## The Path towards Strengthened Safeguards: Experiences in Iraq, South Africa, and North Korea

This video series is a collection of dialogues centered on the immense role played by the IAEA, and in particular how the Agency supports nuclear nonproliferation through the practice of safeguards. This current update is a chronicle of events during the 1990s, Iraq, South Africa, and North Korea, that led to the development of the Additional Protocol.

## 7.2 Issue Background; The Creation of Programme 93+2

## Keywords: SAGSI, development of safeguards, Additional Protocol

Rich: After graduation, I was hired into the old Hanford laboratories, where at the time, it was the very formative days of the development of statistics for nuclear material accountancy safeguards. My mentors at that time were people like Carl Bennett and John Jaech. Fairly soon after that, I became involved in the development of statistical methods for environmental sampling (ES). This was in its formative period. This was both Iodine- 127 analysis by neutron activation in the very early days, and heavy element analysis of individual particles. My participation in this effort continued, my time was split between development of statistical methods for the analysis of ES data and safeguards. In 1982, I came to the agency as a cost fee expert, and my primary assignment was to address some of the reliability problems they were having with surveillance instruments at the time. I returned home in 1985 for 3 years, and returned in 1988 as section head of the statistical analysis section.

I was there when the [UNSC] Resolution 687 inspections began in Iraq – I participated for the first time in the  $3^{rd}$  inspection, and this was in early July of 1991, and fairly soon thereafter was seconded to the Iraq Action Team for the next almost 2.5 years. I participated in 15 on-site inspections in Iraq, and at the same time, during that same period of time, the completeness inspections in South Africa got underway and I participated in some of those, addressing the completeness problem in their enrichment facility.

These experiences of the early 90's - Iraq, South Africa, and DPRK which was about that same time - all played really important roles in the formative part of strengthened safeguards. In the fall of 1991, Blix expanded SAGSI from its traditional size of 14 members to 20, and asked them across the next year to work toward making recommendations to him on ways to reach more efficient and effective safeguards. SAGSI carried out its work across the year 1992, of course it's always heavily supported by the Secretariat, and in April of 1993, they reported their recommendations to the Director General. He then in turn took a summary of those recommendations and reported them to the Board, at the end of 1993. The Board's response was to request the Secretariat by December of that year, to come to the Board with a proposal for how to define the technical, financial, and legal implications of SAGSI's recommendations.

At that time, I was asked to prepare that proposal; the proposal went to the Board as requested in December of that year, 1993. The Board endorsed that proposal, and that was the beginning of what became known as Programme 93+2. And I became the manager of that program.

The name Programme 93+2 was intended to convey the lifetime of the program. The review and extension conference of the Nonproliferation Treaty was scheduled for April-May of 1995, and the intention of the secretariat was to make a final report to the Board before that. 1993+2, that's where the name came from. Unfortunately, the name continued after the Programme continued past that, but that's where the name came from.