

RESUMED

[3.00 pm]

30 COMMISSIONER: It's 1500 and we'll reconvene. The topic is topic 12,
Insuring Against Nuclear Accident, and I welcome Steve McIntosh from
ANSTO. Counsel.

35 MR JACOBI: It is significant to a consideration of the potential risks of
nuclear activities that there are clear and reliable processes that provide the
means for compensation of losses suffered by individuals and organisations
which are caused by those activities. That requires consideration of the rules
governing legal liability for such events, the availability and conditions of
insurance, and the extent to which costs associated with the activity will
respectively be borne by operators, insurers and government.

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45 The key principles governing liability for and the insurance of nuclear
activities are addressed in a number of key international instruments, the
earliest out of, respectively, the Paris and Vienna Conventions and Brussels
Supplementary Convention entered into in the 1960s, and then more recently
their modernisation by the protocol to amend the Vienna Convention and the

Convention on Supplementary Compensation both in 1977 and the protocols revised in the Paris and Brussels Conventions in 2004.

5 The purpose of this session is to explain the effect of the interaction of those requirements in plain terms. That is important because those conventions introduce key concepts to govern the availability of compensation, including defining who is responsible, whether it is through fault or cause, the minimum amounts of compensation that need to be held by operators, the ability to differentiate between parties that have sustained loss, the limitations on time in 10 which claims can be brought, and the requirement to have insurance and the place in which claims can be brought. In that context, it is important to understand the need for their implementation in domestic law of the country if it was minded to embark on fuel cycle activities.

15 Aside from the legal requirements, it is necessary to consider the availability of insurance markets to assume risks associated with nuclear accidents, and that requires an understanding of the source of funds for insurance of nuclear activities and the extent of any demonstrated willingness to pool risks and for insurance markets to have the capacity to take on those risks.

20 Mr Steven McIntosh is the senior manager of government and international affairs at ANSTO, and is the chair of the IAEA's International Expert Group on Nuclear Liability, INLEX, which provides advice to the IAEA director general. He has previously worked in the legal office at the Department of Foreign 25 Affairs and Trade and at the Australian Permanent Mission to Vienna where he represented Australia in discussion and negotiations on a wide range of nuclear and arms control issues. In 2000, Mr McIntosh joined ANSTO where his work is focused on government and international liaison and policy. He assumed the position of senior manager of ANSTO's government and international affairs 30 team in July of 2015, and the Commission calls Mr Steven McIntosh.

COMMISSIONER: Mr McIntosh, thanks for joining us. I might start with the broader question. Have you been to Fukushima and seen the enormous clean-up that's going on at the moment, and also the dislocation of people? I 35 was just wondering whether that accident has changed anything in terms of the nuclear insurance industry.

MR MCINTOSH: Following the Fukushima accident, as part of the overall action plan on nuclear safety was adopted by the IAEA, INLEX was asked to 40 look at lessons learned from Fukushima, and we looked the way that compensation was being paid, because by then a lot of compensation had already been paid out. The Japanese had set up particular mechanisms to enable the payment of compensation, and that all seemed to be working very well. Japan, though at that stage not a party to any of the conventions, had 45 domestic law which was consistent with those conventions. So the liability

principles, the principles of nuclear liability, were reflected in their law.

And as I say, that was all working well in terms of who you sued and the principles under which people were compensated. The big issue was clearly
5 the inadequacy of the amounts of compensation provided for in the conventions as compared to the actual quantum of damage suffered in Japan. Now, the Japanese had put in place a particular mechanism by which the government is effectively loaning money to - TEPCO remains exclusively liable legally, but the government is effectively loaning money to TEPCO to
10 keep it as a going concern with that money to be repaid to government out of future revenues.

So it's clear that the amount set in the conventions weren't sufficient, and so the lesson that INLEX drew - INLEX made a set of recommendations, which can
15 be found on the IEA website, about a year or so after the accident, and the major lesson that we drew was the need for countries to look at the liability amounts prescribed in their legislation, noting that there's a trend globally towards unlimited liability, and also to look at the insurance amounts in their legislation, because whatever you say about unlimited liability, if the funds
20 aren't there, it's a theoretical rather than a real amount of compensation that's available, and to require increased amounts of financial security is dependent upon how much capacity there is in the insurance market, and that increases every year.

25 One of our recommendations was for countries to remain in dialogue with the insurance providers about the amount of capacity that was available with a view to increasing their national insurance amounts on a regular basis.

COMMISSIONER: I think we might try now and go for a broad
30 understanding of the conventions, and then I'd like to come back and talk about the next step were we to pursue this.

MR MCINTOSH: Yes.

35 COMMISSIONER: Mr Jacobi.

MR JACOBI: Perhaps if I can start with, in broad terms, the conventions you've think we've already referred to in the context statement. I just want to pick out - and perhaps you can offer, before we move to the practical, the key
40 pathways that those conventions have taken. I'm just interested in what the reason for the updating was in the mid-90s, and what it was that that sought to address as compared to the conventions as they stood in the 60s.

MR MCINTOSH: Right. Okay. So the conventions that were developed in
45 the 60s reflected the legal principles that were in place at that time, except they

had the innovation, I guess, of channelling of liability to the operator, and they set compensation amounts which, while they were fine in the early 60s, hadn't kept paced or hadn't moved at all in response to inflation. So the lesson from the Chernobyl accident - now, the Soviet Union wasn't a party to any of
5 conventions, and all the compensation paid as a result of that accident is a sort of grace-and-favour payment from the Soviet government or the government of the successor states of the Soviet Union. They accepted no legal obligation to pay compensation.

10 But clearly it was felt that the Chernobyl accident reminded people, if you like, that the amounts were, by then, very inadequate, and also reminded people though the definition of damage which was set in the 1960s reflected general notions of damage at that time, it no longer reflected developments in the law in the 30 odd years since that was set. So the definitions of damage were
15 expanded in the 1990 negotiations.

MR JACOBI: As I understand it, there are some strands which the treaties or agreements follow. I'm just wondering whether perhaps in simplified terms you can explain those two key strands that the international agreements follow.
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MR MCINTOSH: Well, I guess there's the Paris Convention. So the first convention negotiated was under the auspices of the OECD Nuclear Energy Agency and was supposed to be open to all members of the OECD, though in practice, it's turned out that only states from western Europe have ratified that set of treaties. Then the IAEA as the global body followed suit with the
25 Vienna Convention. At the time, there seems to have been some thought that with the Vienna Convention coming in that the Paris Convention states would give up the Paris Convention and join the Vienna Convention so there was a single global regime, but mainly political reasons and reasons to do with what was then the nascent European integration story which has culminated in the
30 EU, the Paris Convention states preferred to remain outside the Vienna Convention structure.

And that has been also compounded over the years by the fact that the Paris
35 Convention states, being wealthy western European states, felt able to increase their compensation amounts to amounts which are comfortably in excess of the amounts available under the Vienna Convention. They've basically said, "Why should we go backwards to go back to the Vienna Convention amounts when our conventions provide higher amounts of compensation."
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MR JACOBI: And notwithstanding those different strands, is it meaningful to speak of the idea that there are some common principles across those conventions?

45 MR MCINTOSH: Yes, definitely. The differences between the two strands

are fairly minor; the principles are common.

MR JACOBI: Can I come to some of the key concepts that underpin the conventions, and to the extent to which there's a difference, perhaps we can
5 address it as we go - - -

MR MCINTOSH: Yes.

MR JACOBI: - - - but I understand there are a number of key concepts,
10 particular the definition of "nuclear damage" and the definition of "nuclear incident" and I'm just interested to perhaps deal with each in turn.

MR MCINTOSH: Yes.

15 MR JACOBI: I'm just interested in understanding what the scope of what's covered within the concept of what is nuclear damage.

MR MCINTOSH: So it's damage caused by ionising radiation, from fuel
20 cycle activities beyond uranium mining and milling; it's considered that the risks inherent in that are low and can be dealt with via normal tort law, because people are conscious that the nuclear liability regime is a special regime and should be reserved for risks of the idea of a particular magnitude.

25 But, it covers everything basically from the enrichment step forward in the fuel cycle, right to the end of the waste disposal operation.

MR JACOBI: Perhaps just picking up the issue of the activities that are covered, we'd move from enrichment on, and the only process that I guess we've not picked up and addressed in that is conversion.

30 MR MCINTOSH: Yes.

MR JACOBI: Are you able to explain the nature of the coverage that's associated with conversion?

35 MR MCINTOSH: Conversion - there's never been an ionising radiation incident in a conversion plant, so it's never been tested. No-one's ever had to interpret the somewhat arcane definitions in the conventions to see whether a conversion plant falls inside or outside. I think the better view is that because
40 there's an exclusion for natural uranium, and conversion involves natural uranium, and the risks at the conversion stage are primarily chemical rather than radiological, that conversion probably falls outside the scope of the regime.

45 But there would certainly be no issue if there was a policy view in Australia for

instance, that conversion should be covered by the regime. There would be no issue with the legislation providing that.

5 MR JACOBI: Coming back to the issue of nuclear damage, what's within the conception of what is "damage" within that definition?

MR MCINTOSH: The concept of nuclear damage is a fairly broad one; certainly in the 1990s convention, so it includes loss of life or personal injury, it includes property damage, it includes a couple of forms of compensation for environmental damage, it includes - - -

MR JACOBI: What about economic loss?

15 MR MCINTOSH: Yes, it includes economic loss; certainly a lot of the damage that's been compensated in Japan has been economic loss because as you know, because of the evacuations, the direct radiological impact upon people wasn't that large, but the costs of businesses having to close down or relocate, the costs of people having to be housed elsewhere and so on is the real big quantum of the damage from Fukushima.

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MR JACOBI: Again, I want to focus on the updated convention - - -

MR MCINTOSH: Yes.

25 MR JACOBI: - - - I'm not so much concerned about any historical exercise with respect to the definitions - - -

MR MCINTOSH: Yes.

30 MR JACOBI: - - - but as the position stands today under the conventions. You talked about some forms of environmental damage, can you explain what they are?

35 MR MCINTOSH: It's the concept of what's called pure environment vehicle damage; I think we felt during the negotiations was too difficult to quantify: what's the cost of, let's say, damage to a forest. There's a forest near Chernobyl which is still very badly contaminated. How do you quantify compensation for that in a civil liability system? It was felt that was too difficult to do, and that should be left to the criminal or administrative law as a fine, if you like.

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45 But on the other hand, the cost of cleaning up a forest, or cleaning up a contaminated water course or whatever, was felt to be something that you could assess a cost on, and attach a compensation bill to. So the cost of remediating impaired environment is the term that's used, so the cost of a

clean-up after an accident is something that the operator is liable for under the 1990s conventions, and economic loss consequential on damage to the environment.

5 So if you ran a business adjacent to a national park for instance, and the national park was contaminated as a result of the accident, and as a result people stopped coming to your hotel or restaurant or whatever it was, you can, under the 1990s conventions recover compensation for that, because again, you can quantify what that is. “Last year I had 5000 customers, this year I had 50
10 customers,” and you can work out what the compensation bill for that is. Again, that’s quantifiable and it’s covered.

MR JACOBI: In the submissions that the Commission’s received, there’s been some suggestion that the definition of nuclear damage is restrictive, and
15 I’m just interested to the extent to which it doesn’t cover some forms of compensable damage that might otherwise be recoverable in a common law court.

MR MCINTOSH: Look, the only reason that it was decided to, in the 1990s
20 conventions to stick to an enumerated heads of damage - there was a school of thought that we should just say, “All damage.” The reason why that was resisted is because other states didn’t want to be bound to the United States’ concept of punitive damages.

25 Punitive damages in the United States can be very large; other countries say, “The concept doesn’t even exist in our law,” particularly under the convention on supplementary compensation, where other countries are contributing to the coffers of compensation of a serious accident, the concept that fringe tax payers would be paying money into a fund which was used to compensate
30 damage which wasn’t even recognised under French law, which is punitive damage, was one that other countries couldn’t go with. And the Americans accepted that.

35 But the idea was, “Let’s enumerate every other possible head of damage, where the damage can be quantified.”

MR JACOBI: So am I right in the sense that, is there a mirroring between what a lawyer might describe as the relevant heads of damage that are available in a civil claim in a common law court, and the heads of damage that are
40 available under the Instruments Act?

MR MCINTOSH: Yes, yes.

MR JACOBI: I think we’ve dealt with damage somewhat exhaustively, and
45 I’m just interested to deal with what is an incident, for the purposes of the

conventions.

MR MCINTOSH: It's anything which causes a release of ionising radiation, which causes damage.

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MR JACOBI: Now, the regimes themselves, I think you've already referred to it, are founded upon a series of principles.

MR MCINTOSH: Yes.

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MR JACOBI: It was those principles that I was hoping to go through and discuss.

MR MCINTOSH: Yes.

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MR JACOBI: Some of them have been the subject of comment in the submissions the Commission's received. The first of those is a principle of channelling; I wondered whether you might be able to explain what "channelling" is, and then who the channelling is to.

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MR MCINTOSH: Yes. The idea of channelling is that in the case of an accident, there is certainty about who the victim needs to sue, who needs to be pursued for compensation, and that avoids the issue of cross claims between various defendants, and potential money which should've been available for compensating victims being chewed up in cross claims between potential multiple defendants.

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It also allows for the available insurance capacity in a particular country to be devoted to the liable entity, rather than all the people involved in the supply chain having to get their own insurance. And the liable entity is the operator of the facility, which generally, under most legal systems will be the organisation which has the licence to operate the facility.

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MR JACOBI: In the submissions the Commission has received, there's been some criticism of the channelling to operators, and I've wondered whether you're aware of there being any controversy about the concept of not including suppliers, that is, those that build plants or those that are the vendors that construct plants.

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MR MCINTOSH: Yes. As I say, if the issue is to ensure that the victims receive the maximum compensation and receive it promptly, rather than being bogged down in legal debate about exactly who's responsible, for years, well then the fact that there's only one liable defendant simplifies that claims procedure. For instance in Fukushima, accident case, I think the number is around 97 per cent of claims have gone to a specially constituted tribunal rather

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than through the court system which meant the compensation was being paid promptly and fully rather than being bogged down in legal argument. If the aim is – of the exercise is to punish wrongdoers, I guess, if that is how it is seen, well then yes there is an argument. But if the aim is to provide
5 compensation to victims the channelling of liability in my opinion is clearly the superior mechanism.

MR JACOBI: And at this point, we've, I think addressed in terms of facilities, can we come to the top of the transport - - -
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MR MCINTOSH: Yes.

MR JACOBI: - - - and I am just interested to understand how channelling to – channel with liability operates in that particular case?
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MR MCINTOSH: The general principle is that the liability lies with an operator of either the nuclear facility from which the material was sent or the facility to which the material is being sent, rather than the carrier. Carriers – transport companies aren't going to have the capacity to get the sort of
20 insurance required under the nuclear liability conventions and so it goes to either the sending operator or the receiving operator. Which one of those it is is generally determined by way of the contract between the two operators. For example, spent fuel ship ANSTO has undertaken in the past the contract with the receiving facility has made it clear where the point of handover of liability
25 is. Now if the – in the case which frankly I can't conceive of but the conventions do have a fallback position if the contract doesn't provide, which is that the sending operator is liable until it is received at the premises of the receiving operator and that is on the basis that the sending operator has packed the material, so if something went wrong and there was a release during the
30 course of the shipment it is equitable that the sending operator is the liable operator.

MR JACOBI: Can I move on to the basis on which liability is determined and the question of fault - - -
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MR MCINTOSH: Mm'hm.

MR JACOBI: - - - and I am just interested to understand the rationale for the choice with respect to the selection of strict liabilities, the basis for that?
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MR MCINTOSH: The rationale was that in many countries there was already a concept of strict liability for organisations carrying on hazardous activities. So the Riles v Fletcher, one of the cases that I did at law school many years ago established that as a general principle of the common law and as a similar
45 principle under civil law. So in a sense it's codifying what already the

understanding was but the nuclear industry is a hazardous activity and in those cases it was appropriate to have absolute or strict liability apply.

MR JACOBI: And in terms of – are there exceptions to that scenario?

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MR MCINTOSH: There is; under the old conventions there were two exceptions and the more modernised conventions removed one of those. So the one that is still there is an act of war, or major civil conflict. That principle does not exonerate operators from liability in the case of a terrorist attack because a terrorist attack falls short of that threshold of war or a war like event. And that is consistent with the general concept which the channelling of liability also reflects, which is that the operator of a facility bears the primary responsibility for its safety and its security. And the fact that liability is channelled on to the operator is consistent with that general principle of nuclear safety and security. Sorry, the other exception which existed in the older conventions was a grey of natural disaster of an exceptional character. Now that exists and it actually appears still in Japanese law but it wasn't available to TEPCO for the Fukushima accident. They felt that it wasn't exceptional enough for that exemption to apply. Now if it didn't apply in the case of Fukushima it is difficult to conceive of circumstances where a court would apply it frankly.

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MR JACOBI: I think to pick up where the Commissioner started - - -

25 MR MCINTOSH: Mm'hm.

MR JACOBI: - - - the conventions contained a principle that provides for the limitation of the amount of liability.

30 MR MCINTOSH: Mm'hm.

MR JACOBI: And I am just interested to understand perhaps first of all, whether that is still an underpinning principle that is admitted under the code and if so why?

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MR MCINTOSH: It is an underlying principle that is still reflected. Though an increasing number of countries are moving to unlimited liability. Germany, Switzerland, Japan, Finland has recently moved, Sweden has either moved or about to move. So there is an increasing trend towards unlimited liability. However a number of countries still have caps on liability. Some of it is based – in the early days, some of it was based upon the need to encourage the industry but the other factor that was in play, even in the 1990s was a feeling that the cap on liability should match the amount of insurance that was available in the international nuclear insurance marketplace. So at that stage, the insurers were saying we can make about 300 million special drawing rights

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available as an insurance amount and that's the basis of the insurance amounts that are in Vienna and the CSC. By 2004, they were saying we can make a bit more available, probably about 700 million Euros and that's the basis for the amount that's in (indistinct) Paris. These days the Belgian national legislation for instance still has an amount, there's 1.2 billion Euros on the basis that the insurers can step up that sort of money these days. The insurers are gradually getting more sophisticated in their reinsurance mechanisms in particular, so that these days for a serious nuclear accident you would expect most of the major insurers from around the world to contribute in some way or another to paying the bill.

MR JACOBI: I am just wondering whether perhaps you can tie that back to the recommendation that INLEX made, I think coming back to the start.

MR MCINTOSH: Yes.

MR JACOBI: Against that backdrop what was the precise recommendation that INLEX made?

MR MCINTOSH: Well, it made two recommendations. One is that the – if you were still going to have a limit in your national law, and we did explicitly note there was a trend towards unlimited liability, but if you were still going to have a limit in your national law, you should really look at it in the light of the quantum of damage from Fukushima and consider whether that amount was adequate. And the second was you should look at the insurance amount because even if you have unlimited liability, there is no such thing as unlimited insurance. No one can go to an insurer and say can you provide me unlimited insurance. That just doesn't happen, so you still have to – even if you have unlimited liability, you have to have a set insurance or other financial security amount that that should be subject to regular review in the light of capacity in the global insurance market.

MR JACOBI: I think coming to the question of insurance and one of the principles concerns financial coverage - - -

MR MCINTOSH: Mm'hm.

MR JACOBI: - - - I am just wondering if you can explain precisely what the conventions require in that respect?

MR MCINTOSH: So basically they require the operator to hold insurance or other financial security to a specified amount. So you could have unlimited liability as we see in many areas of tort law but if we take the Bhopal chemical accident in India for an example, there was no limit in Indian law on the liability of the operator of that facility but they simply declared bankruptcy and

most victims of the accident were largely uncompensated. So the intent in the nuclear liability convention is to provide that there is money available in the case of an accident. And the idea has been to provide that there is a maximum amount which is available in the insurance market, is available, is prescribed and so that there is money available to pay compensation in the event of an accident.

MR JACOBI: I think some of your answers have already picked up a question about the adequacy or the depth of the insurance markets - - -

MR MCINTOSH: Mm'hm.

MR JACOBI: - - - at particular points in time and I am just wondering about, aside from the number that there is now, are there other gaps that exist in terms of the availability?

MR MCINTOSH: Yes, sure. So one of the big ones is, as I said before, the conventions don't provide protection for operators against claims in respect of an incident caused by terrorist attack, but particularly after 9/11, the insurers withdrew -not just in the nuclear space, but in the general insurance market - withdrew from providing any insurance coverage for terrorism or for damage arising from a terrorist attack.

In the years since, they've slowly moved back in as they got more confident that such events are very rare, and they've gradually moved back into the market, but I think it's still true to say that it's difficult for companies to get the same amount of insurance to cover a terrorist attack as they can to cover a pure accident. As I say, it's not peculiar to nuclear reactor. The operator of a chemical plant will have exactly the same difficulties in getting insurance to cover a terrorist attack. You can get it, but it's not the same as you can get for safety.

MR JACOBI: Can I just pick up the issue of limitations of time?

MR MCINTOSH: Yes.

MR JACOBI: In fact I think the updated convention contains a revision in terms of the time period. I'm just wondering whether you can explain what that limitation now is and what its intent is.

MR MCINTOSH: Well, the limitations in time are equivalent to what occurs in domestic laws around the globe, including in Australia a statute of limitations. So under normal law, there's a certain period after an incident where you can claim compensation for damage arising from that incident. Now, the 1960s convention set a statute of limitations, if you like, for claims

from a nuclear incident of ten years from that incident. It was felt in the 1990s negotiations that given the latency period of some cancers that that was unfair and inequitable to victims whose cancers might only manifest themselves more than ten years after the incident. So those conventions extended that period to
5 30 years, which is certainly on the very long end of the scale for normal statutes of limitations in normal civil law.

MR JACOBI: In ordinary common law though, it's generally possible by statute to obtain an extension of time by reason of something that manifests
10 itself that's not known during the period of the time of limitation.

MR MCINTOSH: Yes.

MR JACOBI: Is that a feature that's built into the regime, or how has that
15 been decided to work?

MR MCINTOSH: Well, thinking about that, the 30-year period, the difficulty that people will face in the 30-year period anyway is to prove - cancers occur at a general rate from a range of courses in society. To prove 30 years after an
20 incident that your particular cancer was caused by that particular incident is going to be, just as a causation issue, leave aside the nuclear element - is going to be very difficult, and that doesn't matter whether it was a cancer that was caused by - you would face the same issue if you sought compensation for lung cancer 30 years after you gave up smoking. There's an issue of proving the
25 causation between the event and the damage suffered. So even if you extended the 30-year period out further, the practical impact will be very limited indeed.

MR JACOBI: The next we want to come to is the choice with respect to the forum in which one can bring the claim. Perhaps I can get you to explain first
30 what the forum rule is.

MR MCINTOSH: The forum rule is that under the conventions, the state commits to designate a particular court to hear claims for compensation for nuclear damage, and the idea is that if you have an incident, there's certainty
35 about which court the victims need to go to, and it also ensures an equitable distribution of compensation, particularly if you're in a situation where, because of limits on liability or limits on insurance, there's more damage to be compensated than there is funds available, the concept of equitable distribution of compensation becomes very important. And the most practical, in fact
40 probably the only way, of achieving that is to have a single court hearing all the claims and allocating the amount of money that's available equitably among the victims on common principles.

And the conventions provide that in the case of damage which extends beyond
45 national borders, so a Chernobyl-type situation rather than a Fukushima-type

situation, the court should be in the state where the accident occurred, because that's where the evidence is, if you like, and that's where it's likely that the majority of the victims are.

5 MR JACOBI: Are there competing views that it might be more convenient for a plaintiff to bring a claim in a home jurisdiction as opposed in a jurisdiction in which--

MR MCINTOSH: Look, there are certainly those views. How you would
10 ensure an equitable distribution of compensation in those circumstances I don't know. Certainly the conventions provide two things which help victims in the neighbouring state: one is the principle of non-discrimination, so the court can't award more damages to victims from their own country than they would award to victims with similar damage from the neighbouring country; and the
15 second is that the 1990s conventions at least provide that the government of the neighbouring country can stand in the shoes of the victims for the purposes of legal claims to ease the stress and difficulties which would be associated with bringing a legal claim in a country other than your own.

20 MR JACOBI: Can I come just to deal with INLEX for a moment, and just get you to explain the purpose of INLEX, and then I want to come to the question of the status of the recommendations that it's made.

MR MCINTOSH: So INLEX was set up, there was a conference on the safe
25 transport of radioactive material back in - shortly after I went back to Australia - 2001 or 2002. It might even be 2003. In the early 2000s anyway - in which there was a lot of discussion on the liability issue, and it was clear from that discussion that a number of the states involved didn't understand the principles of nuclear liability that we've actually run through, and therefore uncertain as
30 to how, if there was an accident in the course of transport, particularly maritime transport, how victims of that accident in their territories would be compensated.

So INLEX was created as a group of experts appointed in their individual
35 capacity, but representing a global cross-section of countries, and the first task we were given was to develop an explanatory text, if you like, of the conventions. Now, the explanatory text drafted by a lawyer and reviewed by a group of lawyers, so perhaps it also is a little legalistic in its approach, but that's what you get when you ask lawyers to do things. But the forward to that
40 document does set out the principles that we've talked about.

So at least the forward clearly sets out the principles even if the detailed text goes a lot into the history of the negotiations and so on. But the detailed text will be very useful if the conventions are applied in the event of an actual
45 accident and a court needs to understand what does this provision of the

convention actually mean. The explanatory text developed by INLEX will be very useful to the court even if they're not so useful to lay people trying to understand, in advance of an incident, exactly what it means.

5 Following that, INLEX was asked to do outreach activities to countries. So we conducted a number of workshops around the world on nuclear liability, explaining to countries what the principles of nuclear liability are, running case studies which postulated a particular incident, whether it's in a nuclear reactor or in the course of transport, and asking people, role plays, what would actually
10 happen, "Who would be liable in this case? Imagine that the contract said this in the case of a transport," and so on, "Who's liable? Imagine that one country is a party to the convention and one party isn't, which is a real world situation? Who is liable then? So we do these workshops which run for two or three days and with lawyers from all the participating countries in a particular region. We
15 have done them in most regions of the world to explain that – the operation of the regime. We hold a similar workshop annually before the INLEX meetings for diplomats in Vienna to explain to the representatives of the countries in Vienna how the regime would actually operate. So we have done a lot of work on explanation and as I said, we have done quite a bit of work looking at the
20 interpretation of the conventions. So the old – for instance the old Vienna Convention expresses the compensation amount in US gold dollars which was a concept that made some sense in 1963 but makes no sense whatsoever now. We did a what does five million US gold dollars actually mean in today's currency?

25 MR JACOBI: Can I just pick up – I am interested to understand the force of the recommendations of INLEX because I want to come back and I think deal with the issue of the amounts of compensation that are now recommended.

30 MR MCINTOSH: Yes.

MR JACOBI: And I am just interested to understand what the force of INLEX recommendation was, as against the conventions themselves, or how they are treated?

35 MR MCINTOSH: The recommendations are recommendations. They don't alter the provisions of the legal instruments. Under international law the only way to alter a provision under a legal convention is to formally amend that through an amendment process which is awfully lengthy, time consuming and
40 creates multiple regimes. The recommendations are directed to national governments as to say this is what INLEX recommends that you should do in your domestic law and it is up to national governments to decide how they take that up. Now for instance the INLEX recommendations I was talking about after Fukushima pointed to an increasing trend towards unlimited liability and
45 coincidentally or not, we have seen some countries move since those

recommendations were issued towards unlimited liability. But as I say, it is a recommendation which countries can – are free to take up or ignore.

5 MR JACOBI: Can I come to the issue of the minimum amounts of compensation - - -

MR MCINTOSH: Mm'hm.

10 MR JACOBI: - - - and I just was hoping you might explain what the minimum amounts are as specified under the Vienna convention and the supplementary convention?

15 MR MCINTOSH: So under the 1963 Vienna convention, it was five million US gold dollars and as I say, we spent quite some time discussing whether that meant five million US dollars in today, but it came from the days when the US dollar was pegged to the gold standard and we came up with a number of about 150 million US dollars in what – this is about three or four years ago. So it moves with the price of the gold was the conclusion that we came to. The 1997 Vienna convention and the convention on supplementary compensation set a national – a minimum national compensation amount of 300 million special drawing rights which is a unit of account issued by the International Monetary Fund. So most currencies are convertible in to - - -

25 MR JACOBI: SDR - - -

MR MCINTOSH: - - - SDR, so you can work out fairly quickly what the compensation amount is. What it does mean, that in the age of floating exchange rates, the amount in Australian dollars varies from day to day as the exchange rate bobs around. But you can get insurance in SDRs as well. So that is – to some extent that is a problem for the insurers rather than the operators.

MR JACOBI: And the amount of the 2004 Paris?

35 MR MCINTOSH: The amount on the 2004 Paris was 700 million Euros which reflects the fact that Paris is a regional convention which only covers countries, or mainly covers countries with the Euro as their currency. So that is more than 300 million special drawing rights but that reflects, as I said, the increasing insurance capacity between 1997 and 2004.

40 MR JACOBI: Now can I come to – I understand, I think from an answer you gave earlier that there is an international fund - - -

45 MR MCINTOSH: Mm'hm.

MR JACOBI: - - - and I am just wondering if you can explain the operation of that international fund under the CSC?

5 MR MCINTOSH: Right. So under the international fund, under the CSC in the event of an accident where the damage exceeds 300 million special drawing rights, there is then a call for funds. And countries are assessed mainly dependent upon their nuclear capacity. So the big nuclear countries pay 95 per cent or so of the overall compensation amount. There is a small component which is assessed on the UN rate of assessment of countries as an expression of international solidarity it is argued as. But most of it is on nuclear capacity. The idea is that when most of the world's nuclear reactors are in countries which are parties to the convention on supplementary compensation, there would be about another 300 million special drawing rights available, though as the number of reactors around the world goes up, or smaller reactors are closed and replaced with bigger reactors because it's not the number of reactors, it's the installed capacity.

20 So if you replace a 500-megawatt reactor with a 1,000-megawatt reactor you are doubling your capacity, even though you have still only got one reactor. The amount of money in the international fund will go up. So the idea is that the national compensation amount of 300 million special drawing rights will be drawn on first and then the international fund would be drawn on, then if the international fund is exhausted but there is still people who are left uncompensated or partially compensated, then if the national law provides for an amount bigger than 300 million special drawing rights, or unlimited liability that would kick back in again. So the idea is not that this replaces the concept of unlimited liability but it just provides some additional funds because as I said, unlimited liability is all very well but assets are finite.

30 MR JACOBI: Can I just come to – I don't know whether you have a view on the view of adequacy? I understand where you can express one view at one end with respect to the Fukushima - - -

35 MR MCINTOSH: Mm'hm.

MR JACOBI: - - - event and as I understand what we have been discussing the amounts that are available - - -

40 MR MCINTOSH: Mm'hm.

MR JACOBI: - - - are clearly not adequate - - -

MR MCINTOSH: Yes.

45 MR JACOBI: - - - for such an event - - -

MR MCINTOSH: Yes.

5 MR JACOBI: - - - of that sort. Has there been a claim's experience at the other end with respect to other sorts of facilities and plants under which claims have been made where (indistinct) to make an assessment about other points in the fuel cycle?

10 MR MCINTOSH: Look we've done – in INLEX we have done assessments of likely scenarios and the adequacy of the funds available. We haven't assessed each particular type of facility because for instance the enrichment plant, depending upon its capacity, will have a certain potential for damage. But what we have concluded is that, particularly in the case of a transport accident for instance, which is an issue which is of interest to a number of countries
15 which don't carry out nuclear activities themselves but are interested in how much compensation would be available in the event of a transport accident. The general conclusion we have come to is that the amounts in the conventions probably are adequate because materials transported in order to qualify to be able to be transported isn't capable of a meltdown for instance. So you don't
20 have the potential for the release of the sort of amounts of radioactive material that we saw in Chernobyl or Fukushima and therefore the quantum of – the amount of damage that could be suffered is that much smaller. And we have also come to the conclusion that in fact, if you look at the convention, particularly the Paris convention, they actually set smaller liability amounts for
25 what are called low risk (indistinct)

So as I said, at 700 million Euros for the operator of a power reactor in Europe under the Paris – revised Paris convention but for the operator of a research reactor it's only 70 million Euros. For a transporter it's only 80 million Euros.
30 So it's clearly been assessed that the potential quantum of damage from those sort of facilities were all activities much lower and there is therefore no need to require the operator's of such facilities to get huge amounts of insurance which are never going to be called upon.

35 COMMISSIONER: Yet if you looked at the consequence of transport on the sea - - -

MR MCINTOSH: Mm'hm.

40 COMMISSIONER: - - - breaking up and pollution emanating from that, one might question whether that amount is adequate?

MR MCINTOSH: Well, we looked at that. I mean the material that is transported at sea is solid material - - -
45

COMMISSIONER: Yes.

- MR MCINTOSH: - - - so to imagine a scenario of its widespread dispersal in the environment is difficult. And there was in fact a study that was done
- 5 outside the liability scenario – liability context but there was a study that was done by a group of states around 15 years ago in the IAEA context, under what’s called the co-ordinated research project, so they looked at scenarios and so on.
- 10 They looked particularly at the scenario of an accident which involved a ship sinking, or losing its cargo in deep water, that is a depth beyond which you can feasibly recover. If you lose a transport container in shallow water, you just bring in a ship with a big crane and put it back on, but in deep water - and it was assessed that in fact the likely quantum of damage was less because of the
- 15 amount of radioactivity in the cargo, as compared to the amount of radioactivity which is naturally present in sea water from dissolved uranium and other radioactive constituents. As I say, the quantum of damage was actually less for that scenario than it was for a shallow water issue.
- 20 The other thing to be aware of, which I didn’t pick up in one of the earlier answers was that the revised definition of damage covers the cost of preventive measures. So in that scenario, let’s say a container goes overboard from a ship carrying radioactive material, the containers being very strong, isn’t breached, but still there’s an issue that you don’t want to leave it there forever, and let’s
- 25 say it’s in shallow enough water where you can recover it, the cost of the recovery operation is recoverable from the operator. It’s compensable damage.

MR JACOBI: I think in my reading, and I think we’ve been talking about figures in the order of 300 special drawing rights, and a figure in terms of

30 E700,000,000. I’ve also got a figure of E1.2 billion.

MR MCINTOSH: Under the Paris system, like the CSC, they have a supplementary funding convention, which governments will kick into called the Brussels Supplementary Funding Convention. That was revised at the

35 same time as the Paris convention was revised in 2004, and so that provides for an extra E500,000,000 for a public fund from parties to that convention.

And most Paris countries are parties also to the Brussels Convention. So if there was an accident in a Paris-Brussels state, there would be the

40 E700,000,000 available under the Paris Convention, plus another E500,000,000 available under the Brussels Convention, which adds up to 1.2 billion, plus whatever else might be provided for in national legislation. Or unlimited liability, as in the case of quite a few of the Paris-Brussels states.

45 MR JACOBI: Coming to Australia, I’m just interested to understand to the

extent to which Australia's already a party to any of the agreements that we've been discussing.

MR MCINTOSH: No, we're not. We signed the Convention on
5 Supplementary Compensation in 1997, shortly after its adoption. The entry
into force of that convention, because of the element of the international fund,
it was felt there was no point having an international fund which only had
\$2,000,000 available in it; that was felt to be a bit of a risible concept, frankly.
10 So the entry into force of the CSC was dependent upon the ratification of states
with an installed nuclear capacity, i.e. number of megawatts; a rather large
number of about 400,000 megawatts, thermal.

With our 10 or later 20 megawatts thermal, we felt, I think rightly, that we
15 made no difference to entry into force of that convention, therefore there was
no point us going through the convention ratification procedure prior to entry
into force of the CSC. The CSC is now entered into force with US and
Japanese adherents, and soon to be Canada and perhaps India. So the issue of
Australian ratification of the CSC is now a more active one than it was for
20 many years after the adoption of that convention.

MR JACOBI: Now, am I right in understanding that Australia hasn't made a
national law, that's domestic law, to actually implement that - - -

25 MR MCINTOSH: That's correct. And we would have to make that domestic
law before. Under the current treaty practice, we would have to adopt such a
domestic law before we could join the international convention.
Under current treaty practice, we would have to adopt such a domestic law
before we could join the international convention.

30 COMMISSIONER: That might be a good time for us to explore: if we were
to develop the nuclear industry here, what would be the steps that would need
to be taken, assuming that it was a state based activity, as opposed to a Federal
based activity.

35 MR MCINTOSH: There would need to be legislation in place. My feeling
would be that it would be preferable to have national legislation, because
inevitably for instance, there will be some sort of, I would think, interaction
between ANSTO for instance, and a South Australian based facility, or
40 interaction between the South Australian facility and the National Radioactive
Waste Management facility, if that's placed in a state other than South
Australia. We don't know where that's going to be placed, yet.

45 And in that case, to have a common liability regime, I think is necessary. We
would need to adopt legislation; there are a number of countries like Australia

which we could draw on. Canada recently amended its legislation to enable it to ratify the CSC, so Canada had national nuclear liability legislation for many years, but with a rather low national compensation amount of about 70,000,000 Canadian, which they recently increased to \$1 billion Canadian, and made a number of other amendments to their law which were necessary to bring it into line with the CSC.

So that's a model we could draw on. There's also modern legislation which has been developed by the IAEA in consultation with INEX, which again provides model provisions for a law. So I don't think it would be too hard to draft a law; the politics of getting it through a parliament is - - -

COMMISSIONER: I'm not asking you that.

MR MCINTOSH: - - - not my problem, but certainly drafting the law would not be particularly challenging. Then you would need to find an insurer who would provide the insurance, but that shouldn't be an issue. For instance, for some years when we used to run the old HIFAR reactor, the British Nuclear Insurance Pool provided the insurance for third party liability insurance for the HIFAR reactor. If Australian insurers either say they're unwilling to cover nuclear, or say that they don't have the resources to provide the sort of quantum's of cover that we're talking about, there's plenty of international insurance pools which will step into the breach.

COMMISSIONER: Are these specialist nuclear pools, or just broader?

MR MCINTOSH: No, they're generally specialist nuclear pools.

COMMISSIONER: Right.

MR MCINTOSH: They bring together the insurers from around the world. For instance, I can't remember the names of all the companies that were involved in insuring HIFAR, and HIFAR was only \$50,000,000, given it was only a 10 megawatt reactor. But there were about half a dozen different companies involved in that, sort of marshalled together by Lloyds of London as the principal insurer, but then they re-insured with other pools, the Swiss; I remember at one stage we got an inspection from the Swiss pool.

I knew the guy from the Swiss pool because he was on INLEX with us, but he sort of rang me one day and said, "We're coming out to inspect the safety of your facility, as your insurer." "Oh, are you? I thought we had a regulator to do that?" But no, the insurers in fact will do their own inspections of facilities, to ensure that they meet their criteria for insuring.

So you could have somebody from a pool that you didn't even, on the face of

5 your insurance policy, you didn't know was insuring you, but in fact because of re-insurance arrangements - I mean, you could ask your insurers, "Who's re-insuring you?" but on the face of the policy, you might not know that the Swiss pool is one of your re-insurers. And that's the way the global insurance market works.

10 MR JACOBI: I'm just interested in the extent to which the supplementary convention is a complete regime, or whether it's necessary for country stores to enter into any of the other conventions or arrangements.

15 MR MCINTOSH: No, the Convention on Supplementary Compensation can be joined as a standalone convention. It's designed so that it either fits with being a party to Vienna or Paris, and a country like the UAE has joined both Vienna and the CSC; as you know, the UAE have got an ace nuclear power program, and they've joined both of them. Or, you can do it as a standalone, so the US, Japan, and very soon Canada will join the CSC as the only nuclear liability treaty to which they're a party.

20 MR JACOBI: The other question I've got is with respect to timing, and that is that if a decision was made to proceed, is there a relevant point at which you're required to enter into those arrangements, that is, do you need to do it when you're contemplating the decision, if you're doing site selection. Is there a relevant point in the process that it needs to be done?

25 MR MCINTOSH: Look, I would think that, and certainly our experience at ANSTO when we were tendering for the construction of what was then the replacement research reactor, which became OPAL, was that reactor vendors, when we came to the tender process for the reactor selection, were saying, "What nuclear liability arrangements are going to apply in respect of this
30 facility? We're used to operating in countries with nuclear liability legislation which is consistent with the international regime. You don't appear to have any. What are the arrangements?" in ANSTO's case, the commonwealth put in place an indemnity, which basically operates in the same way as nuclear liability legislation would do. In that case, the commonwealth is the insurer, if
35 you like, the insurer of last resort.

40 To my mind, that's not appropriate for a private concern that was operating in Australia. It's not appropriate for a government to be the insurer of a non-government entity. So I think by that stage, you would need to have nuclear liability legislation in place in order to ensure a competitive tender. If you don't have a nuclear liability system in place, either you will have - some companies will simply not tender. Those that to do tender will charge a premium for their enhanced risk. That's the commercial reality.

45 MR JACOBI: And one of the aspects that we picked up in the submissions is

a comment that the conventions amount to arrangements that primarily benefit the industry as against victims, and I'm just wondering about whether you have any comment to make about that sort of comment.

5 MR MCINTOSH: There's some truth to it if you're looking at the amounts under the 1960s conventions which are clearly inadequate, to the extent that there are still national laws which reflect those 1960s amounts, and there aren't many of them left. Clearly there's a protection to the industry. But in terms of the general principles we were going through, I think it's generally accepted -
10 there are clearly some contrary views from people who are perhaps more interested in punishing people they see as wrongdoers than in compensating victims, but I think it's generally accepted that the regime which concentrates liability on a single entity is much simpler for victims to make their claims, and get much prompter and more adequate payment of compensation.

15 I saw one paper which sited the Gulf of Mexico oil blowout some years ago and said that people were able to pursue BP and Haliburton and somebody else. I know a lot of time was consume in cross-claims between those three entities before final liability was settled and compensation was paid. To me, a regime
20 which has clarity as to who should be sued, what sort of damage can be compensated, and what the conditions of payment are, is much more in the interests of victims than the operation of normal tort law.

COMMISSIONER: Mr McIntosh, thank you very much for your evidence,
25 very useful for us. We'll now adjourn until 1730.

MR MCINTOSH: Thank you.

ADJOURNED

[4.03 pm]