# Diplomatic Processes on Killer Robots:

# An Explainer with Elizabeth Minor

**Matilda Byrne:** [00:00:00] Welcome to safe ground, a small organization with big ideas working in disarmament, human security, climate change and refugees. I'm Matilda Bern. Thank you for tuning into our series. Stay in command where we talk about lethal autonomous weapons, the Australian context, and why we must not delegate decision making from humans to machines.

[00:00:24] This episode, we are doing an explainer on the international talks regarding this issue. So we know that diplomatic processes can be very complex and convoluted. And as we are seeing with discussions on lethal autonomous weapons systems, specifically, they can move very slowly. And so to give you an overview of how the issue of fully autonomous weapons is progressing at the moment and sort of the history of international discussions, where we're at and where we need to go I'm joined today by Elizabeth Minor. Elizabeth is an advisor at article 36, a UK based NGO that works to prevent harm from weapons through stronger international standards and is on the steering committee of the Campaign to Stop Killer Robots. So, Elizabeth, thank you so much for joining us today for this podcast.

[00:01:13] **Elizabeth Minor:** Thanks for having me.

[00:01:14]**Matilda Byrne:** To start, I just want to mention that this issue was first flagged in a diplomatic fora for the first time in 2010. So 10 years ago now, and it was in a report by the United Nations Special Rapporteur on extraditional summary or arbitrary executions, Professor Phillip Olsten who coincidentally is Australian. And so that report said, and this is a quote, "urgent consideration needs to be given to the legal, ethical, and moral implications of development and use of robotics technologies, especially, but not limited to uses for warfare."  This isn't a specific mention to lethal autonomous weapons systems per se, but then led to subsequent discussions.

[00:01:56] And most recently there was a meeting just last week. So one session held over five days as part of the current Group of Governmental Experts, so what has the path been from this first instance where it was flagged as an issue to now. Elizabeth, I was wondering if you can give **an overview of how this issue has been broached on the international diplomatic stage**.

[00:02:21] **Elizabeth Minor:** Yeah. Sure. So, I mean, like you said, at first really got on the international radar with this report to the human rights council in 2010 from a UN special rapporteur, but then wasn't sort of picked up again for another three years. They'd been growing concern from, you know, scientists, ethicists and roboticists, such as those that are now part of the campaign's founding member the international committee for robot arms control, raising these concerns around deploying new technologies in the areas of, for example, sensors and data processing to use systems for more and more sophisticated processing tasks for the application of force. And you know, this issue of increasingly

autonomous weapons was starting to kind of get on the international diplomatic radar with this report in 2010.

[00:03:06] It was first debated at the human rights council in 2013, when another special rapporteur with the same brief Christoph Heinz, uh, released a report, which focused quite strongly on this issue and was looking at the issue in his mandate of whether it is not inherently wrong to let autonomous machines decide who and when to kill . So he found in his report that they should be controls on these kinds of systems and that the issues go beyond standards currently set in international law, urging a dialogue from States. So States first kind of really had this issue to look at and make their first statements on it, in 2013 at the human rights council, then it kind of picks up from there.

[00:03:47] So it then got discussed at the UN General Assembly that year, and then within the current forum where it's being discussed the convention on certain conventional weapons . The CCW as we abbreviate this convention, which has a very long name is a treaty that's based out of Geneva, whose mandate is basically to look at conventional weapons technologies, so anything that isn't weapons of mass destruction and see whether new restrictions or prohibitions are needed on a particular technologies that cause particular suffering or are problematic in some other way.

[00:04:20] So at the end of 2013, um, on partly and an initiative from France countries agreed a mandate to begin to work on discussions on this issue of what they termed lethal autonomous weapons systems and emerging technology in that area from 2014. Uh, this meant that for a few years, they had so-called expert meeting discussions on this, which was basically to explore the subjects. They got in, um, experts from, you know, different technical, legal, ethical fields to explore the issues in these areas.

[00:04:52] The CCW meets every year with all its high contracting parties. So that's all the countries that have signed up to the treaty and they make decisions each year on what work they're going to do the coming year. Every five years, they have a review conference, which is kind of a bigger meeting, looking at what is the status of work under the convention and kind of, you know, what needs doing in the next five year period. The last review conference was in 2016. So at that point countries decided to establish more formal discussions, uh, on lethal autonomous weapons systems, which basically meant that they had a mandate to explicitly look at recommendations for what should be done in this area, in a format, which is called a group of governmental experts, uh, which basically means that the same diplomats that work in Geneva plus their colleagues from Capitol who have the file on this issue, maybe military experts as well other lawyers or technical experts can attend these meetings and discuss the issue in more detail.

[00:05:53] So since, uh, 2017, we've had around 10 or more days a year of these kinds of discussions. And that's the format of meeting that we just had last week. Um, I suppose the concerns in this area, which. Uh, States have been discussing, and obviously we've been raising have generally been in areas that you could group as, you know, dehumanization and the risks of human dignity of autonomy in weapons systems, issues around the protection of civilians, legal challenges, because as the special rapporteur originally said, there's questions within existing frameworks of the law of what the gaps might be and what might not be

covered when the law was originally written without these systems in mind, you know, uh, also concerns around sort of opaque technologies  and also the risk to international peace and security, the possibility of an arms race and what some States are already saying as the third revolution in warfare, and they're specifically looking at these technologies for, for that purpose.

[00:06:54] Um, so we, as a campaign and as an organization in article 36, uh, have been suggesting sort of since around 2013, that countries should consider this concept of human control and meaningful human control as a way to condense and structure the discussions, cause it's quite a wide area of, you know, concerns and issues to consider, but clearly a lot of them are centered on whether there's adequate control and accountability. And within the international debate, I think in 2016, special rapporteurs to the human rights council, again, looked at this issue and made the recommendation that autonomous weapons that don't require this kind of control should be prohibited.

[00:07:36] So where we are at the moment. Just in terms of process, is that we're in this phase of, um, a group of governmental experts discussing these issues at the convention on certain conventional weapons. This means that States need to make sure recommendations on what to do, and they have a mandate of exploring options and their mandate at the moment says that they need to come to consensus recommendations in relation to the clarification, consideration and development of aspects of the normative and operational framework on emerging technologies  in the area of lethal autonomous weapons systems. So what this means basically is they need to decide, you know, whether they, want to recommend some rules in this area and how formal they will be. So will this be something politically binding? Should they be looking at a legal instrument? Are they just going to write down a compendium of kind of good military practice, if you were to use killer robots? So that's basically where we are at the moment.

[00:08:33] **Matilda Byrne:** Yeah, excellent. That was such a great comprehensive, I guess, overview of what the process has been like.

[00:08:38] I think we'll dive a little bit into that, um, normative operational framework thing a little bit later, but  as you mentioned, I guess human control has been put forward as an area where diplomats and others can sort of center these talks on the international stage. You've mentioned how the group of governmental experts is also part of the CCW forum or comes under that purview and part of the process means that there needs to be consensus for things to move forward so that is that every state party in the room needs to agree to adopt something or move it forward.

## Discussions on human control

So in terms of human control, Where are we seeing agreement? Um, and I guess, meaningful human control also is the term that the campaign likes to use, so if you could break that down a little bit and also note what countries have been saying about human control in these talks.

[00:09:29] **Elizabeth Minor:** Yeah, sure. So there is quite a lot of agreement now we think in this forum that the human element at least is central to sort of solving the problems in this area. And, you know, there is quite a lot of convergence on the fact that this is the core area of work quite a lot of States are agreeing saying, this has kind of more or less a, not quite a consensus point, but definitely a point of convergence. Um, so working out what's required in terms of the interaction of people with the tools that we create has been recognized as key in answering these sort of legal and ethical questions over autonomous weapons. And this question of how the law can be upheld is definitely at the forefront of what's what's being discussed.

## On the concept of meaningful human control

[00:10:11] In terms of the terms that are coming up and being used- meaningful human control, we suggested as a term that would be good to, to structure debate, uh, basically because you know, the meaningful is up for discussion and needs definition, right?

[00:10:27] So I think from the start most countries were able to agree that there should be some kind of human oversight or control or interaction or supervision over autonomous weapons systems but that could mean basically anything, right? From kind of approving some suggestion from a system of what you should be doing in terms of targeting and applying force to things, uh, to, you know, fully retaining what we see as meaningful human control of the full control and legal deliberation over systems that, you know, is required by, by international law. So I suppose the campaign at the moment has broken down what we think is our concepts of human control into different components. So one's around decision making and the use of weapon systems, uh, one's around technical characteristics of weapons systems to, you know, sort of ensure that they can be controlled and also operational components in the use of weapon systems.

[00:11:24] So, in sort of making this concept of meaningful human control, the point is basically to show where we draw the line of what should be prohibited and then of the weapon systems that are left in this area of discussion, how can we keep kind of sufficient control over them to uphold our legal and ethical standards?

[00:11:44] Um, in article 36, we've done quite a lot of work on this kind of concept . Basically with the weapon systems in this area that are under discussion, they're essentially weapons that are taking in data from the external environments using sensor systems, the system then processes that data and if it matches a certain profile of a target, then it will activate force. So, you know, firing a weapon, firing a missile or something like that. And one of the key issues with these weapons is, is that of uncertainty. So after you've, you know, activated one of these systems, which is essentially something automatic, um, the human user or the military commander of that system, won't be able to be sure exactly when or to what or, um, where force will be applied to a target. So for us, thinking about meaningful human control is thinking about these factors. So how can the kind of the space over which something operates at the time for which it does so, and the scope of targets to which it can apply force be limited. And this qualifier of meaningful is where that kind of work is done over human control.

## Human control in international debates

[00:12:57] So in the international debates, um, there's obviously been some discussion over what words we should use to describe the interaction between humans and their tools, the weapons systems, uh, whether the term should be meaningful human control, human control, human involvement, um, all these, all these kinds of things. Um, it's essentially kind of a political discussion over these words and what countries think the level of activity and restriction that's going to be required.  Um, and I think for some countries as well, possibly, not wanting to use words that have been originally suggested by, by civil society because countries like to negotiate their own standards. For example, the United States is quite strongly against using the term control, uh, in the debate and  prefers words like, uh, you know, human judgment. Um, I think because, you know, they are one of the countries who has the most interest in systems in this area and has been sort of advocating for the acceptable uses and the advantages of autonomy in weapon systems.

[00:14:04] So something that was encouraging from from last week and this year, despite some procedural challenges, increasingly what we're seeing is countries articulating what are the components of this human control, you know, less than debating the terms actually looking at the content, which is what we wanted to see.  So they're saying, you know, this is what we think might be possible,  this is how you should restricts weapons systems  in general, in terms of, you know, how long they should be operating for and you know, over what areas if they're automatic, um, questioning what kinds of targets it might be acceptable to automatically apply force to. Um, and also thinking about kind of technical aspects that, that might be helpful there. So. That's been something positive to take away that we saw last week in this year.

[00:14:50] **Matilda Byrne:** [00:14:50] For sure. And I think more and more there's countries speaking about human control at the level of individual attacks, or also human control over specifically the selecting of targets and engaging targets with lethal force.

## On the notion of so-called 'control over the entire life-cycle'

On the other hand, though, you do have countries like the US you've mentioned also Australia and others who sort of are shirking this issue of human control at this level and are instead talking about notions like human control across the entire life cycle of the weapon. So this is really interesting phrase that's also being thrown up in the discussions and essentially appears to be a tactic for those countries wanting to avoid a prohibition on lethal autonomous weapons systems. So I was hoping you could elaborate on what this concept actually means and why it is insufficient, that level of human control.

[00:15:40] **Elizabeth Minor:** Yep. Yep. You're totally right. And yeah, so we're, you know, advocating that really, it's the point of use, which is important when you're talking about control right?. So that's why we talk about in operations and specifically, like you said, in individual attacks. But this concept of control across the entire life cycle of the weapons system,  means that  there's a concept of control in design as well as control in use. So, um, you know, that you should design tools that can be controlled by a human or that have

certain design features that might enhance a human control over them. Um, I think that's on the kind of, you know, more and more useful side of this area.

[00:16:19] Like you say, this idea of control across the entire life cycle, so from the research and development phase of a weapon to its kind of testing and then also, you know, after that it's deployment can be used a bit by countries who would prefer to have less human control and meaningful human control over that point of attack, and to kind of defer that back to an earlier stage when you've been, you know, designing and deciding to use a weapon and trying to make the argument that, you know, control somehow in the programming of systems or in the design of systems is sufficient in order to effectuate human intent at the point of, of an attack. Whereas we think that, you know, this is very problematic in terms of taking away the point of human decision making and legal assessment from where it is in international law, in the laws of war, which is what is discussed under the CCW, you know, at the point of a commander making a decision to attack a specific thing. Um, you can't really roll back from that and say that things will be at an earlier point in, you know, the deployment of some automatic system. Right? We think that though there are kind of some useful concepts in this area about you know, designing systems that aren't totally out of control, which I feel like as a designer is, is basically, you know, your job and you shouldn't be doing that anyway. I think it, it, it, as a way to slightly maybe try and push things into an area which isn't the relevant one in order to be addressing these legal and ethical questions.

[00:17:52] **Matilda Byrne:** [00:17:52] Definitely. I think on that sort of relevance, one of the delegations last week used this great iceberg analogy about control. So yes, there is the entire life cycle, but things like the design and the development phase is all underwater. And it's like the tip of the iceberg, the control over individual uses of the weapons, which is where we really need to come to some kind of agreement and actually I guess antagonize.

[00:18:16] **Elizabeth Minor:** [00:18:16] Yeah, definitely. And I think it'S UNIDIR who also has this, uh, diagram, uh, depicting such an iceberg, um, to, to demonstrate this concept of, you know, all the phases of human control. But, but like you say, it's this, you know, the bit that is above the water, where you're actually using the weapons system, which we think is, uh, is the most important thing.

## False solution of proposed techno-fixes

[00:18:35] And I suppose, another kind of problematic aspect in this area is this question of suggesting techno-fixes to what are essentially human problems. Right? So, I think that another very popular point amongst States is to discuss this idea there should be mechanisms for remote recall or self-destruct mechanisms or for it to abort mid mission if it turns out the target is wrong and, and stuff like that. And I think that we advocate for this kind of thing and it's an important aspect, but also it's not, you know, it's not the solution in itself. And in an end it can be quite problematic just to focus on those particular possible technical characteristics rather than looking at, you know, the human action in relation to the tools. There can be a tendency in weapons discussions and in high tech discussions in general to like put too much faith in the technology and to concentrate on technological

solutions when we really should be looking at, you know, ourselves and what we're wanting to do in this area.

[00:19:34] And I think for, you know, some other campaigners who worked on previous campaigns on landmines and cluster munitions,  it's a bit similar to issues that came up there. Right?  Say in the cluster munitions prohibition, so  large bombs containing a lot of submunitions, one of the main kind of humanitarian problems of them was that, um, they leave a lot of unexploded bomblets right and they kind of act as defacto, landmines  and cause a lot of suffering.  But in the kind of international discourse on whether to prohibit these weapons or restrict them, um, there was a lot of discussion around failure rates of these bombs and States proposing that the most high tech weapons with the lowest failure rates or  munitions that could self destruct after a certain time would be the solution to this, and similarly with landmines that you could have, you know, very high tech, smart landmines that would just get rid of themselves after a while, um, and therefore not pose a danger to communities. I mean, I think you know, we've demonstrated that this isn't the solution to these kinds of problems. The solution is in human use of these tools and how we put each other in danger with using them. So I think that there's definitely, you know, there's a danger there with these kinds of concepts of across the lifecycle and just with the high tech nature of the discussion.

## Limitations of Article 36 Weapons Reviews

[00:20:50] **Matilda Byrne:** Yes. And I think while we're talking about techno fixes, not being a solution in themselves, the other kind of, I guess, idea I want to come to is Article 36 weapons reviews, and them also not being a solution in themselves.

[00:21:04] It's something that in particular Australia likes to make assertions around, uh, speaking about how they mitigate risk doing these weapons reviews and  they have control systems within Australia. They assess if a weapon can be deployed in accordance with international humanitarian law and that if the weapon system in any particular context isn't compliant, then it won't be used.

[00:21:28] So these are some great sort of, I think, sweeping statements but they  also have a few issues at various levels. So I was wondering, how does this actually play out in terms of assessing autonomous weapons, these articles 36 weapons reviews. And the other thing that I question is how the people conducting the reviews could possibly foresee every context where it's going to be deployed.

[00:21:52]**Elizabeth Minor:** Yeah. Well, I think you've already hit on a couple of the key problems. So article 36 of the additional protocol one to the Geneva conventions, uh, which we are, we are named after, um, more because I feel, you know, we we think in civil society, we do a lot of the scrutiny work that maybe, you know, States thinks should be doing themselves. So article 36 requires States that are party to that protocol to review any new weapons, means or methods of warfare that they bring into service and for them to check that these weapons basically don't  violate the law in themselves. They're not already illegal; for example, you know, you accidentally built a biological weapon or there's something about their characteristics that mean they would cause say superfluous injury or

unnecessary suffering to combatants or that they would be by their nature indiscriminate. So already it's quite a narrow requirement  would these weapons always break the law, is one way you could interpret it or would they generally be, um, you know, illegal by their kind of nature and how they've been built. Um, States interpret this requirement in different ways.

[00:23:00] There is a general kind of problem in this area that we don't have very much information about how countries do these reviews in practice  because of military and commercial secrecy. some countries  publish general information about how they do them. For example, the UK does this and has, you know, workshops and discussions about how they do their article 36 reviews. But generally, we don't know what standards to which these things are being done.  When  this has been researched for example, by the ICRC and SIPRI I think did a study recently, and we had to look at it a few years ago as well, um, it's very hard to get information and probably the standards are quite variable and quite different.  In the absence of an international standard, that sets up kind of very clear boundaries  States will inevitably be interpreting these differently in doing these reviews of, you know, any kind of weapons systems with autonomy that they're going to bring into service. So this is one key problem with relying on article 36 weapons reviews.

[00:24:04]Some countries that aren't party to protocol one also do weapons reviews. So the US for example, does weapons reviews and also talks about them in this forum. But given that  this is an issue which  is really for the whole world and the whole community of States. Right?, and not just for those who are either protocol one parties or who are active in doing weapons reviews, it's also a partial solution in that way, right? Like not everyone's going to be doing this.  More fundamentally, these procedures  by their requirement in law and by what we know about the nature of how States might do them could be quite limited. Right? And like you say, this problem the real life use of weapons and the effects that this might have versus,  testing of them under certain conditions and  a very kind of narrow concept  I think is not going to be sufficient to address all the range of problems, ethical, legal, and moral that we have around autonomous weapons.

[00:25:02] And I think a key issue is that, as the, the International Committee of the Red Cross has been demonstrating in its kind of arguments and statements to the CCW,  within existing international law  there are unanswered questions, right?  There's not consensus interpretations  and that's something that's already acknowledged by States in this forum. So saying that you could just review these weapons under national procedures, it's not really a sufficient response. So again, I think like you say it's for some countries, um, certainly perhaps a way to weasel out slightly of the fact that we do need strong international standards in this area and that it's not going to be sufficient just to leave this to individual countries, to do what they want, because that's really kind of the problem and why it's on the table in the first place; is that we don't want countries, you know, just running away with this technology, and you know, having very different interpretations which will have dangerous results in its, in its usages.

[00:25:58] **Matilda Byrne:** Mm. I think, uh, while we don't want to discourage countries from doing article 36 weapons reviews, you really highlighted there, the limitations of relying on that and why it is inadequate.

## Debates around definition

And I think also touched on this idea a few times of needing a global standard and why this is really important, which sort of brings me to my next idea, which is beyond the guiding principles, which is the set of ideas that were agreed upon in the last mandate of the group of governmental experts. What's coming next is obviously a key part of the mandate, which you outlined earlier. I'm going to stick with Australia; what they have said is that the guiding principles are not an end in themselves which I think, you know, the campaign and civil society also agrees with, the issue then with Australia is that they keep asserting time and time again, that it's premature to support a ban without a definition. And I think this is something that we could maybe also unpack a little bit- because in the international talks, it really has been a sticking point, being able to formally define lethal autonomous weapon systems or understand the key characteristics.

[00:27:05] **Elizabeth Minor:** Yeah. So I suppose, on, on the definitional points, um, I think, yes, it's true that at the moment, in a way, still we have countries talking about a few different concepts. So their conceptualizations of lethal autonomous weapons systems varies quite a bit between a very narrow idea, which some, some countries are using of extremely sort of futuristic weapons, machines that might have higher level intent and evolve and all these things, which certainly don't exist at the moment and perhaps would never exist. Other countries are talking about a much wider concept of systems, um, which might include also existing systems that use sensors to apply force automatically and some are somewhere in between. So it's true that there isn't a definition of lethal autonomous weapon systems that's universal. Um, but also I think that, you know, we don't. Need that at this point in order to take action and move forward. I think in our opinion and the campaign's opinion, um, discussions for regulation should proceed on the basis of having, you know, a very broad scope for discussion so perhaps, all systems that use a process of processing data from sensors to apply force, um, after their activation by a human. That covers everything that is being discussed in the CCW at, at the moment in some kind of catch-all way and allows us to then pick off the systems that we think need to be prohibited and those that need higher standards of control and where there's legal and ethical questions aren't answered.

[00:28:41]definition making is a political process, right? So there isn't something that exists out there, which is a definition of lethal autonomous weapons systems. That's something we're kind of generating in these discussions and in an international regulation, it's kind of a key part of the negotiation to decide, you know, what is the thing that we're talking about and what, what is the thing we're banning and what is the thing that we're regulating? So I think that could also be a political move to say that we need definitions before we do anything, because then, you know, you can spend a lot of time uh, talking about definitions . We think it's better to go the other way round and talk for example about, you know, human

control and how we can ensure that over weapon systems and proceed from that side in order to make our regulation.

## Going beyond the guiding principles

[00:29:28] In terms of the mandate at the moment, and moving beyond these guiding principles towards this idea of some consensus recommendations around a normative and operational framework.

[00:29:41] So the guiding principles was something that States agreed last year. They contain things such as, you know, the law applies to autonomous weapons systems, uh, which, you know, you'd hope wouldn't have to be stated, but for some reason it did, you know, that accountability can't be delegated to machines so the law applies to humans. It's good to have consensus on that point, because earlier in the debate there was quite a lot of ideas and excitement around the possibility that you could program international law, um, into, you know, algorithms somehow, which, you know, fundamentally misunderstands, I think both technology and the law as a human process. And the guiding principles have stuff around human machine interaction around article 36 reviews, which yes states should definitely do but not sufficient here and other things like that.

## Arriving at 'Consensus recommendations'

[00:30:31]They were meant as kind of a starting point for discussion. What countries are meant to be doing this year is kind of looking in more detail about legal, technical, and military aspects considering ethical ones as well. Um, and trying to narrow down  what they think they're going to be recommending.

[00:30:48] Uh, you mentioned earlier that the CCW operates on consensus as a forum. what this might mean is that States have got to come to some sort of conclusions and recommendations that everyone in the room can live with. What it's often meant in practice in this forum, unfortunately, is that their disagreement basically means the exercising of a veto. We've seen, especially Russia  use this this consensus rule to, I suppose, block certain things  so, for example, there was quite a long involved discussion last year, about how many days it should be this year. There's a lot of this stuff going on on things which are less serious and meaningful than the actual issue of autonomous weapons systems and regulating them.

[00:31:36] So we feel in the campaign from these discussions, the consensus recommendations that might be made, they're unlikely to be kind of at the level that we want to see in order to adequately respond to these issues. Um, I mean, suppose I don't want to preempt anything, but that's the direction in which we, we think things might be going, But I think that, you know, notwithstanding whatever is, is recommended by consensus, by States in this forum, a lot of useful work is already being done. Like I was saying, you know, on elaborating what human control looks like. I think countries can increasingly talk about what they think, you know, a structure for a legal regulation should look like in this area and talk about the elements of that more.

[00:32:19] At the end of next year, that's kind of a crunch point in these discussions, which is the latest review conference of the convention on certain conventional weapons. So at this point this group of governmental experts really needs to come up with these recommendations of what should be done next. And I think you know what those look like and what countries feel about the adequacy of those will really kind of set the stage for what happens next in this issue and whether we'll see effective regulation on killer robots.

[00:32:49] **Matilda Byrne:** [00:32:49] For sure, Obviously there are some difficulties with getting something decisive. You mentioned Russia and US earlier, we've touched on Australia, Israel, I guess and India, also in that small handful of countries that are really, I guess, impeding the group from moving forward decisively, but there is also a lot of calls to create a legally binding instrument or prohibitions, a ban on legal autonomous weapons systems. even if not, you know, the point that we arrive at at the end of next year, in terms of consensus recommendations I was wondering if you could **explain what this legally binding instrument might look like.**

[00:33:26] **Elizabeth Minor:** Yeah, definitely. So, um, I suppose the structure that we think might be effective as a campaign what we need to do is, uh, prohibit certain technologies that are legally or you know, ethically just unacceptable and ensure that there's meaningful human control over the rest of the systems, because they all have their problems from this uncertainty about where exactly force will be applied.

[00:33:49] So we want to see in terms of prohibitions, a prohibition on anti personnel use of systems, so on systems that target people We think that that's very important from the point of view of human dignity and rights, and some of the really kind of key ethical concerns in this area right of allowing machines to make life and death decisions

[00:34:11] We also want to see a prohibition on systems that, you know, by their nature could not be meaningfully controlled by a human, so for example because of their complexity, systems that a lot of countries talk about that might use advanced computer processing techniques in order to define their target profile it's really essential, I think under the law and also ethically that people understand exactly what the effects of their weapons systems are going to be. They don't need to understand, you know, the programming of something or all the technological components, but when you're using it, you need to know what it's going to do and you might not be sure by the nature of, you know, machine learning techniques so systems that can't be meaningfully controlled should be prohibited. And I think, you know, these at best are the kind of systems that might be caught by a weapons review, but maybe not always.

[00:35:00]And then over the whole range of systems that is left, we need to ensure meaningful human control. So we think that any legal instrument should have positive obligations on countries to ensure that there's meaningful human control over all weapon systems in this area. And that, that should be broken down into the components that we were talking about of, you know, at the moments of an attack, uh, making sure you know, that there's restrictions on the time and space and target type that our systems are used against and that the point of application of force is sufficiently close to when a legal decision

has been made under and things like that. Um, and also the campaign suggests that there should be a general obligation in any treaty to, um, ensure meaningful human control over the use of force. So that's the kind of general structure that we're looking at. It's a bit more complicated, I think, in this area than just one simple prohibition because, you know, by the nature of developments in this area, it's not going to look like one single thing, right. With one kind of, you know, level of control over it, it's different technologies, which can be in different system configurations. So we need this more nuance and complex approach to make sure we prohibit all the systems and all the uses that we think, you know, are going to be a problem.

[00:36:19] And like you said, it's very encouraging that we're, you know, hearing more and more calls for a legally binding instrument and for a ban. And that, you know, this is kind of the strong position of a lot of countries in this forum, not withstanding others who want a wait and see approach, um, for different reasons, including that they're interested in having these technologies in their arsenals . So we're hoping that, you know, I suppose over the next year or so that, um, Countries will be able to, to also develop their positions in this area. And start thinking more seriously about what the structure of regulation could look like. So that, that, that groundwork is done in order to have a legally binding regulation, we can't really settle for anything less, because these are very fundamental questions and challenges.

[00:37:06]**Matilda Byrne:**  Absolutely. Could you also touch on **then the avenues procedurally or with the diplomatic process that are possible for achieving such a legally binding instrument** like the one you outlined?

[00:37:18]**Elizabeth Minor:**  Yeah. So this is, I mean, it's up to countries to decide this. In the CCW, they can choose to add an extra protocol to the convention. So, um, at the moment it has five protocols which address different weapons systems.  There could be a sixth protocol on killer robots. So that's one option.

[00:37:35] States can negotiate treaties in other ways, if that's not what they decide to do. So for example, through the general assembly, like the arms trade treaty was negotiated through that, um, or through a standalone process that's, uh, convened by one country that that wants to lead it. So for example, the prohibitions on anti-personnel landmines and cluster munitions were negotiated in that way, through conferences in Canada and and in Norway. So there's a few different options for what, what countries could do. And if there's not consensus for all countries in the CCW to go ahead, there's 122, uh, I think parties there which includes all the countries that consider themselves the major military powers, which is meant to be an advantage of negotiating in this forum. Um, if not all of those countries want to agree to negotiating a legally binding instrument, then there are alternatives in which those countries that are willing to set the standard and red lines around this issue to start doing that and to bring others along with them later. So there's a lot of different options for States to take.

## The need for decisive action and leadership

[00:38:42] **Matilda Byrne:** Yeah, wonderful. And I guess that then leads to the point that it is really important that countries do step up that governments of the world to start really advocating for decisive action for new strong, legal instruments to be developed. Um, and also I guess, bold leadership in really leading us to the solution that is really required in terms of tackling this issue.

[00:39:04] **Elizabeth Minor:** [00:39:04] Yeah, I definitely agree. And I think that, you know, countries that feel, um, you know, strongly and have strong positions about this should be developing the content and the material and the groundwork for legal regulation in this area.

[00:39:18] I think that's something that, you know, is already getting done and it's encouraging to see, uh, but yeah, we really need a response on this issue cause it's, you know, it's so, so fundamental, isn't it? And I think as well, you know, it is an issue for all countries and all people, um, quite often in the CCW, you know, you see a tendency to consider some countries more relevant than others, unfortunately. Right. Um, in these problematic kind of, I suppose, power dynamics between countries in the world. So, considering that it's just those major military powers so called, who are developing these new technologies whose opinion and participation is important in this process. Um, I think that, you know, this is a question that should be answered by the whole international community collectively, and it's going to affect, you know, all, all our countries and societies. So it's not something that we can just leave or wait for certain countries to, to come into the process in order to start defining what our standards should be. So I think that's right thing. That's very important to bear in mind with the process going forward as well. We need to act and we need to set strong standards and we need to kind of, you know, pull the rest of the world, along with us, rather than waiting for countries who are interested in autonomous weapons to be ready to abandon the third revolution in warfare that they're going for.

[00:40:42] **Matilda Byrne:** [00:40:42] Yes. And I think that's a really great point to end on this sense that it is an issue that's impacting the whole world and that the whole global and international community need to be alert on this issue and really start stepping up and moving forward. And so I know, uh, you and I, and many, many, many others will be monitoring the diplomatic talks to come and look forward for real steps forward and progress. Thank you so much, Elizabeth, for joining us today.

[00:41:09] Thanks for having me.

**Matilda Byrne:** If you want to know more, look for us on Facebook, Twitter, and Instagram Australia Campaign to Stop Killer Robots or use the hashtag #ausbankillerrobots. Become part of the movement so we Stay in Command.

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