nuclear proliferation include voluntary arrangements such as the Nuclear Suppliers Group (NSG) Guidelines adhered to by 45 States.

The AP provides information on specific nuclear related activities to develop a better understanding of States' nuclear programmes. To curb proliferation, the NSG Guidelines require comprehensive safeguards in the recipient State as a condition of export of nuclear use and related dual use items, in addition to other requirements. The NSG members inform each other of export denials in an attempt to prevent an export denied by one member being licensed by another. Currently, the IAEA does not receive such NSG denial data on a regular basis.

In addition to the national and international control measures, corporate level export control compliance programmes are increasingly used by ethically aware companies to make sure company sales are not used to advance proliferation of weapons of mass destruction (WMD). Additional motivation for improving awareness and avoiding expert control violations include the risk of becoming blacklisted, being penalized up to one hundred million dollars and losing export privileges. Identifying suspicious procurement enquiries and deciding not to supply improves defense-in-depth in fighting proliferation.

Denying an export by companies based on an identified proliferation risk rather than mechanistic reading of control lists, improves selectivity and the effect of such control measures.

## The Need for Nuclear Trade Related Information

The need for additional information in developing a better understanding of covert nuclear related trade has long been recognized by the IAEA. In addition to the GC resolutions mentioned above, detection of undeclared nuclear material and activities is identified as one of the priorities of the IAEA Medium Term Strategy (MTS) 2006-2011.

One specific action of the MTS calls for obtaining, through appropriate mechanisms and channels, pertinent information on international nuclear activities and trade relevant to safeguards implementation.

Improving access to complementary nuclear related trade data was one of the proposals of the IAEA Secretariat to Committee 25 aiming at further strengthening of safeguards. It was proposed that the Board of Governors would request all Member States to provide to the IAEA, on a voluntary basis, relevant information on exports of specified equipment and non-nuclear material, procurement enquiries, export denials, and relevant information from commercial suppliers in order to improve

the Agency's ability to detect possible undeclared nuclear activities. The information would have been processed within the existing structure for the evaluation of safeguards related information. The Committee was, however, not able to adopt any specific recommendations.

## Nuclear Trade Analysis

The Libyan case made visible a widespread international nuclear procurement network. It revealed that the traditional, facility oriented safeguards developed in the late 1960s, and strengthened in the 1990s to address the State as a whole, was facing new challenges. The biggest proliferation risks were no longer just State specific but also trans-national in nature with non-state actors increasingly involved. The problem was that the IAEA had no specific verification tools to address such new challenges. This is why innovative approaches in the IAEA, in addition to regulatory control and voluntary compliance on the State level, were and still are needed to curb nuclear proliferation.

To address the safeguards challenges of covert nuclear related trade, a Nuclear Trade and Technology Analysis Unit (TTA) was established in the IAEA in November 2004. The Unit, located in the Department of Safeguards, is mandated to centralize the analysis of all procurement networks related information available to the IAEA. In cooperation with other organizational units, TTA investigates the activities of known networks and endeavors to reveal presently unknown networks. It also maintains the IAEA's institutional memory on covert nuclear related procurement activities. These measures are pivotal to the analysis by enabling access to nuclear trade related data both now and in the future.

TTA provides expert services using technical and trade analysis expertise to support verification activities and the preparation of State evaluations, a core safeguards activity. Close cooperation with other information analysts and inspectors has improved the potential of the IAEA to understand better weak proliferation indicators related to trans-national trade activities.

A specific procurement outreach program was launched in 2006 by the IAEA to facilitate acquiring of nuclear trade related information provided by States and companies. Responding to the requests of the General Conference, some 20 States had been contacted by the Secretariat by the end of 2007, inviting them to provide complementary information on a bilateral, voluntary basis to aid a better understanding of safeguards relevant, covert nuclear related trade. The programme is based on the premise that developers of an undeclared nuclear programme need to buy sensitive items from the open market thereby leaving traces that, once analyzed, may reveal early indicators of proliferation.

States have shown interest and several of them are already providing complementary information on export denials and unfulfilled procurement enquiries received by companies. Outreach information is handled with high confidentiality by the IAEA as has been agreed with States participating in the programme.

## Conclusions

Trans-national proliferation networks and the increased involvement of non-state actors in covert nuclear related trade activities pose a challenge not only to national and international safeguards but also to other WMD verification regimes. Nuclear trade analysis aims at developing better understanding of such networks. Declarations based on safeguards agreements do not provide the type of data networks analysis needs. This is why the needs of nuclear trade analysis call for States to increase information sharing with the IAEA on a bilateral and voluntary basis. It is obvious that synergies in analytical approaches, methods and tools could be found between different WMD verification regimes.

International safeguards would also benefit from increased cooperation with State authorities and companies controlling proliferation sensitive exports. While controls can only address the symptoms, internal export control and compliance programmes can change the culture of curbing proliferation. In these endeavours, the former subject and object of controls become partners in fighting proliferation. Increased support of Member States in providing information forms the basis the IAEA needs in addressing the biggest proliferation challenge, the nuclear proliferation networks.

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