GOVERNMENT OF
WESTERN AUSTRALIA

Climate Health WA Inquiry

Inquiry into the impacts of climate change on health in Western Australia

Inquiry Lead:
Dr Tarun Weeramanthri

Witness:

Mr Vic Andrich
President, EHA WA

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HEARING COMMENCED

DR WEERAMANTHRI: Mr Andrich, I'd like to thank you for your interest in the Inquiry and for your appearance at today's hearing. The purpose of this hearing is to assist me in gathering evidence for the Climate Health WA Inquiry into the impacts of climate change on health in Western Australia. My name is Tarun Weeramanthri and I've been appointed by the Chief Health Officer to undertake the Inquiry. Beside me is Dr Sarah Joyce, the Inquiry's Project Manager. If everyone could please be aware that the use of mobile phones and other recording devices is not permitted in this room, so please make sure that your phone is on silent or switched off.

This hearing is a formal procedure convened under section 231 of the *Public Health Act 2016*. While you are not being asked to give your evidence under oath or affirmation, it is important you understand that there are penalties under the Act of knowingly providing a response or information that is false or misleading. This is a public hearing and a transcript of your evidence will be made for the public record. If you do wish to make a confidential statement during today's proceedings, you should request that that part of your evidence be taken in private. You've previously been provided with the Inquiry's terms of reference and information on giving evidence to the Inquiry. Before we begin, Mr Andrich, do you have any questions about today's hearing?

MR ANDRICH: No, that's fine.

DR WEERAMANTHRI: For the transcript, could I ask you to state your name and the capacity in which you are here today?

MR ANDRICH: Vic Andrich, as President of Environmental Health Australia WA.

DR WEERAMANTHRI: Would you like to make a brief opening statement?

MR ANDRICH: Yes. I guess when we look at Environmental Health, Environmental Health is pretty much the only profession that actually looks at human life, from the time you're born to the time you die. As a result, we have a unique perspective as to how health impacts affect humans, and we often have to pick up the pieces after other agencies or other processes have failed or haven't quite achieved what they've meant to. For example, for development, if someone builds too close to a house and there's a noise impact, it's the Environment Health Officer that actually deals with it at the coalface, rather than that issue being dealt with by their developers or whoever built the place. So as a result, we intersect with a whole range of different agencies and different processes. We often try to influence them to best set up their health outcomes for the occupants. As a result, with climate change and stuff like that, it is another area that we consider when we look at human health. So our perspective is really across the board. And we look at the systems that's in operation and looking at ways that we can change the system to actually enhance human health.

DR WEERAMANTHRI: Thank you. So we might just continue on with the notion of environmental health professionals being at the coalface of a whole range of issues. Can you talk about how environmental health professionals might contribute to an enhanced response to climate change and what workforce partnerships might be particularly useful?

MR ANDRICH: When you look at – quickly look at the system-wide approach, Environmental Health has a unique perspective. In order to achieve, I guess, sustainable things or climate change, you need to change the way that the system operates. Currently, planning legislation, environmental protection legislation, occ health and safety, all those different areas, all view life from their perspective. There is no climate change requirement of any of that legislation. So as we develop the climate change issues and stuff, we are going against, I guess, the authoritative power in respect of X to actually deal with climate change from their perspective. So if it's a public transport legislation, there's no requirement of the Public Transport Authority to actually invest in carbon neutral vehicles.

Everything to do with climate change needs a policy lens which the government at the time decides we're going to do climate change. If there's a change of government, then there's a change of policy, and all that work that's been done then falls to the wayside. So unless there's a statutory way of incorporating climate change into existing legislation, there's going to be difficulty in getting the whole of society approach to addressing climate change. Now, in order to do that, we need to rephrase the language you use for climate change into the language used by the particular department or legislation. For example, if it's a finance legislation, you need to rephrase climate change in terms of financial benefit to the country. If it's going to be town planning things, we rephrase climate change in regards to development and how to reduce the carbon footprint. These would be in a way that that sector understands what you want it to achieve.

It's is very easy for a planner or other agency to say, "That's a health issue, we don't need to deal with that". And the climate change policy from an environment health perspective, you're constantly trying to, I guess, go against the grain of what other agencies are trying to achieve, by imposing an additional consideration into their deliberations. And so there's – to embed climate change within the whole society, it needs to be picked up by the relatively different acts of parliament. And then once an Act of parliament, say planning, got carbon neutral development, whatever, then every regulation, every policy that comes out of planning, will automatically have to align itself with that goal, and therefore you embed within the society the whole climate change or the climate effects or deficits. And therefore when you get to our pointy-end, where the health offices interact with humans, a lot of that philosophy is already built into the system to enable a better outcome for the human health. So it makes the EHO's job easier in convincing people to do certain things or to mitigate whatever issues are coming up.

DR WEERAMANTHRI: Thank you. So I think I hear you arguing that it would be useful to have some legislation, or existing legislation – some new legislation or some existing legislation altered to give some kind of head of power for action.

MR ANDRICH: That's right.

DR WEERAMANTHRI: But that there are already existing pieces of legislation which cover some aspects of it, such as through public health, environmental health, occupational health and safety – or environmental legislation, occupational health and safety legislation, et cetera. And we'll pick up this issue with some of the other witnesses. And are you personally familiar with any other jurisdictions in Australia or in other countries which have taken a kind of legislated – have got a legislated underpinning for …?

MR ANDRICH: I'm not aware of that aspect of other legislation. And I guess one of the – I guess, when you look at the way legislations evolved, our Health Act in WA, the original Act, covered off on environment protection, covered off on occ health and safety, covered off on planning and those sorts of issues. As the legislation's been taken out of our Health Act and redeveloped, they've more or less dropped the public health aspects of what they're trying to do. And so even under – our Health Act used to have waste in it. And when they created the Waste Avoidance and Resource Recovery Bill, they pretty much dropped the public health impacts of waste, and they looked at it purely as an engineering – or as a process to reduce the environmental impacts of it.

So when an issue comes up in waste, they don't necessarily have the head of power to actually give it the public health impact. And often the different legislations, and the way the system works, is that they defer to health to impose their own requirements on the things, rather than taking responsibility to include a public health aspect to their work. So it's really just a way, I guess, that legislation has evolved over time. The areas have become so big in their own right, that they've had to, sort of, put it off and actually just deal with their sort of stuff. And so society itself doesn't really have a good way of integrating climate change in to their legislation, because they consider that another area, rather than part of what they're doing.

DR WEERAMANTHRI: Thank you. So you did mention waste as a specific issue. And it's interesting, in our public forums we've held across the state, when people are trying to, you know, grapple with this issue of climate change and health, often they will begin with their personal experiences of waste and what they're trying to do to reduce or avoid waste. And we do know that waste is, you know, a small proportion of all total emissions, but it's a useful place to start when you're thinking about acting in an environmentally friendly way. So could you please provide an overview of waste management policy and practice, the legislation if you can, as it relates to the health sector in general, and hospitals specifically?

MR ANDRICH: When you look at hospitals, they've evolved, and their waste has been created over time depending on technology changes and products and availability. If you are serious about changing how a hospital deals with waste, you need to take a step back to their original purchasing policies or their tenders at the beginning of the process and look at exactly what it is that the hospital needs from that purchasing process. An example, say, for energy efficiency lighting. If a hospital has to go to tender to replace all the light globes, they would be better off going to tender to the power companies to say, "You shall supply a level of lux in your hospitals". And all the cost of light globes and that maintenance is then borne by the power company. So straight away, the power company, to reduce their costs, will automatically engineer longer-lasting light globes, more efficient way of using energy and that sort of stuff.

And so the waste aspect of hospitals is actually reduced by changing the terms of your purchasing or your tendering at the beginning. And so there needs to be a shift from just looking at the waste you're creating, to have that waste, essentially, entering the system, and do it that way. With hospital waste in particular, there's a range of clinical waste which comes out of hospitals, and the health sector itself needs to look at what actually is clinical waste, and possibly divide up those things that don't require specialist disposal, compared with those products that can go to the general waste stream. And there needs to be a lot better education and process driven within the hospitals themselves to get that message across. And I think, even though a hospital may have an advanced system of processing, once the nurses are on the ward and they're busy, the actual separation of waste, or that sort of stuff, tends to fall apart, depending on what other pressures are on the ward. So there needs to be a fairly extensive retraining program in place to assist nursing staff to actually divide the waste up and dispose of it correctly.

We should also re-look at the single-use versus the reusable utensils and stuff in hospitals. I think most hospitals have a single-use item, they open it up, use it, throw it away, and those products used to be made of metal, then they could be autoclaved and re-used the following – all that seems to have disappeared and it's all very much a case of just removing the waste before it becomes a potential to be addressed. And so the idea is, is that you have to look at the processes within the hospital as to, "Can we reuse a particular product?" Okay, yes, it costs more to buy in the first instance, but then it's re-used constantly and therefore can be autoclaved, and then reduce the amount of waste. So your actual processes need to be, I guess, reassessed.

DR WEERAMANTHRI: Thank you. So I've got in front of me an operational directive from January 2016 from the Department of Health called, "Clinical and related waste management policy".

MR ANDRICH: Yes.

DR WEERAMANTHRI: Which I'm sure you'd be familiar with. And in that, they define exactly what clinical waste is, but also what related waste is, which is cytotoxic waste, pharmaceutical waste, chemical waste and radioactive waste. So clearly, hospitals have a lot of, kind of, high-risk waste.

MR ANDRICH: Yes.

DR WEERAMANTHRI: And for the highest risk category of clinical waste, it has to be incinerated - - -

MR ANDRICH: Yes.

DR WEERAMANTHRI: - - - and certain other types of clinical waste can be treated in alternative ways such as autoclaving. We know that the cost of incineration is double the cost of autoclaving. And you've mentioned the fact that the clinical waste stream is often contaminated with other waste, is that right?

MR ANDRICH: That's right, yes.

DR WEERAMANTHRI: Okay. So what can be done, or what have you seen being done, to ensure that waste segregation is done effectively in health settings?

MR ANDRICH: Again, primarily, it's the result of the person themselves putting in the waste in particular bins. So although you might have a whole range of facilities available for waste to be separated, unless the person actually is trained and is mindful as to where they put that waste, that's the critical thing. So the education and the training of staff in actually achieving that. Now, that may mean that you might have to have additional nursing aides who actually look at what waste has been thrown out and they separate it, rather than the nurses themselves or the doctors or whoever's doing the work. It really is a case of a process to go through.

And when you design your operating theatres or your consultant rooms, you design it in such a way so it is easy to separate the waste. You don't, sort of, have your recycling bin over there and waste bin over here. Because whatever's closest is what ends up with all the material. So you really need to look at the process, or the flow diagrams, within the operations to see how that works, and how best that can be incorporated into ongoing regular training and process driven by the hospital itself. And that would vary depending on the size of the hospital, where it's located. The other thing you need to, sort of, be aware of is once they do separate the waste, how can it be transported and disposed of correctly. Different hospitals have managed to install different technologies to a system, like Fiona Stanley has their maceration and their autoclaving process, and that's quite good in neutralising the waste so that it

actually can go to other forms of disposal. So you can mitigate the costs of incineration. Yes, it depends on the equipment available and the cost and stuff.

DR WEERAMANTHRI: There's another term that's used – controlled waste. Can you explain what that means?

MR ANDRICH: The Department of Water and Environment Regulation lists a whole lot of waste that needs to be regulated in the way that it's handled, disposed and transported. Controlled waste is their version of picking up those wastes that require special requirements. Now, there's a whole tracking system in place, and so that any waste that is taken from a waste generator, whether it be a hospital or what, and it's transported, that waste is tracked throughout the society or through the streets to its disposal point. And it's designed so that the endpoint actually verifies that they received that waste and they've disposed of it correctly. And that certification then goes back to the waste generator to advise them that their waste has been disposed of how it's supposed to, within accordance... And the Department of Water and Environment Regulation monitors that process so that all waste carriers are registered as part of that program, all waste is documented, and there are various checks and balances which they put in place to ensure that that waste is controlled.

Originally, a lot of clinical waste wasn't able to be sent over state borders. They've revised that now to enable them to do that, and as a result, competition between the waste companies – we have an incinerator in WA, they were charging quite a high price. And so the other waste contractors, instead of being forced to use that incinerator, can now transport that waste across borders to incinerators in the East Coast. And so it has opened up, I guess, how waste is disposed of and incinerated, but it has also meant that the local facilities are under pressure, because they may close, because they don't have the volume of waste to continue on. So there's a fine balancing act between opening up the system of disposal.

DR WEERAMANTHRI: And just for the record, is clinical waste, a sub-category of controlled waste?

MR ANDRICH: Yes, it is, yes. It's all part of that process. So any clinical waste that is transported out of a waste generator has to be managed through the controlled waste program. And the conditions that we impose with our policy, the controlled waste system makes sure that that's the way it's handled.

DR WEERAMANTHRI: And again, just to state it, I'm presuming that clinical waste is a subset of - - -

MR ANDRICH: That's right, yes.

DR WEERAMANTHRI: - - - all of the waste that - - -

MR ANDRICH: That's right, yes.

DR WEERAMANTHRI: - - - hospitals will produce, particularly hospitals because they're big generators of waste. And so then most of the waste inside a hospital will be non-clinical waste.

MR ANDRICH: That's correct, yes. But unfortunately, most of the hospitals ends up all the waste going into the same bins, as, I guess, caught up in that clinical waste component. And so that adds to the cost of the waste disposal. Different hospitals can instigate their own internal recycling schemes and stuff, to actually separate out non-infectious utensils and stuff, for recycling. And those sorts of things be part of your separation process within that hospital to separate what is actually clinical waste and what's not.

DR WEERAMANTHRI: So I think what you're saying is that you could get – because if you don't separate, properly, you might be having the situation at the moment where non-clinical waste is actually getting put into clinical waste.

MR ANDRICH: That's right.

DR WEERAMANTHRI: So you're then incurring a greater cost of disposing of that clinical waste, because it has to be done in a specific fashion.

MR ANDRICH: Correct.

DR WEERAMANTHRI: Okay, so we might take that issue up with the health services in future hearings, so thank you for that. Do you have any views on the auditing, monitoring of waste inside facilities? Like, is there any data produced about what is being produced, and is that shared, et cetera?

MR ANDRICH: Various waste generators will conduct waste audits of what they're actually doing. And most of the waste companies will actually provide that service free, or at a small charge, to the hospital or to the waste generator in order for them to better manage how wastes are handled from your property. So that data is data for hospitals to use, and I'm not sure whether they put out on the public question and stuff, but if a waste company does that work, they tend to keep that in-house rather than allowing other agencies to access that data. But a lot of waste audits are conducted either through local governments or regional councils, from waste companies or whatever, so that data is available. But it depends on the individual hospital whether they've done that audit themselves.

DR WEERAMANTHRI: And I believe that the facility managers in hospitals are particularly important in the organisation of the system, is that - - -

MR ANDRICH: Yes. So that, then – the facility manager will be able to actually get a waste audit done. And that would clearly identify how much is non-clinical waste, how much can be actually recycled. And yes, it's quite a good process to go through to actually work out exactly where your wastes are generated.

DR WEERAMANTHRI: So you hear in general media about waste, rather than being seen as the end product, can also be seen as the beginning product, as a resource for future use. So is there any examples you can think where waste has been turned into a resource in the health sector?

MR ANDRICH: I can't think of the health sector particularly, but in other areas, waste tyres for example, there's a whole industry set up to recover waste tyres and stuff. Now, it's not well developed in WA. And when you look at the waste sector, in Western Australia, our size is a disadvantage to the waste collectors. And so if you are going to set up a sustainable waste processing side of things, you need to have an efficient collection system. The waste needs to be – recyclables needs to be washed and bailed and stored until they reach a critical mass. And then when you get a critical mass of recycled material, that there's when it should go to market. In WA, our markets are quite small for recycled product, and as a result, as processes try to go to market, the prices are small because they've got small quantities and therefore make it difficult to make ends meet.

If you brought in a system whereby wastes are collected, separated, washed and bailed and stored until you have a critical mass, which can influence the price you get at market, and that might mean that you might need to store the product for two or three years to build up that critical mass and then go to market, say, "Now I've got 500,000 tonnes of this product". And then that, as a material resource, that someone else could then use that amount of recycled material to make into new products. And so you need to, sort of, look at what type of waste you've collected, how best it can be washed and separated, and then what potential markets there may be for that product.

In the waste tyre area, I did some work with the Department of Environment Protection, it was back then, where we looked at the marketing of recycled product and identified within West Australia all the different major – where you could use recycled rubber. That then gave me an idea about how much product would need to be produced to cover that whole market. And it worked out with the formulas that we had enough markets in WA to actually take an entire waste tyre strip. But the… mechanisms in place to achieve that were quite a lot of work, and a lot of infrastructure had to be built to accommodate for that sort of stuff.

DR WEERAMANTHRI: See, you're explaining this complex area very well, so that's why I'm sticking with it, so it's very helpful to me, thank you. So again, because other countries, recently, are saying they're no longer taking some of Australia's waste - - -

MR ANDRICH: Yes.

DR WEERAMANTHRI: - - - is there – and you're talking about markets – is there a potential that the costs of dealing with this waste are increasing in Australia and that actually acts as an incentive to reduce waste and separate it properly?

MR ANDRICH: That's right. Yes, when I did work for the Office of Waste Management a few years ago – quite a few years ago now – we looked at that aspect. And I was simply looking at the recycling of tyres and stuff. And a lot of the waste operators were sending their tyres over overseas for recycling and stuff. And when I tried to raise, "Well, why don't you build the plant here?", they had a short-term view of the, "Well, it's cheaper to send it overseas than it is to do here". And I said, "Yes, but what happens when that overseas market collapses or stops?" And there seemed to be the, "That'll never happen, everyone's growing", that sort of stuff.

And, I guess, when we look at the whole process, basically, in order to get a sustainable waste recycling process in place, you look at what the potential markets are and identify them. You look at your resource supply, and so that means you would look at where it, I guess – the tyres were actually located, how do we recover them, all that aspect. And so they've come back, there's a stable resource supply. The technology in between turning the tyre to the marketable product is available worldwide, and private industry will actually develop that. As long as they know they've got a stable resource supply and a potential market, they'll sort out the bit in the middle. The problem with the, I guess, industry in WA is that people will try to monopolise different aspects. So if you know that a tyre recycling plant's going to be built, people will try to buy it for the tyres so they could hold them to ransom to – so if you're going to set up a process, you need to balance the resource supply end so that no one person has a monopoly on that product. And the market end, that no one person is held to ransom, that they must use a particular product. And so it's a balancing act between different sectors at play.

DR WEERAMANTHRI: And I appreciate the fact that you're drawing on your particular experience with, you know, a specific product, mainly tyres, but that you could take that example and apply to any - - -

MR ANDRICH: That's right, yes.

DR WEERAMANTHRI: - - - waste stream you put it in.

MR ANDRICH: You know, pretty much even in the hospital waste and the hospital recycling, as long as you know what products you've got, what the potential markets are for that product, and how it can be re-engineered, then that gives you the ability to then work out how much quantity and stuff you need for that technology to then step in - - -

DR WEERAMANTHRI: Okay.

MR ANDRICH: - - - and take that over.

DR WEERAMANTHRI: So we'll just move through a little bit – so that was very useful, thank you. So we'll just move through a little bit quicker just to get through the next few questions. You know, in a minute or so, what's the problem with landfill? So some people might think, "Well, you know, you get waste, you stick it in the ground, Australia's a big country, there should be no problem". What's the problem with that?

MR ANDRICH: Landfill. With any waste you put into the ground, it breaks down eventually, but it also leeches out a range of products. So to put into a landfill, it's only a limited life expectancy of the landfill, and so you're pretty much condemning that land to be not useful for anything else except for waste. By just putting in landfill, there's a waste of a huge amount of resources that can be re-used and save the use of virgin product into doing stuff. And so I see landfills as, I guess, a last resort, as the resting place of a lot of recycled material. And by being smarter about how we deal with waste and the way we process it, a lot of that material can be recycled and re-used and the landfill spaces then saved for what really needs to go to landfill that you can't actually re-use. And so you could argue that yes, we've got a lot of land, but that's then not actually dealing with how best to use your resources. You're actually just perpetuating the myth that, "We can just bury it".

DR WEERAMANTHRI: And there are issues with contamination of - - -

MR ANDRICH: Contamination, yes. Leaching into the ground waters, all that sort of aspect. Plus landfills also, you do disturb the natural environment to actually establish landfill. There's a lot of work involved. And so it really is a case of, yes, unnecessarily destroying land, rather than taking the appropriate action to actually reduce the amount of stuff going to landfill in the first place.

DR WEERAMANTHRI: Okay, thank you. Can we just move on to – you mentioned single-use items.

MR ANDRICH: Yes.

DR WEERAMANTHRI: So again, if you can just, kind of, give us a lead into this area. What is the relationship between single-use, reduction of infection risk, single-use plastic versus single-use non-plastic? Can you just, kind of, guide us into this area?

MR ANDRICH: Primarily, I guess, going a few years back – step back to with hospitals, they should buy the metal utensils and stuff, use

them once, autoclave sterilise and use again. The same products were used over and over again. It did require the hospitals to have autoclaving – or facilities to sterilise their equipment. It required them to have staff to actually process the whole things. As hospitals had become, I guess, more efficient, they looked at ways of reducing their staff costs and staff operations. So things like autoclaving and specialists offices to deal with that were basically, "Well, we can get the single-use things, it's no longer our hospital's problem to improve it". So they introduced – and I guess as new products would come on the market, and they could be produced more cheaply and more efficiently, they basically have moved into that area.

And Australia, generally, has become very much a throwaway society. Even appliances that you now buy will only last four or five or 10 years, and then you have to buy a new one. Refrigerators, it's the same thought of thing that applies. They're using cheaper products to make the product cheaper, and so it builds in obsolescence so that you throw away the – and buy a new one. So you continue to buy new products. The single-use items in the hospitals really is the same concept. It's easier to throw something away, and rather than having another staff member there to actually pick it up, sterilise it, wash it, clean it and bring it back again. And so it's just the economics of modern life, I think.

DR WEERAMANTHRI: Thank you. We'll take this issue up with others in the health services. Thank you for that. Can I just go to the issue of data? In general, so moving away from hospitals specifically, how well integrated is environmental data with health data, and could this be improved, and what benefits could that provide?

MR ANDRICH: Environmental health data isn't very well integrated at all. It is quite difficult to quantify how much benefit there is to doing preventative work. And that's one of the difficulties. It'd be good for universities or others to do some research work around actual links between preventative work and the health benefits afterwards. It is quite difficult to actually, sort of, draw that – because there are so many things that have an impact on human health, to determine which bits relate to what actions have been taken, it's quite hard to do that. So a lot more work is needed in that area. Most of the data collected is about the diseases or the ill-health that's been caused and trying to relate the reduction in ill-health back to environmental health is quite hard. And that's where there is a lot of difficulty in that. And that's where, often, environmental health is often forgotten about in regards to funding and what needs to be done, because they can't grasp what is being saved or being prevented in regards to ill-health or processes.

DR WEERAMANTHRI: Okay. Thank you. Local government currently has a defined role with respect to public health planning under the *Public Health Act 2016* and under previous public health Acts. How could this be applied to addressing the impacts of climate change on health?

MR ANDRICH: It's a great opportunity for local governments to formally include climate change. Local governments, with their public health planning, rely on the State public health plan providing guidance. And so if the State public health plan picked up climate change and those mitigations, it then sets the benchmark for local governments to follow suit. Where local governments are, I guess, unsure is to what extent they need to highlight issues. And unfortunately for local governments, many of them will, if an item costs a lot of money without an actual perceived benefit, they'll tend to drop it off and just not mention that area. So unless it's highlighted in the State public health plan, to give local governments guidance that you need to include this as part of your plan, is the opportunity for local governments to, I guess, drop off different aspects of public health planning that is difficult for them to, sort of, resource.

The Environment Health Officer at local level, involvement with public health plans, I think is essential. They have a unique perspective of the business community, as well as the householders and the various aspects that impact on human health. And because they've got that acknowledgement across the board, they are aware of the economic costs to your business about some of the work that they do at Health. And from my perspective, if the business is not economically viable, then the first thing they start to cut is things that might impact public health. And so if a business is viable, then it's more likely to pick up requirements for public health and continue on. The same thing would apply to climate change. If the business itself is struggling, the first thing it's going to not do is climate change, public health, for those in the areas which don't impact on their bottom line.

DR WEERAMANTHRI: So there's a capacity issue for local governments - - -

MR ANDRICH: Pretty much, yes, that sort of stuff.

DR WEERAMANTHRI: All right. Look, just as a final question, Mr Andrich, you started off by talking about the role of the Environmental Health Officers and Environmental Health workforce. Do you want to make any comments about the appropriate training such people need in light of climate change?

MR ANDRICH: That’s right. Environmental Health Officers, they are all required to complete an accredited university course. And there is an opportunity, I guess, for greater leadership in the Department of Health in the climate change area in regards to the courses. The *Public Health Act* itself has actually moved to ‘authorised officers’, and that’s enabled local governments to employ people who are specialists in particular authorised areas. What it has also done, inadvertently, is that some local governments are now using, I guess, an authorised officer for one area and then ignoring the broader public health impacts of climate change and stuff that the EHO wouldn't be able to pick up as part of their general duties.

And so there needs to be, I guess, a greater capacity built in within the training system, as well as with leadership of local government, to pick up climate change amongst all the officers that deal with environmental health. The EHO has a capacity to come into play with emergencies, recovery, as well as the day-to-day life of things. And so the officer, just through their training and through their education, is actually picked up a whole lot of climate change-type issues. And they, sort of, relate back to practical measures that need to occur at the coalface. And having that understanding – or the link between the science and the practical implications of how to make changes, is where the EHO comes into play.

DR WEERAMANTHRI: Thank you. You started at the coalface and ended at the coalface. Mr Andrich, thank you for your attendance at today's hearing. The transcript of this hearing will be sent to you so that you can correct minor factual errors before it is placed on the public record. If you could please return the transcript within 10 working days of the date of the covering letter or email, otherwise it will be deemed to be correct. While you cannot amend your evidence, if you would like to explain particular points in more detail or present further information, you can provide this as an addition to your submission to the Inquiry when you return the transcript. Once again, thank you very much for your evidence.

MR ANDRICH: Thank you for the opportunity.

HEARING CONCLUDED