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Transcript

## **THE POLITICS OF SAFEGUARDS**

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## **RAFAEL GROSSI**

Hello, everybody, can you hear me? Is it okay? Thank you very much. Good afternoon to you all, and thank you very much for joining us in this panel discussion on the politics of safeguards. It's very good to see that our issue attracts so much distinguished attention. It is, in my view, at the end of the day, one of the most crucial ones, because many of the things that are being discussed today and yesterday, in the conference are connected with ensuring that nuclear remains and is always for peaceful uses, and that international agreements are observed.

And there is one way to do it, and it's through safeguards. Or at least one way to do it in a way that provides guarantees and provides confidence, and it's through safeguards. Safeguards is a subject matter that presents some complexities, of course, because it does... like Janus... have two faces.

The title of this panel and the discussion talks about the politics of safeguards, which means that this is an activity which, while technical in nature, has a profound, a deep political consideration, because it has to do with the observance, as we were saying, of important commitments, entered freely by countries. And this system evolves. This system changes with time.

And on top of that, the system is not [unclear]. It's not a system that you can describe easily as something that contains a set of rules that people simply need to observe. Far from that. As you know, there are different modulations, different formulations for the system, ranging from what I call the comprehensive safeguard agreements that contain certain provisions, certain scope to more limited ones like those known commonly as item-specific or in the jargon of the IAEA in 66 type of safeguard agreements, moving on to voluntary offer agreements whereby countries allow or subject certain facilities or parts of their facilities to international inspection.

So as one can see, there are different layers and sometimes they cross with each other, they intersect. The safeguards system, as we can call it, has also evolved in time, and most notably, in the wake of certain... to use the word of the panel as well... political situations that prompted, facilitated, necessitated changes, adaptations that happened with time. As you know, most notably after the Iraq crisis with the introduction of the Additional Protocol.

And there are more discussion, there is more evolution which hopefully we are going to be discussing together today. To do that, we have two very distinguished panelists. On my right, Laura Rockwood, who is one of the world's most respected experts in safeguards field. A former colleague, we used to work together in the International Atomic Agency. And I'm sure you are familiar with her work, and many of you, I'm sure, know her personally.

Anton Khoplov, also from the Russian Federation. A great expert, having served both in official capacities, but now in one of the most respected think tanks in Russia. A frequent assiduous writer on these matters. Myself, I'm the Argentine Governor to the IAEA, Chair of the Nuclear Suppliers Group, and formerly with the International Atomic Agency. So hopefully we'll be able to lead a discussion and look forward also to your comments and your questions.

It is clear that the politics of safeguards are as vibrant and valid and pressing as ever, and we are going to try to see what is good with them, what should be changed or adapted in the course of our discussion.

So, to start, I would turn myself to Laura, and perhaps ask you, as a legal expert, what is your assessment of this system I just described very succinctly, and what were the challenges that the system was confronted with throughout the years before it became what it is now?

## **LAURA ROCKWOOD**

Thank you very much, and thank you all for coming here. I feel as though almost all of you in this room know as much about safeguards as I do, so forgive me if I'm being a little repetitive and teaching you something you already know.

First of all, I wanted to start out with, on behalf of the IAEA, I would like to say IAEA is not political, it's technical, okay? But the truth is that the IAEA safeguard system, and the nuclear non-proliferation regime as a whole, has developed as a function of states' need for collective and individual security, and the risk that is posed to that security by the spread of nuclear weapons.

And I think many of you have heard my lectures and courses before, have heard me say that it has evolved over time as a function of shifting perceptions as to where that risk comes from, what the nature of that risk is.

In the early days, just prior to the IAEA's creation, the risk was associated with supplied nuclear materials and technology being misused, so you had bilateral safeguards. The US and its trading partners had safeguards, and other mechanisms for other parties. But that wasn't very satisfying to the other half of the world, and so what was needed and what I think we continue to need today are international safeguards, and that was what gave rise to the creation of the IAEA and its first system, the item-specific safeguard system, designed to make sure that this particular reactor, which was sold to another country, wasn't misused.

And that worked pretty well until you had the development of five nuclear weapons states, and the United States and the Soviet Union came within minutes of blowing not just each other up, but the rest of the world as well. And that's what really drove the creation of the first regional nuclear weapon free zone in inhabited territory, the Tlatelolco Treaty, which also helped with the negotiations, helped feed the negotiations of the NPT.

So what kind of risk were they trying to solve with that? I don't know what the Americans were thinking, or the Soviets or the Chinese or the French, but they didn't own all the smart scientists in the world. So what was needed was a system that was capable of addressing a state's capability to develop indigenous capabilities of producing nuclear material. And that was what the nuclear weapon free zone treaties and the NPT were all about. And as you know, the NPT said non-nuclear weapon states will conclude with the IAEA safeguards agreement in accordance with the agency statute and its safeguard system.

The system that was in place at the time wasn't much of a system, to be perfectly frank. So they had to go about creating a new one, and that became what we know of as NSERC 153, and the basis for comprehensive safeguards agreements.

Now safeguards were actually created, and I want to thank Andreas for saying this this morning, as an organic system. Even as the member states were negotiating the contents of these agreements, it was clear they weren't going to be able to see into forever for what the technology would be, what the approaches would be, so built into those very agreements is the possibility of the evolution of safeguards.

It went slowly, and for the first 20 years, for a variety of practical reasons, the focus of the Secretariat was more on trying to make sure that declared nuclear material and declared

facilities weren't misused. Having said that, it was not the exclusive focus, and it never was a legal issue. For example, at research reactors, the Agency would look for undeclared production of nuclear material. But by and large, they were learning as they were going along. So it was never a question of the Agency will not because it doesn't have authority to look for undeclared. You just don't try to do everything at once.

That all changed with the epiphany of Iraq, when member states asked the Agency, what is this about declared? Why aren't you providing us assurances about the absences of undeclared. And sure enough, when we went back and looked at 153, there was the authority staring us in the face, all the whole time.

So we started looking at what we could do within the existing legal framework. And then developed into program 93 plus two and we identified measures that we could do within 153 and measures that the people who worked on Program 93 plus two thought would be more useful if we could have consistent legal interpretation and a consistent legal framework.

It wasn't because the Agency needed new authority to verify correctness and completeness, but because there were certain tools and measures that if we wanted to do them on a more routine basis, apart from special inspections, a more routine basis, that it would be useful to have this additional authority, and that's what became the model additional protocol.

That's been working quite well, and I just checked the numbers. We have, I don't know, something on the order of 140 or 120 states with Additional Protocols today. 124, thank you. But it hasn't stopped there. I mean, it would be nice to think that if we could just stop with comprehensive safeguards agreements and Additional Protocols, all would be right with the world. But then 9-11 happened, and as I have described in the past, what Chernobyl was to safety, Iraq was to safeguards, and 9-11 was to security.

What we had to start thinking about was not just state actors, but non-state actors. So my theory is that the nuclear security and nuclear safeguards non-proliferation regime worked together to try to create a fabric that is so tightly woven that you cannot give rise to another nuclear weapon state.

We've had challenges to that. Some of the most obvious challenges are the Iran situation, how that will play out. We've seen challenges to the further evolution of safeguards, and we can talk about that in a little bit, what we call the state level concept.

But I think, fundamentally, there are a couple of political challenges, if you will. And one is, recently we've seen challenges to the IAEA safeguards authority that we haven't seen in 20 years. Now how did that happen? Was it all entirely mischief? I don't think so. I think we have 20 years is a long time in our business, and we have people who are new to it, who simply don't understand how these measures came about in the early '90s and who have their own concerns, and I think the Secretariat of the IAEA has learned the critical importance of communicating that more clearly on a more routine basis to its member states.

I also think that it's really important to have unanimity. Look at the case of North Korea. It was a perfect storm. The IAEA, using a brand new technology and environmental sampling was able to identify an anomaly, possible indications of undeclared nuclear material and activities that North Korea was hiding. And using intelligence information, it was satellite imagery provided by the United States, and our own internal secretariat analysis, we were able to put on a case to the Board of Governors, that was so compelling that by the time we finished with the presentation, you could hear a pin drop in the room.

And the Board ultimately determined that the Agency should be able to carry out the special inspection that it wanted, access to additional information and locations. And in one fell swoop, it confirmed the use of environmental sampling, the Agency's authority to have recourse to intelligence information, the importance of access through special inspections to undeclared locations and material, and the Agency's authority under comprehensive safeguards agreements, to ensure not only that there's no diversion of declared nuclear material but that there's no undeclared nuclear material in the country - what we call correctness and completeness.

Why do I refer to North Korea? Because we are yet again fighting these battles all over. And what I want to demonstrate is the importance of unanimity in order to achieve effective safeguards. I think we're going through an incredibly difficult politically divided era in the IAEA and that's been very challenging. And I think some of the challenges to the Agency's authority, in my view, aren't good faith. I think they are done for reasons that have nothing to do with good safeguards, which is unfortunate, if what you want is an effective safeguards system.

I think there's been too little emphasis on the Agency's possible role in disarmament verification and in Vienna, the word disarmament has almost become a dirty word. I think that needs to change. I think it can change. The Agency has the legal authority. But the bottom line is, safeguards are only as good as the member states want them to be.

Certainly you want a secretariat that pushes the envelope, who gives new ideas to the member states. But if the states aren't willing to demand an excellent safeguard system from the Agency, then it won't have one.

#### **RAFAEL GROSSI**

Thank you, Laura. Thank you for that. You have reminded us of all this important milestones that have sprinkled the history... the story of safeguards and the history in general, and how, like you said, it has been evolving organically as you said, and changing. But this hasn't stopped. It's not the end of the story, as you pointed out, because of the nature and the dual nature of the subject. A subject which is technical in a politically changing background.

So, Anton, I was wondering, from your perspective, is this system suited to the realities of today's technology, the realities of today's nuclear activity in the world? Russia is a main actor, not only nationally or locally, but also as one of the most important vendors of nuclear technology. And so you are very aware of all these evolutions and convolutions. So how do you see the safeguards system in that fitting in that system? Is it adequate? Is it too rigid? Is it mechanistic? Is it doing what it needs to do in an efficient way?

#### **ANTON KHLOPKOV**

Thank you, Rafael, and the short answer is yes and no, and I would explain what I mean. But first I would like to mention I never worked either for the Russian government, nor for IAEA, so what I will present, this is my personal view as an expert, as an analyst who follow the non-proliferation issues for more than 15 years.

So yes, because during the last years, legal-based technical capability financing human capacity has been developed significantly within IAEA. A few numbers. Laura already mentioned additional protocol which created a new legal authority for IAEA. 124 countries, for whom the protocol is in force.

Financing of safeguards. Shortly after Iraq in 1994, it was twice less than we have now in numbers. And again, that time it was used dollars, now it's euros, so again, there is an increase,

for sure. My understanding that number of personnel who involved, of experts who involved in safeguards is increased dramatically. So this is a good development for IAEA ability to provide reliable safeguards.

And of course, this is an important contribution to strengthening what we called safeguards system. Now, because since during last 10 years, or even 20 years, there are many developments which affect IAEA ability, taking into consideration the limited resources, they have been increased, but they're still limited, to verify non-diversion of materials or no undeclared nuclear activity.

And first, more and more countries would like to develop nuclear energy, which means that more power reactors, more research reactors are being built, being operated, and, of course, it's applied additional responsibility, additional work for IAEA.

Second, we faced, during the recent years, a few non-proliferation crises. And I'm sure that most of the people who are in the audience attended yesterday lunch when ADG Amano spoke, and he mentioned that if a new agreement, a new deal is signed with Iran, IAEA will need additional financial resources, human resources, and additional legal instruments to verify. So it means that any new crisis in the non-proliferation field which we face require additional resources from the agency.

And my understanding that first there is not much enthusiasm among members of IAEA to increase funding for separate activity. At least there is limited. And second, most of developing countries point that if we increase funding for safeguards, it should be a balanced approach for technical cooperation.

So all this makes not probably us, but some researchers as well. But first for IAEA to be creative how to find new approaches, how to be creative to improve cost efficiency of safeguards activity. And it creates some challenges. I will mention one probably of them, which is widely discussed in the public among experts. How to use third party states information.

And it is true that in the past, number of countries shared intelligence with IAEA, and Soviet team and Russia did the same. That were some examples, at least to my knowledge. But how to find the formula when we can use that kind of information properly, not misuse this opportunity to provide intelligence information, because unfortunately, a few recent examples makes me personally concerned how this kind of information may be used.

Of course, Iraq and weapons of mass disappearance is one of the examples. It makes people concerned. Second, Republic of Korea case. We know that there was some undeclared uranium enrichment activity. Quantities were small, but the enrichment was very high. It was actually weapons grade level. And it did not have any consequences. So, for example, one of the criteria in the new system, the past cooperation between the IAEA and a country. So should we regard Republic of Korea as a normal state, or we should take into consideration this particular fact. Again, and for me, this is a grey zone.

But back to intelligence. November, 2011 report on Iran, which was a very detailed, I think, a lot of information was there, but I personally follow Iranian issue for about 15 years. And in my files I have much more information. Or I should say it in a different way. I have more information in my files than when the report. And I use only open sources. It makes me be concerned that some countries which provided the intelligence information did that on selective basis. And if this is the case, how we can trust that information.

And again, unfortunately, I know at least two examples, two countries which provided information for that particular report, but did not provide some information which they do that.

I have my own view what it was the case, but again, it makes me to be suspicious or to be concerned how future this opportunity to provide intelligence information will be used.

And probably the final point here, that I think we need a new... not new safeguards system, but we need a new evolution of the system, because there's couple work to be done by becoming bigger and bigger. And again, if there is Iranian deal, which I hope will be signed, there will be a big amount of work for IAEA, so who will fund that? How will other areas of IAEA responsibility be affected, like technical cooperations, among others. And how to find the balance. So all this quite important so this new system should be understandable for the members of IAEA.

**RAFAEL GROSSI**

Thank you very much, Anton, for those first remarks. You are both pointing at this issue of the evolution of the safeguards system. And as you both, in a different way, but you both pointed out very clearly, history has shown that these adaptations or modifications, at least in the past 20 years or so, came as a result of a big challenge to the system, like you were saying what happened in Iraq was a determining factor, and Laura was mentioning other cases, North Korea of course.

My question to both of you would be what is the current crisis right now that justifies another step in the evolutionary history of safeguards, or it is not about a crisis or about an adaptation. Simply an evolution. Laura?

**LAURA ROCKWOOD**

First of all, I think, unfortunately, inertia being what it is, crises are things that get people's attention much more quickly than a gradual evolution of events. I don't see that we have an existing crisis in front of safeguards, but I think what we have in the case of Iran is an opportunity to grow, to evolve. So if I share your expression of hope that we eventually do get a deal with Iran and that we are able effectively to resolve concerns about possible military dimensions. And maybe in doing so, we will be able to develop better techniques using novel technologies, or novel applications of existing technologies.

So I think there are ways of defusing a crisis and I hope to God it doesn't come to another crisis that requires us to take another big look at safeguards and how we're doing it. And I think this is why in the IAEA they have a safeguards advisory group. It's designed to be one step ahead, to try to look ahead at what might happen instead of waiting until after the fact, and then trying to fix safeguards. So I like to think of it as an opportunity.

**RAFAEL GROSSI**

So you see it as more of an opportunity.

**LAURA ROCKWOOD**

Yes. I think it can be. I think it can be.

**RAFAEL GROSSI**

Very good. Anton?

**ANTON KHLOPKOV**

This is a good approach, to see it as an opportunity rather than a problem which we have to solve. But I think that there are a few factors, a few elements which made IAEA to make a new step in the evolution of IAEA safeguards. So it's a series of crises, like North Korea and like uranium, and, in spite of the process IAEA started purely but even in spite of lately the Fukushima, in spite of Fukushima, more and more countries with a few exceptions are planning to build new nuclear plants. It means that more and more possibility within the IAEA.

So all this, and probably financial crisis makes IAEA try to find a new... if not new format, but to improve cost efficiency both safeguard system. So my point that there are a few elements, a very few challenges which we face and all them try to make a new step in the evolvment of a healthier safeguard system.

**LAURA ROCKWOOD**

And that's in fact what led, what contributed to the next step, which was the state level concept.

**RAFAEL GROSSI**

Exactly. The discussion is leading nicely to tackling this issue, although this new incarnation, if you want, of the revolution of safeguards, which is going by the name of State-Level. Concept is not so new. It has been discussed for a number of years now, with different designations, different labels. But lately, and especially since the introduction of our document to the board of governors of the IAEA, in August 2013.

We've been having a discussion within the IAEA on this state level concept. Before getting into the critique of the concept, I would like to hear, in your own words, how you would describe... and perhaps I would start with Anton this time... this state level concept. What it is for you as an analyst in Moscow, this state level concept. How would you understand it?

**ANTON KHLOPKOV**

Well, first of all, there are very few new elements, which introduced. And the previous version of the title was information driven, which makes people much more concerned.

**LAURA ROCKWOOD**

Crazy.

**ANTON KHLOPKOV**

Yes, that's correct. Again, I think that the current developments of safeguards, its nature. And I don't see much opposition, even it is being portrayed as being some publications, and including by my good friends here in DC, that Russia gains state level concept. I don't think that this is the case, because if we would have a look on the history of Russia... Soviet Union at that time, and US started working together all the safeguards, almost from the very beginning. Both before NPT and then after NPT.

And it's in Russia's interest to keep countries like North Korea, like Iran which is much closer to Russia's border than in previous years, out of access to nuclear weapon technology. But what makes people concerned that, first, it may divide countries further. Now we have those who have, who have not. But again, if this criteria ... and I mentioned one of the examples, Republic of Korea, which makes me concerned, this example.

If we are not able to develop a kind of universal system, which means that at the beginning all countries are equal, it may, in the long term, create some... it may disincentivize some countries to be cooperating with IAEA.

And the second issue, which I mentioned, what sources of information IAEA will use, and how these sources, or how this information will be used, because, again, unfortunately during last few years there were a few examples, some of them I mentioned, which makes me, personally concerned.

But in general, again, from my point of view, this is in the nature of development of safeguards, when we are trying to find a way to reduce costs of the safeguards, especially in those cases where there is not any negative history. Why we should, let's say, visit Czech Republic often, only if they have a very good record. They don't have enrichment, they don't have reprocessing, etc.

But again, this system should be well developed, not to create new dividing lines, and not to be used to apply political pressure. The whole country should be treated as equal, based on that system.

### **RAFAEL GROSSI**

Very good. Laura, for you, what is the SLC?

### **LAURA ROCKWOOD**

It is what we have been doing since the mid-1990s, which is looking at the state as a whole, trying to figure out what does the state have? What do they not have? What does their nuclear fuel cycle look like? Is what we're seeing matching what the state is declaring?

It was indeed Iraq which forced the secretariat to lift up its head and think beyond just individual facilities to the state as a whole. And the theory was, if, by looking at the state as a whole with all the information available to it, the agency were able to confirm that there's no undeclared enrichment and no undeclared reprocessing, it could conceivably, in countries in particular that had larger nuclear fuel cycles, reduce their inspection effort, or reassign the inspection of it onto more proliferation sensitive parts of the fuel cycle.

Now very little of that information is intelligence. Is that a sexy topic? Does it make countries nervous that it can be misused? It not only makes countries nervous, but the IAEA is acutely aware of being whipsawed by fake intelligence. And in fact... and I mention this every opportunity I have... it was, indeed, the IAEA who determined in 2003 that the intelligence that it had been provided was fake.

So I think, by and large, the IAEA has a healthy respect for intelligence, and a healthy respect for the possibility of it being misused. And I think... obviously I would say this, but I think it's committed itself quite well.

On the idea of all countries being equal, you start out with an equal legal footing, but not everybody's country's nuclear fuel cycles, just to start with are the same. So it makes sense to make distinctions in how one implements safeguards. Not discrimination, but distinction. And is that a sensitive, is that a difficult, is that sometimes challenging? Sure. And I think the secretariat, by changing the terminology, unfortunately made states think this is brand new. We've never heard of this before. What are they doing? And I understand the use of the phrase information-driven suggested to people that, oh my gosh, that means they're not going to be working with intel.

Well that wasn't the case. The idea is safeguards is all information driven. Most of the information comes from the state. Comes from the verification activities. Some open source. Very minimal intelligence information. But it was an unfortunate use of words. So we don't use it anymore.

But unfortunately, with this change in terminology and a lack of historical knowledge, diplomats change, the people in Vienna aren't the same as they were 20 years ago. And I think the secretariat learned a really tough lesson over the last couple of years is the importance of bringing the member states along with it, instead of presenting it with something, assuming that the states would know the history and would be supportive of it.

In this issue of non-compliance, I think there are reasons to distinguish between states that have a history of concealment. In the case of Iran, you know that in 2003, we did uncover not just undeclared nuclear material and activities, but 20 years of deception. So I think that's what you're getting at that if you see the history of a state that is trying to conceal, you might want to take a closer look.

In the case of ROK, I think you're referring to a couple of years ago, when that became known, the IAEA and the government of South Korea actually cooperated quite well with a view to resolving those uncertainties. And in that case, there was no clear indication of an attempt by the government to conceal the fact that they had done that in the past. And that plays well. That plays well with the member states when the agency is able to report there's been considerable cooperation, as distinguished from other countries where that isn't the case.

**ANTON KHLOPKOV**

And may I ask here, and will it be considered for this criteria of past history, of cooperation between a country and IAEA within this new system?

**LAURA ROCKWOOD**

Again, it's not a new system.

**ANTON KHLOPKOV**

Okay, new brand.

**LAURA ROCKWOOD**

No. The next step in the evolution. Yes, it will. The state's willingness to cooperate, provide the agency inspectors with access, to help us resolve issues when we see them. You're going to get... and not just the secretariat, but the member states are going to feel more confident about a state's compliance if they have the impression that the state is interested in cooperating with the IAEA.

Is there a risk of subjectivity? Sure. But unless you want to revert to a strictly quantitative criteria-driven safeguards approach, you're going to have to - at least in the first instance - trust the secretariat to exercise some judgement. There has to be judgement exercised. Now, do the member states have a right to understand how that judgement is exercised? Absolutely. And I think, as I said, the secretariat has learned to be a bit more forthcoming about that. And if they get it wrong, they get it wrong, and the member states are right to go back to the secretariat and say, we don't like what we're seeing.

But as you talk about the evolution of how we approach safeguards, the next step... we were doing the safeguards as a whole and reducing safeguards in states where we had assurances of no undeclared, right? The next step is to look at states where we don't have an additional protocol and maybe even look at that and say, is there something we can do better? We're running out of resources. We can't keep hiring people, and we can't keep adding to the budget.

**RAFAEL GROSSI**

Some have said - and I'm playing a little bit of the Devil's Advocate here. Some have said, excuse me, the simplicity behind the SOC there is an attempt to introduce an Additional Protocol through the back door. What do you have to say about that? Do you think it's possible?

**ANTON KHLOPKOV**

Well, first the good news that we don't have many countries that are still out of the protocol. Second, and anyway, if a country has no protocol in force, it has different obligations, so any cooperation between any state and the IAEA has to be based on the legal state which they have. It means what kind of agreement or agreement plus protocol they have.

**LAURA ROCKWOOD**

I don't actually understand that whole concept of how the state-level concept is a way to back door into the Additional Protocol. On the contrary, it acknowledges that there are states who have chosen not to conclude an additional protocol. Notwithstanding, the secretariat would like to see if there are better ways of implementing safeguards in those countries. It cannot routinely go to the state and say, you have to give us a declaration of all the buildings on a site, for example.

I think that is one of those examples where I think that is a mischief question. I think there are lots of good questions and reasonable questions, but back door into the Additional Protocol, I don't get it.

**RAFAEL GROSSI**

The safeguard system as we know it, and as we knew it, was based on the application of safeguards criteria that have a tradition and have been applied. Another observation that we could see in this debate in the board of governors was that with the new system we would be moving to something which would not be unlike you were describing in the beginning. Something which would be equal for all, or none for all. But more of a tailor made approach, based on state specific factors, which would include, as you have been alluding, Anton, repeatedly, in your interventions, to, for example, the experience that the agency may have had in the past or the history of the application of safeguards in that country. Wouldn't that be a way to introduce a lot of uncertainty in how the safeguards system is applied? Or, on the contrary, is this the way forward? Is this the way to make the system more intelligent in the face of this, like you are saying, more facilities, more nuclear material in a way, less resources? What do you think?

**ANTON KHLOPKOV**

First, it goes without saying that we have to develop a new step in the safeguards. Second, the old approach, which was before Iraq, it just would not work under current circumstances because it failed. So again, additional protocols is a natural development.

But when I'm saying it should be equal for all as a starting point, but Laura, I agree with you, that if you have reprocessing and enrichment, it should be different, so you should have some extra attention, I would put it on this way, on the countries which don't have. But all these criteria should be understandable from the very beginning for every country, what the responsibility is, what steps to be done by a country to meet these criteria.

**RAFAEL GROSSI**

How do you see that?

**LAURA ROCKWOOD**

I think that is not an unreasonable position to take. And it is my understanding that these state level approaches are worked out in consultation with the state concerned, so that they understand why the agency is putting the resources where they're doing, or what the specific nature is of any particular concern.

And that's an important thing to remember that people might not be aware of is any time the secretariat identifies a concern or an anomaly that it doesn't understand, one of the first things it does is reaches out to the country concerned and says, we're seeing this problem. Can you help us understand where it's coming from?

So I think there's probably more transparency than people might imagine. But I think it's absolutely reasonable for states to want to know, on the basis of what are you developing, this particular approach for my country. I'd like to think that they do do that, and we have some people in the room who might be able to confirm that.

**RAFAEL GROSSI**

Talking about that, I think it's time to open the discussion with our audience here, which includes a number of experts in the field. What we have seen throughout this very brief discussion of such a fascinating and complex topic is that we do have a system which has evolved, which is very necessary. That suffered serious setbacks in the past. That addressed those... I'm allowing for time so the line is getting... no, that went through these setbacks and processed those setbacks in a number of ways, most notably through the introduction of the Additional Protocol.

And now with the introduction of the state level concept which is, we must say something that is still work in progress. It's not something that... it's been applied to countries having integrated safeguards, 53 of them, so there is a good number on which the system is not being tested or applied, and it's an ongoing debate, which makes it all the more fascinating. So let's get started with your views and your questions. And please remember to mention your name, affiliation, and put your question. Thank you very much.

**Q**

My name is [unclear]. I am a Senior Researcher at the Danish Institute for International Studies. As both the panelists know, I am doing a lot of work currently looking at the very front end of the fuel cycle. And so my question is actually for Laura, in terms of the reinterpretation of paragraph 34c. And how the IAEA has been moving to capture more of the material at the front end of the fuel cycle. And particularly, and this is done through the policy paper series. Policy paper 18 brought it basically to the point of urinal nitrate and then policy paper 21 is bringing it almost to the Middle East in some countries.

But my question is, going by what both you and Anton have said, that the agency needs to be very clearly articulate what the obligations are with states, the policy papers are not made public. So if you're a newbie coming to the fuel cycle, you really are kind of... you don't have that information from the beginning. So if you can maybe give a little bit of the history as to why these policy papers... one, legally how do they work, and then why are they actually not made public, if they are so important to when full scope safeguards are put in place.

**RAFAEL GROSSI**

That's a very clear question. Who would like to start?

**ANTON KHLOPKOV**

I guess it's for you.

**LAURA ROCKWOOD**

I hoped you were going to take this. To be honest, Cindy, I don't know... I should know, but I'm not familiar with the history about why policy papers are not made public. But just a little bit of clarification. Paragraph 34c of the NSERC 153 says that material of a certain composition and purity should become subject to all of the other safeguards' provisions, inspections, reporting, etc. Material that comes before that, there are some reporting obligations with respect to that material, but not if it's in the mine, okay? So that's what we call pre-34c material.

Now the question isn't moving back the point of 34c. The question is, what are the appropriate levels of purity, and what are the appropriate compositions that are suitable for fuel fabrication or isotopic enrichment? It's not the definition that changes. It's the technology that changes. So before, you might have had material... you might have uranium or concentrate that you would never have considered 34c material, but if you have companies and countries advertising that they have uranium or concentrate that you can use in fuel fabrication, that's the change. It's not a change in where 34c kicks in.

But it's a good question. I think the secretariat is going to have to be a little bit clearer about some of these aspects. And I think that's one of the areas where it could afford to be a little bit more forthcoming about how they're struggling with this. How you make sure you safeguard the stuff you need to safeguard, and don't allow gaps in the system to be created. But making rational distinctions on what material is of a suitable purity. Certainly commercial scale purity isn't enough, because if you have someone who's committed proliferators, they're going to probably be happy to mess up their centrifuge enrichment capability by using less pure material. So you have to be careful about that. But good question about the policy papers.

**Q**

I'm Trevor Finlay, I'm from the Managing the Atom Project at Harvard University. And Anton, I had a question for you. As an independent observer of Russian policy, I wonder if you could help us understand Russia's apparent obsession with the state-level concept. I was at the safeguard symposium in Vienna, the last one held, and the Russian delegation, they critiqued the state level concept paper from the secretariat almost to death. They nitpicked the language. They almost... they verged on harassing the secretariat about the meaning of the paper. And Russia has been a strong supporter of safeguards. It doesn't have a comprehensive safeguards agreement, and it does make you wonder what the motivations of the Russian delegation are. It didn't come across as a country that was overly concerned about other countries misusing the critique of a state level concept for their own nefarious purposes. So I'd appreciate your commentary on that.

**ANTON KHLOPKOV**

Thank you, Trevor for your good question, but I think it's very difficult to comment on official position, but I will try. First, if you will have a look on the history, I think, for the first time, Russia objected against that concept at the general conference in 2012.

**LAURA ROCKWOOD**

It was a little bit before that, but that was the big objection, yes.

**ANTON KHLOPKOV**

Okay, before that. So if we have a look what happened during the previous 12 months. November 2011, a report on Iran. No fly zone over Libya. Because, I think the obsession in Russia was very strong how international organisations decision may be misused. I think there was something else in March.

**RAFAEL GROSSI**

So the idea would be that the SOC would be part of this misuse of information.

**ANTON KHLOPKOV**

That IAEA, which is a technical board, can be used as political organisation to apply additional pressure on a country. So again, at least a couple of examples, if the third one will come back to my mind, I will mention it later. But again, I don't think that there is a problem within Russia with the state level concept in general. But as usual, the devil is in the details.

**Q**

Mark Goodman, US Department of State. First, just a quick comment on the ROK. To make clear that the ROK found out about these undeclared activities in the process of developing its initial declaration of the additional protocol, and voluntarily reported them, so I think that's an important factor. These weren't state driven activities that somehow had been concealed, but they were activities uncovered by the state in the process of implementing safeguards.

The question I want to ask for both of you, actually, is a concern about what is it that drives safeguards? Obviously the term information driven was an unfortunate choice. I prefer to think of safeguards as being driven by specific objectives. You want to provide assurances. You want to have a probability of detecting things in order to provide credible assurances.

But Anton, your intervention suggested that resources may be driving safeguards. And one of my concerns is that in implementing safeguards at the state level, with a very flexible approach, with no fixed technical criteria that you're assessing all states by the same way. You're not driven by the criteria, how can you be sure that the safeguards system is still performing effectively? Efficiency means that you're doing the same work for less money. But maybe you're just doing a less good job with less money, and maybe the safeguards system will fail. So how in the state level concept can you prevent the system from becoming too thin and not even knowing about it?

**ANTON KHLOPKOV**

First of all, objectiveness is a big issue for safeguards, and I do not suggest to use financing as the key element. This is just one of the issue which can provide the limit what agency or any organisation can do. But again, to raise finding, not the first goal of agency, to be clear. The first goal among others, peaceful use, technical cooperation to detect or to confirm that there is no undeclared activity, or all materials which are safeguarded, so they are used for peaceful purpose only.

So I agree, and again, this is one of my point, that we should develop set of criteria which, as much as possible should be objective. Whether agency is able to do that among those criteria which I have seen, I think, and Laura mentioned that there are still some subjective. But again, and I think we should try to address concerns of countries in this particular area on this particular criteria as much as possible. But I think we should be realistic. We should be realistic. But again, if we are able to use only math and physics to develop the safeguard system or a new stage of the safeguard system development, it will be just perfect. But I am not sure that there are any practical proposal.

### **RAFAEL GROSSI**

For you, are resources an issue?

### **LAURA ROCKWOOD**

Resources are an issue. They shouldn't be a driving factor, but by the same token, assuming you had a static situation, no additional facilities, no additional nuclear material, it doesn't mean you shouldn't look into ways to be more efficient. But Anton's absolutely right. It shouldn't be about the money, and if there is a value to nuclear non-proliferation, I think it is a shared value among all the member states of the agency, and I think that's important. You either want a good system or you don't want a good system. Or maybe it's just not worth it for you to pay that.

I think the secretariat has tried to develop criteria and I think the process over the last year and a half has forced a little bit more intellectual rigour into that process. They will continue to use the safeguards criteria for nuclear materials accountancy, as I understand it, and so I think there will always be an element of the quantitative about it. And I don't see how you can get away from the idea that there has to be an element of judgement in what the secretariat does. You don't want it to be arbitrary. You don't want it to be entirely subjective. But you want a secretariat that goes, yes, I think we have a problem.

### **Q**

Andreas Persbo Director of Vertic. First let me support what Cindy said about the transparency within the IAEA. I've been going to general conferences now for 10 years, as a non-governmental representative, and I've seen it go from an organisation with remarkable transparency to an organisation that is increasingly closing its doors. And it relates not only to access to documentation information but also access to meetings. Something that once was ingrained in the Vienna spirit, and it is today no longer there, sadly. So it's a very important call that Cindy's making.

And while we're at it, why not, for instance, make the safeguards implementation report publicly available on the agency website, because that would really help in getting further understanding about safeguards.

My question relates to a state level concept but perhaps the role of the secretariat itself. I once asked former DG, Hans Blix, how he managed to push through the additional protocol in a time when the European Union wanted to reduce the budget, etc. And he said one word, persistence.

Now the secretariat's role is critical, obviously, and great credit to people within the secretariat that defended the state level concept. But it was a divisive and upsetting debate. So my question is open-ended. What could the secretariat have done to avoid a debate? What measures could the secretariat have taken to forestall and perhaps prevent Russian interventions, misconceptions about the safeguard system, and an authority and legalistic debate that frankly - I'm going to use the word, - it's a bit ridiculous. Thank you.

**LAURA ROCKWOOD**

Tell us how you really feel.

**RAFAEL GROSSI**

Quick reaction?

**LAURA ROCKWOOD**

Quick reaction. The secretariat has, over the years, made numerous proposals to the board that it release the SIR. I personally think it should be done. And in terms of what the secretariat might have been able to do, I think started consultations at a much earlier point in time, and perhaps reach out to those whom we already know are a little bit suspicious about where the agency's going with safeguards. Consult with them, find out where the problems are, fix those problems, or at least understand them. So I think starting earlier in the process is how we manage 93 plus two. And I can't tell you the number of hours we put into advanced consultation, individual, bilateral, multilateral consultations. There's nothing that replaces that.

**Q**

Joseph DeThomas, formerly of the Department of State, currently with Pennsylvania State University. I think most of us in this conference are worried that the negotiators in Switzerland might not succeed at getting an Iran agreement. But I've begun to wonder if people who support the agency might not be more afraid if we get one. Largely because there will be such a heavy role on verification and monitoring for the agency in what is going to be a very toxic environment here in the United States on this agreement. How do you think the agency can go about establishing its credibility to what is going to be a very sceptical group of people here in the United States about their ability to monitor this agreement and lay out what you can and cannot do, and the pace at which you can do it, since here in the US this big fear about the break out of Iran in a short period of time is theoretically the driving force behind this opposition.

**RAFAEL GROSSI**

It's an excellent question. May I, as being the only Governor on the panel say something about the discussions we are having at the board right now? Yesterday, I think a question was put to the DG, and he answered, yes, to all of the above. But that leaves us, of course, with some anxiety what this could mean.

I believe that quite clearly already now, you can see, even within the limits of the GPOA that the agency has spent around 10 million Euro on top of what had already been spent on Iran on an agreement which, as you know it, is quite limited. If we succeed, and I think we all want a good agreement, then the challenge will be huge. Especially since realistically one can not expect member states to accept or to agree to a budget that would include that sort of increases. And there is a legal issue on agreeing to mainstreaming verification measures that are being paid by

voluntary contributions. Now you can do it, because it's a specific agreement. There has been a specific request to the board, and we agreed. So it's a huge challenge.

Not to speak about the challenge in terms of human resources that this will put, because we have a whole lot of countries to inspect, not only Iran. So I believe there is going to be... well, if this happens now, there's going to be a need for an additional budget. There's no other way around it. So there will be negotiation about that. And it might be extremely difficult. So I hope there is some serious thinking about this in the course of some of the deliberations in the board. Some governors have pointed to this, and I'm sure that the agency is looking into this. But it's a very pertinent question.

#### **ANTON KHLOPKOV**

Just that we should not forget that if a deal is reached, so verification and extra control from IAEA will take at least 10 years. That is in the media. So it is not just one year effort. It will take years. So a strategy of IAEA on how to fund that, how to bring new human resources, should be developed quite well.

#### **Q**

Hallie Wasalia from SVD Pakistan. With regards to the evolution of safeguards, the state level approach and integrated safeguards, they were formally approved by the policy organs or IAEA. Why wasn't it felt necessary to seek a formal approval for state level concept? And secondly a related question to this, would SLC be administered automatically with any member state having a safeguards agreement or does it require state consent, with regards to...

#### **RAFAEL GROSSI**

It hasn't been approved by the board of governors. The board of governors has taken note of the state level concept, as introduced by the technical secretariat. So there's a big debate about the need to this be approved or not, and that was part of the political discussion. And I think wisely the secretariat chose to simply request states to take note of it, and also listen to what the secretariat had to say in terms of engaging, communicating, and consulting with countries. It's a political safeguard. It's a politically sensitive issue for some countries whether they need to or must accept this.

#### **LAURA ROCKWOOD**

He's absolutely right. I just wanted to point out that when we first introduced integrated safeguards to the board of governors, again, it was not to seek the permission or the approval of the board, but to put them on notice as to where the secretariat was going. Certainly to give the member states an opportunity to say, we don't like that. But not formally required to get the approval.

Eventually the state level concept might be applicable in some respects to the 66 agreements and VOAs but in my own personal view of marginal utility.

#### **Q**

Mark Hibbs in the Carnegie Endowment. There's been some recent discussion about the value of the broader conclusion. When we look at the political significance of what the broader conclusion implies and means for a country, doesn't that almost, to be provocative, ensure us that we will never have a broader conclusion revoked or suspended? Conversely, we might also consider whether, for a few cases, including Iran, that again, significance of the broader

conclusion, what it implies, might mean operationally that Iran might never get a broader conclusion for the same reasons.

### **LAURA ROCKWOOD**

Very quickly, it's not a question of revoking or suspending a broader conclusion. Every year, those decisions have to be taken for the previous year. So it's not a question of revoking, and I would like us to get out of that mindset, of talking, because I'm afraid that might happen, Mark, is that it becomes so politicised that people go, oh, my gosh, you can't not give me the broader conclusion once you've given it. There can be any number of reasons why the secretariat is unable as a technical matter to reaffirm that conclusion in any given year.

You could have an inability of a state to provide access. Is it the state's fault? Not necessarily. I can name a couple of situations where it's probably not the state concerned's fault. But if the agency isn't able to carry out the access, get the information that is required under the safeguard, through no fault of the state alone, you don't do safeguards and the international community any favour by continuing to draw a broader conclusion in that kind of a circumstance. I think you undercut the credibility of safeguards.

**Q:**

[Unclear] Hussein from [unclear] College of Canada. Definitely mention that the additional protocol is for use according to the lesson we learned from Iraq situation. And now for years of negotiation in that Iran situation, what do you see that we need additional staff to the safeguard protocols according to the lessons learned from Iran situation?

### **ANTON KHLOPKOV**

I think we should, but to be frank, I think that first Additional Protocol creates quite a number of opportunities to verify. And second, as we discussed, there is a natural new step of development for evolution of safeguards. So I think we should first accommodate what has already been on the table, and again, I mention as a positive example that we have 124 countries which implement additional protocol. But again, some work to be done. And it should be step by step development.

### **RAFAEL GROSSI**

Thank you very much. I think we've come to the end of what has been, I believe, a very interesting opportunity to discuss these issues. I think... and I would like to go back to some of the comments that were made at the start of our conversation. I think Laura said something which I think is so important. Safeguards are so essential to international peace and security that we do need unanimity. We do need a conviction that they are needed, that they are applied in a comprehensive, in a thorough, and in an efficient manner. And I believe that we are... everybody is in agreement with this, which is so important.

The system is evolving. There are a few challenges, as we can see. Systemic, but also derived from political circumstances that are there, and that we must face together. But I think it's important that this community, the expert community and member states alike, are all united in supporting the importance of a strong, robust, system of safeguards, which is equal for all, which does mean it is identical in its characteristics. But it is there, as a real pillar of non-proliferation and peaceful uses of nuclear energy.

Thank you for this opportunity. Let us give an applause to our experts here who have done a tremendous job. Thank you very much.