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TRANSCRIPT

Event

"Gaza's Water Crisis—What Can Be Done"

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FEATURING

Jean Gough
Special Representative for UNICEF in the State of Palestine

Lama Abdul Samad
Humanitarian Support Personnel, Global Humanitarian Team, Oxfam

Fakhr Abu-Awwad
Representative, Rostropovich-Vishnevskaya Foundation

Hamid Jafari
Director, Polio Eradication, World Health Organization

CSIS EXPERTS

J. Stephen Morrison
Senior Vice President and Director, Global Health Policy Center, CSIS

Michelle Strucke
Director, Humanitarian Agenda and Human Rights Initiative, CSIS

Natasha Hall
Senior Fellow, Middle East Program, CSIS

Transcript By
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J. Stephen Morrison: Good morning, good afternoon, good evening. I'm J. Stephen Morrison. I'm a senior vice president here at the Center for Strategic and International Studies – CSIS – a think tank based in Washington, D.C.

This is the 15th episode today of the CSIS broadcast series, Gaza: The Human Toll. It's a product of the CSIS Bipartisan Alliance for Global Health Security in partnership with the CSIS Humanitarian Agenda and the CSIS Middle East Program. We'll be running 75 minutes today in this program. Later today we will post the full video on the home page of CSIS – CSIS.org – along with a transcript. As I mentioned, it's the 15th episode. We began this series November 13th of last year.

Today we're putting a special focus on water: sanitation, hygiene, health implications and dimensions of that. That covers a broad complex of issues: access to clean water, water production, desalination, management of human waste and garbage, and treatment. It brings forward questions of what available clean and safe water is available per person in the midst of this crisis, and at what quality.

It's tied to infectious diseases. We know that under-fives in Gaza – over 50 percent have suffered infectious – serious infectious illnesses. We know that acute diarrhea has struck half a million people within Gaza; 80,000 cases of Hepatitis A; extreme malnutrition, a threat to over half a million citizens in Gaza, tied in some respects to water sanitation, hygiene. It's tied to access to fuel and electric power, and the ability to bring in spare parts to repair damaged or destroyed infrastructure; and now today, as we'll hear, it's tied to the discovery June 23rd of polio within six sites – at six sites discovered by UNICEF inside Gaza June 23rd.

We've seen no paralytic cases yet. We'll hear from one of the world's leading experts Hamid Jafari from WHO as well as from Jean Gough from UNICEF about this. The race to investigate this, the race to put in place campaigns and plans to arrest this and avoid further spread internally within Gaza and around the surrounding region, that's included in efforts by the Israeli Defense Forces to vaccinate their troops.

This is a perfect environment, as we'll hear, for the rapid spread of faux polio, other infectious diseases, and malnutrition, and it brings forward the questions of what can be done in the midst of such sweeping damage and destruction of the water and sanitation infrastructure estimated at over 70 percent and how to deal with

this amid the displacement – the active displacement, over 2 million of the 2.3 million citizens of Gaza, in a period in which there's still very intensive fighting in the offensive that began in early May which continues to this day, and how do we proceed in a situation not just of vast destruction but of mountains of garbage and human waste in the intense heat and fecally-contaminated water supplies in the region.

Today's event we have very – it's very propitious today who we've been able to bring to the table I'll introduce momentarily, but also the events here in Washington itself. We had the visit on Wednesday to Congress by Israeli Prime Minister Netanyahu. Mass protests around that occasion, another reminder of how deeply mobilized but also deeply divided Americans have become over the health and humanitarian crises inside Gaza.

Vice President Kamala Harris, who is now the presumptive Democratic presidential candidate, met with the prime minister yesterday and made a very strong statement about the need for a ceasefire and peace agreement that will bring about the release of the 111 Israeli hostages and bring about actions that will address the profound suffering of Palestinians and the need to close the negotiations – expedite the closure successfully of the negotiations over a ceasefire and peace deal.

Earlier, just recently, July 11th, Samantha Power, the U.S. assistant administrator for AID, spoke in the region, pledging an additional hundred million (dollars) in humanitarian assistance that could help flood the zone in the event of a cease fire. But also she called for greater protection by the IDF of civilian workers and made the point that 278 humanitarian workers have been killed, announced the decision that the Israeli Defense Forces, which had come into an experimental model of deconfliction along the maritime corridor with international NGOs, with the U.S., and with U.N. agencies – that that system was now to be extended. That deconfliction system that had been applied narrowly along the maritime corridor is now to be extended across Gaza to bring greater protection and delivery of assistance.

We'll see what that means, but I think that press statement, that statement by a senior leadership within the U.S. government in the region, was a significant development.

We're joined today by a remarkable group of experts. We'll hear from them momentarily.

Jean Gough is the UNICEF special representative in the state of Palestine. She's served for 28 years in UNICEF in leadership positions in Palestine, earlier in South Asia, in Nigeria and Latin America. She's an engineer trained at Arizona State University.

We'll hear from her first, followed by Lama Abdul Samad who is the lead author of the newly released Oxfam study "Water War Crimes: How Israel has Weaponized Water in its Military Campaign in Gaza." Lama is a water and sanitation specialist, more than 20 years of experience working in lower, middle income, and fragile states. She has a master's – a BS and master's degree in engineering from the American University of Beirut.

Our third speaker is Dr. Hamid Jafari, a close friend. He's the director of polio eradication at the World Health Organization based in Amman, Jordan. He'll be speaking specifically to the polio outbreak. We've had – we'll have Hamid with us up to 40 past the hour and then we'll be joined by our fourth speaker, Dr. Fakhr Awwad, who is a representative in Gaza for the Rostropovich-Vishnevskaya Foundation. That foundation is very active inside Gaza in repairing water facilities in displaced residences and hospitals. It's shown some remarkable progress under very adverse circumstances. Dr. Awwad – Dr. Fakhr Awwad has a Ph.D. in chemistry from Islamic University of Gaza.

I'm joined here in the studio by my CSIS colleagues Michelle Strucke, director of the Humanitarian Program with CSIS and director of its Human Rights Initiative. And I'm joined by Natasha Hall, a senior fellow in the Middle East Program, special expertise on the water sector, published on that sector earlier this year as the war began, and has authored some very remarkable work on the war in Syria and the humanitarian programs there.

So thank you so much for all joining us today. I'm going to turn to Jean Gough to get things rolling.

Over to you, Jean. Thank you so much for joining us today.

Jean Gough: Thank you, Dr. Morrison.

Good afternoon, good morning, good evening to everyone. Warm greetings from Jerusalem, where I am now. And I just got back from Gaza a week ago.

So the humanitarian situation in Gaza following the events of the 7th of October in Israel, which led to an escalation of hostilities,

remains deeply concerning, with a multitude of challenges impacting the well-being of the population, especially children. Freshwater resources in Gaza prewar was already scarce due to the excessive groundwater extraction, seawater intrusion. And, hence, this has attended the use of desalination system to provide potable water for drinking and domestic use.

The conflict has resulted in a severe crisis in the water and sanitation services, affecting over 2.2 million people. Most water systems are either damaged or not operational. Before the war, Gaza water systems relied mainly on three seawater desalination plants, two of which are now still operating, depending on fuel availability; 283 water wells, 200 of which are destroyed, damaged or out of order; and three water-connection points supplied by the Israeli Water Authority company, Mekorot, that are still operational.

With an estimated 68 percent destruction and damage of the entire water and sewage system, coupled with limited availability of fuel, power, spare parts and maintenance capacity, water supply and production have plummeted to around 20 percent of their original prewar rates. Current water-production capacity has dropped significantly, leaving only approximately two to nine liters per person available per day, down from 83 liters per capita per day prewar.

Despite support from UNICEF and other wash response actors, the water utility and service providers in Gaza, including the Coastal Municipal Water Utility, CMWU, as the main operators of the water and sewage system and critical responders have been extremely stretched in their ability to respond and cover needs. Their technical and financial capacity, alongside of staffing conditions are running thin, and have lost warehouses, vehicles, staff, and many pieces of equipment and installations.

Shortage of power and energy in Gaza has had a critical impact on the operation of essential wash infrastructure. Water production, heavily reliant on functioning water wells and desalination plants, has been severely hindered by lack of electricity and limited fuel. Similarly, the operation of sewage-pumping station, crucial for maintaining wastewater and preventing environmental contamination, has been compromised. Without reliable energy resources, these facilities cannot function effectively.

The situation has forced people to resort to unsafe water sources, with uncontrollable quality, significantly increasing the risk of

water-borne diseases. Reports of the case of increased rates of acute watery diarrhea, bloody diarrhea, acute jaundice syndromes, and now the resurgence of polio in the environment. The reliance on alternative water distribution solutions, such as water tracking, is currently insufficient to meet the needs across the Gaza Strip, which is aggravated by security and movement restrictions. Sanitation has also been severely affected, with sewage-pumping stations and wastewater treatment plants out of service due to the lack of power, fuel shortage, and damages, resulting in daily sewage flooding and outlets into IDP formal shelters, streets, and discharge into the Mediterranean Sea, which causes high public health risks.

Water scarcity, limited hygiene supplies, and limited access to sanitation facilities such as toilets and bathing facilities exposes girls and women especially to diseases, infection, and mental stress, especially during menstruation. UNICEF is leading the wash cluster coordination with about 52 partner agencies with a wide range of capacities and areas of expertise. And the cluster operates regular coordination meetings at national, subnational levels, and multiple technical working groups. To address this complex humanitarian situation, UNICEF expanded the reach of the emergency multi-sectorial services, including essential and lifesaving water, sanitation and hygiene, wash, child protection, education, health care, nutrition, and social protection, and social and behavior change.

On the water front, UNICEF is using the following approaches: Increasing water production by supporting the running of the main sources of water, supporting emergency quick fix repairs and maintenance of pipelines and water systems, including supplies spare parts to increase water production, distribution, and reduce excessive leakages, water tracking and installation of small mobile desalination units powered by solar generators. UNICEF has advocated at the highest level for the repair of the electricity feeder line to the UNICEF-built desalination plant in southern Gaza to reduce fuel dependency.

This is expected to improve water supply production when it is finally connected when the desalination plants are completed from the current production of 2,500 cubic meters per day to around 20,000 cubic meters per day. We expect this line to be connected in next eight days. The line is fully restored, and we are just waiting for the last piece to be connected to the Israeli side of 70 meters. So this is something that we are looking forward for because we do believe it will increase the production of water in Gaza.

On the sanitation front, UNICEF has implemented a two-pronged approach – access to basic sanitation service, which includes the construction of family household toilets, repair, rehabilitation, construction, installation of showers and washing facilities, and solid waste management at the community level. Sanitation services beyond containment – which includes construction, rehabilitation, recommission, septic tanks and cesspit, provision of the sludge services, treatment of fecal sludge, repair and rehabilitation of sewage pumping stations, provision of spare parts for the maintenance of damaged infrastructure, support sanitation service providers to maintain and operate sanitation network and sanitation infrastructure.

However, the challenges are huge. It's not enough. We are not yet able to reach each and every one in need of service, given the difficulties in the time it takes to get spare parts, to get construction materials into Gaza, which has really complicated the ability of all partner to really deliver those services.

Key acts that we would love to see happening more and better. We have requested to allow into Gaza the dual-use material, the so-called dual-use material. We call them critical humanitarian materials and supplies. We need to establish a restriction-free supply chain, which in turn could facilitate the proper wash response. We also need to accelerate the clearance process to get spare parts into Gaza. It's not acceptable that it takes three to four months to get materials into Gaza. We need the restoration of key services, such as electricity and fuel services. We also need an exception to donor conditionalities and sanctions to service providers such as CMWU, who are unable to pay salaries of their 300 staff, and yet they are key players in coordination, maintenance, operation and wash infrastructure in Gaza. And, finally, we need a ceasefire. We need it now. And we really need that. We owe it to the children of Gaza. Many thanks.

Dr. Morrison: Thank you, Jean.

I'm very encouraged that you're eight days out from seeing that restoration of that desalination unit that will make significant change in the picture and also your very concrete recommendations about dual use and clearance – accelerating of clearances, very real and very concrete steps that need to happen.

Lama Abdul Samad, thank you so much for joining us. Congratulations on the Oxfam report that you were the lead author on, along with a number of other colleagues, and thank you for

taking time to be with us today, the very week in which this report has appeared. That's terrific timing, and thank you.

Over to you, Lama.

Lama Abdul Samad: OK. So good morning to you and thank you for this opportunity.

Let me just first start by saying that the problem – the water problem in Gaza did not start on the 7th of October. In fact, it started decades ago with the Oslo Accords. This was mainly due to the inequitable sharing of water resources. It is due to continued restrictions on entry of construction material and restrictions on development of water resources.

Prior to 7 of October, like the speaker before me indicated, in Gaza people got 83 liters per person per day. Their neighbors enjoyed 250 liters per person per day. Gaza relies predominantly on groundwater resources. Eighty-one percent of their water comes from groundwater resources. That water is highly polluted due to the restrictions I discussed earlier, right. To supplement that they purchase water from the Mekorot, Israeli state-owned company. In 2021 the water utility had paid the Mekorot company 98 million U.S. dollars for very small quantities of water.

Now we fast forward to post 7 of October. The overall – our study duration is up to the 26th of May so end of May. Up to that period water availability to the population was less than five liters per person per day. Now, that is a minute amount of water, a severe reduction from what it used to be, and there are reasons for that.

That water is the quantity of a toilet flush. That's what people have to drink, to cook, to bathe, to do everything. The reason is on the 9th of October the prime minister of Israel, Gallant, vowed to cut off fuel, electricity, food, and so he did. That resulted in a massive reduction of water. No more than 20 percent of the capacity of the Mekorot lines were supplied over this duration of seven months, right.

Then you would say, well, most of the water comes from the groundwater resources so why couldn't the water utility produce it from internal sources. The short answer is they couldn't because water and sanitation infrastructure got severely damaged. As you kindly indicated, it was 90 – 68 percent destruction.

But how about we zoom into the actual water production, reservoirs, desalinization units? We start to see a much more bleak

picture. In northern Gaza and in Gaza City there is nearly no water production capacity left. Even the largest seawater desalinization plant has been taken out of service, right. And so all of this destruction has actually happened despite all of these sites being deconflicted. The last time the water utility sent the complete list of GPS coordinates, technical information, to the Israeli authorities was on the 15th of December.

Despite that, we see massive and widespread destruction. Harvard University ran an analysis and they came back with there is less than 1 percent probability that this level of destruction was due to chance or due to mistake. As was also noted, fuel is a very big problem and there's only a fifth of what is required to operate the remaining facilities that is actually available to the water utilities to operate. That means internally Gaza's water production has dropped by 84 percent. Not only that, the warehouses that contain all the supplies and the equipment needed to conduct rehabilitation work have been lost, have been destroyed due to military action. The two main water quality testing laboratories inside Gaza have also been destroyed.

This is way back earlier on in the response in the crisis, yeah, which is catastrophic in the sense that if we don't really – there is no way for us to actually test and know the questionable quality of the water people are receiving. It's very little, and it's very bad quality. Also to say that the main headquarters of the water utility has been destroyed. With it goes all public records. This is going to make recovery efforts extremely difficult once this war ends.

As also pointed out, restriction on entry of supplies through the crossings – we note that it takes at least three months to get a pre-clearance; however, our desalinization units and our pipes for repairs have received only partial clearance. Six months later they are still at the border, have never made it in despite being pre-cleared. So pre-clearance does not necessarily mean entry into the strip.

And we also note that there has been destruction of water and sanitation infrastructure in hospitals. Most notably, we've looked at up to February, and we recorded seven incidents on hospitals. This is what is reported; there might be more. You've probably seen in the news Al-Nasser Hospital's emergency rooms, and x-ray rooms flooding with sewage. That was the reason, because their sewage systems were destroyed.

All of this actually just translates to a catastrophic public health

emergency. As of the end of May, we have noted 26 percent of the population has fallen ill due to one of the water-borne diseases: as mentioned, watery diarrhea, bloody diarrhea, or Hepatitis A or E.

Now we know that we also have polio, and to be honest, I didn't see polio coming because my eyes were focused on trying to see if we will get cholera because it wouldn't be unheard of for us to have a cholera outbreak. Johns Hopkins University came out and indicated that there is a probability that if cholera – it does – we do have a cholera outbreak, 8,000 people are expected to die. And if we just compare that with Yemen, 2016-2017, 3,600 people died of cholera then. So this would be a much, much larger catastrophe.

And I guess, from where I sit, I just want people to understand that people inside Gaza are exhausted – psychologically, physically. They have been moving, being displaced repeatedly. They've lost family and loved ones. They are starving, they are quite hungry, they have poor sanitation conditions. They have no water at all. And so I think – I believe that even when the ceasefire is achieved, the bombs stop falling, it wouldn't be irrational if we thought that people would continue to die due to public health risks.

Dr. Morrison: Thank you. Thank you, Lama, that was excellent and very powerful.

Over to Hamid Jafari. Hamid, thank you so much for joining us today. You bring extraordinary expertise on polio. Tell us what we need to know about the current situation in Gaza.

Hamid Jafari: Steve, thank you very much for the invitation. I am very honored to join this discussion.

So what we know so far – first of all, just to say that, because polio is at such final stages of eradication, it is the only current public health emergency of international concern under the international health regulation. So previous declarations were there for COVID, and for Ebola outbreaks. Polio is the only standing public health emergency of international concern. So what we know is that samples were collected from three different sites in Deir al-Balah area of Gaza, and then four sites – from three sites, and then from four different sites in Khan Younis. So six of these seven sites, the samples collected from there turned positive for the variant poliovirus.

So you're discussing these conditions. And as has been mentioned, polio has a mode of transmission called fecal-oral transmission. So the impact of sanitation and unavailability of access to clean water

is extremely favorable for poliovirus transmission. One of our – one of the reports of the Polio Independent Monitoring Board some years ago in monitoring the Global Polio Eradication program, came up with a list of the survival guide for poliovirus. And it was looking at weaknesses in the program, weaknesses in management. Coordination, those elements that – insecurity.

But this is beyond – I mean, this is not a survival guide but a thriving environment for poliovirus. When you put together the overcrowding, the internal displacement, lack of access to clean water for hand washing, for toilet hygiene, personal hygiene, and then constant exposure to sewage, this is as bad as it can get. Now, fortunately, a case of paralytic polio has not yet been reported. But it may be because there may have been a case or two, but the surveillance system for acute flaccid paralysis in childhood leads to identified cases of paralytic polio myelitis was also disrupted after the start of the war.

Gaza also had a system of regular sewage testing, which was also disrupted. And the samples that I spoke about were collected on an ad hoc basis. So what we are at this point trying to do, a risk assessment has just been completed by a multiagency team, which is working very closely with the Ministry of Health, WHO and UNICEF, UNRWA on the ground, and to look at how do we restore surveillance for paralytic polio and surveillance for poliovirus, both environmental surveillance, as we call sewage testing, as well as acute flaccid paralysis surveillance, and then start looking at how do we organize a mass-vaccination campaign.

In order to stop this outbreak, we need to implement at least two to three rounds of oral polio vaccination mass-vaccination campaigns with the novel polio vaccine type two. It's called novel because it was newly developed and prequalified by WHO last year, but it has been used in more than 40 countries. More than a billion doses have been used around the world. But it comes from a global stockpile that only the director general of WHO releases in response to an outbreak of this type of variant poliovirus type 2.

So I think what is the biggest threat, of course, going forward is that we're learning that it is very, very difficult for health workers to go and do active searches for cases of paralytic polio because of insecurity, and that one of the first things you do when you suspect an outbreak of polio is to go to health facilities, go to communities, and search for cases of paralysis. And we understand that that's becoming very difficult for health workers to do.

So we're going to have to devise alternative mechanisms to be able to, first of all, socialize the idea, make the communities aware – a community that is so tired and exhausted, and yet another threat for them to deal with is that, you know, there was a case of acute flaccid paralysis reported to the health authorities immediately for an investigation.

We're also looking at rapidly deploying the vaccine. And, of course, the challenge is going to be that this vaccine is going to be only effective in stopping the circulation of poliovirus if we can achieve very, very high levels of coverage, over 90 percent coverage, to be able to stop the outbreak, especially, as I said, in a setting where there is so much exposure and contact to sewage and that would, of course, require, ideally, peace. If not peace at least what, you know, the program has experienced in other countries historically of days of tranquility when there is a cessation of hostilities so that children can be vaccinated. At least that could be established so that this outbreak could be stopped.

But I think, as Dr. Samad has mentioned, polio virus is emblematic of the wider scale risks. You know, we've heard about the hepatitis A, which is also a fecal-oral transmission of hepatitis E potentially and then, of course, cholera would be a horrific scenario in this environment.

So back to you, Steve.

Dr. Morrison: Thank you, Hamid.

Just two quick questions. One is if you could speak to the most vulnerable population, which I understand are those newborns under 18 months who have not been vaccinated. How large is that population, in your estimate, the most acutely vulnerable population to the polio virus?

And, secondly, this is not just a Gazan phenomenon. This is a regional phenomenon. This is one that has to be thought of and acted upon on a regional basis. If you could say a few words on those two questions, please.

Dr. Jafari: No, absolutely. An excellent question there, Steve.

So Gaza used to have a very, very high childhood immunization coverage, around 99 percent with the polio vaccine and other childhood vaccines in 2022. That, with rapid surveys that have been done as part of this risk assessment, is now around 87

percent and declining because immunization services have been significantly disrupted and, of course, within that the youngest group that is becoming increasingly vulnerable are the infants and children under two years of age. So that's the one – the most vulnerable group here.

And, Steve, you're absolutely right that the – of course, the immediate threat is to the children of Gaza but this is a regional threat as well. You know, for Egypt, you know, across the border – Jordan, Lebanon, Syria – these are all, particularly Syria, that is still a country that's recovering from conflict, Lebanon in conflict. These are countries that are at very high risk of spread of this outbreak.

So yesterday we had the – a meeting of the Regional Subcommittee for Polio Eradication which is a ministerial committee that has been established in our region to oversee polio eradication in the region, and all of the ministers in that meeting clearly articulated that this is a regional threat. It requires a regional public health response and a regional solidarity to support Gaza through this public health crisis.

Thank you, Steve.

Dr. Morrison: Thank you, Hamid.

I'm going to ask Natasha and Michelle to offer a few thoughts and then we'll come back to our speakers, and then we'll hear from Dr. Fakher momentarily.

Natasha?

Natasha Hall: Yeah. I mean, I think the thing that comes to mind immediately Lama and Jean had talked about sort of the outcomes of the access restrictions on Gaza for many years before October 7th, and so I think the thing that we need to be asking ourselves in particular is how was Israel able to cut off all electricity, fuel, water, to supposedly an independent territory with access to other borders with a large coastline over that period of time.

And we spoke a little bit about that but it's primarily because most of the fuel comes from Israel. Most of the electricity comes from Israel. Water lines especially come from Israel. But even that's just about 10 percent of Gaza's water.

But the remaining water has to be treated and well treated to be potable and so that means it needs to be desalinated, it needs to be

treated, and that requires fuel as well, and all of that has to come from Israel in the case of Gaza.

Gaza does not have a port even though it has a very extended coastline. So I think that there are structural issues at play that we need to think about for the future as well of Khuzaʿa, because we've been talking about the water catastrophe in Gaza for a long time, because the coastal aquifer upon which it depends has been collapsing. And it requires large desalination plants to be built, but donors are – honestly, it makes sense that they're reticent to build those, because Israel has not promised not to destroy them in the next war. Israel also controls the kinds of parts that need to go into the territory as well, as the speakers alluded to. And so this kind of control over an area, the fact that you could cut off water, food, and electricity to 2.3 million people within two days – which is exactly what happened after October 7th – is very alarming.

I mean, I worked in some of the darkest sieges of the 21st century in Syria. And in many cases, you actually had to have some kind of crossline cooperation between rebel forces and the regime, because one side would have water and the other side would have electricity and so you had to have some kind of coordination. Obviously, it didn't pan out well in the end for a lot of these areas, but that's why you saw some kind of back and forth. In this situation, it's all one way. And that has been absolutely devastating. And I would add to that the sanitation crisis, which I think is the thing that I've had my eye on this whole time.

And I would agree with Lama. I was looking more at cholera than I was at polio, which we should all be incredibly terrified of right now because we're already looking at probably one of the most severely disabled populations in the world by the end of this war. If we add polio to that mix, it's really horrifying consequences at this point. But the wastewater treatment plants – and I'll go back to a report that I that I coauthored with PAX for peace early on – there was a large wastewater treatment plant in Khuza'a that served about a million people, so almost half the population. This actually ran on solar. Even my colleague Will Todman wrote earlier this year that Gazans, because of this dependency on Israel, had moved towards solar. Probably one of the highest per capita rates of solar panels in Gaza City of anywhere in the world when the war started.

The problem is that all of these solar fields and these solar panels were damaged by the war. So this enormous wastewater treatment plant that ran on solar was destroyed very early on. The solar field was destroyed. In earlier conflicts, we had seen the nitrate level or

the sewage level in the Mediterranean Sea immediately skyrocket because a lot of the wastewater treatment plants were not operational, and the wastewater went into the sea. What we're seeing today – or, what we were seeing at least in the first few weeks of the conflict was we weren't actually seeing those nitrate levels immediately going up. And the reason for that was also the destruction.

The types of bombs that Israel has been using, these 2,000-1,000-pound bombs – in order to reach the tunnels of Hamas – have also destroyed the piping infrastructure in Gaza. And so we have sewage actually not even reaching the Mediterranean Sea. It is flowing into the streets and causing a lot of the real devastation that we're seeing in these overcrowded, informal settlements. And, you know, perhaps unsurprisingly, I think it was probably surprising to a lot of people that we're seeing polio now. But I think cholera is, you know, around the corner. And we did see waterborne diseases skyrocket after October 7th. And I suspect that will increase as well.

Dr. Morrison: Thank you. Thank you. I'm going to turn to Michelle in a moment. Hamid, I know we're going to get to the end of the time, and we're going to need to transition to hear from Dr. Fakhr.

One question for you is, are we staring at the need for days of tranquility? Are we staring at a higher level of political mobilization that this polio crisis is bringing forward? Does this change the picture in terms of demands for more structured cessation of fighting? In the absence of a ceasefire and a peace deal, is that where we're heading right now? I just want to put that question out there because it would seem to me that's a logical next step, is higher-level political tension diplomatically around this matter, and also an organized effort at trying to deal with the fighting and get those campaigns underway.

Michelle, your thoughts.

Michelle Strucke: I just – I want to pick up on that point. I fully agree. I mean, the need for higher-level political attention – first of all, people in Gaza are in such a state of deprivation. We're talking about the fact that they're very – the water they're drinking is less than a toilet – one toilet flush per day. Many are living in areas where they don't have access to running water. Children are having to go and spend hours per day fetching water, sometimes from the sea, for them to drink. And when we're saying on this broadcast, we're saying contaminated water, they're talking about sewage-contaminated

water.

So for the audience listening, this is a state of deprivation that is really, I think, unconscionable; so to say first that this should be solved because it's the right thing to do and because legally the parties to the conflict should not think that two to three liters of water per day is ever an acceptable standard. So I'll say that first.

But second, self-interest should come into play too, because something like polio could absolutely affect, as Hamid said, the neighboring countries. It could affect Israel. And this is also a self-interested thing to do for regional powers that have influence over the parties to the conflict. And the United States leaders, especially those that focus on global health and the political negotiations, they should be very seized with getting some type of cessation of hostilities at least to vaccinate.

And I do – it would be wonderful to hear from Hamid too about what that vaccination campaign would look like, just considering the level of open sewage, the overcrowding, and the incredible difficulties that would happen in terms of a distribution campaign in a context in which some of the major donors aren't even funding UNRWA right now. The U.K. has now allowed it. The U.S. is still not even funding UNRWA. So in that situation, how do they even carry out a responsible vaccination campaign?

And I wanted to highlight too that, you know, it's currently summer. Temperatures are soaring. That means that people need more access to water than less. So the incredibly, I think, dehumanizing situation we're looking at should cause us all to pause as humanitarians to look at the concrete things that should be done from the points that Jean made about accelerating clearance, allowing materials in that are needed for repair, really asking Israel to restore that electricity. It's such good progress that you're eight days out from that one desalination plant. But a broader electricity and fuel being allowed in is absolutely critical to changing the situation that people are facing in terms of contaminated water.

But I think that the big political point is that this is something that affects Gazans but people outside as well. And we should all be concerned.

Dr. Morrison: Thank you.

Hamid, I'm going to come back to you to offer some remarks to the issues that have been tabled. And then we're going to bring in Dr.

Fakhr. We'll obviously want to hear back from Jean and Lama. But before you depart, Hamid, just some closing thoughts, please.

Mr Jafari: Yes, I know my Cinderella hour has arrived, so just I would offer three comments.

I think first is that, ideally we do house-to-house vaccination to make sure that we reach each and every child, because that's the kind of coverage we need to stop this outbreak. This situation, of course, is unprecedented in some ways where so many of the houses have been destroyed. So we will have to develop an operational plan that is highly differentiated to wherever the children are and, you know, vaccinate them in health facilities, in shelters, in schools. And wherever they are, we'll have to search for them.

And that kind of differentiated operation requires an extensive workforce that should be moving in a conflict zone. So this would be nearly impossible to do unless there is peace, unless there is at least cessation of hostilities, you know, to your question, Steve. And I know that I didn't come back to the population size you asked for. We are planning to or proposing that all children under eight years of age be vaccinated in this situation. And that's an estimated size of just over 501,000 children. That's just an estimate. You can imagine how difficult it is to estimate the exact population at this time. And, of course, within that, the children two years of age, which would be around 150,000 or so, are at highest risk of paralytic polio.

Thank you, Steve. If there are no further questions for me, I will sign out.

Dr. Morrison: Thank you, Hamid. It's great to see you. And thank you so much for taking the time to be with us today.

We're going to bring in Dr. Fakhr Awwad from the Rostropovich. Fakhr, thank you so much for joining us and for your patience. I'm sorry we couldn't bring all four of you at the same time. It's a technological constraint. Why don't you tell us a bit about the work that you've undertaken, which is rather remarkable, at a ground level, operating with ingenuity to try and repair facilities at displaced communities, hospitals and clinics? Over to you, Dr. Fakhr.

Dr. Abu-Awwad: First of all, let me thank you so much, Steve, for everything, for having me with you, and for your kind introduction early in the

program when you mentioned some politics. It seems like encouraging when you mention some aspects about the opponents or about opposing opinions and so on.

Let me bring to your attention, all of you – also I should thank Lama and Jean and Hamid – every single information I think it was impressive and very useful on this regard. Let me bring the attention of everyone, please, that I am a Palestinian refugee, I'm a registered refugee by United Nations. I was born and raised in shoddy refugee camps. And I'm bringing this information just to give an evident that I've been in this crisis almost all my age. I'm now 60 years old; I've been more than 50 years old in this crisis. I never felt full up of water. It seems to me and to my mother – she is blind, she is 85 years old – we have the culture of being thirsty, unfortunately.

Right now, in the last 16 years I lost my house. I'm living only five miles – maybe four miles – away from the closest Israeli settlement. I see everything. They are full of drinking water, full of lights. We are living in darkness, and we're thirsty. I'm sorry – it wasn't my plan to bring this in, but I'm just excited to tell because every single piece of information was mentioned by Lama, by Hamid, by Jean, was very informative.

Now coming to RVF, the foundation that I'm leading the teams in Gaza in the last about 10 years, as you may know, Steve, that RVF has been dedicated to helping the children in need, either by providing med or providing vaccines, and then the last five years we just grabbed – we were forced – we have been forced to go to the most serious field, which is everyone in desperate need for, which is drinking water in Gaza. It's something – it's not something complement; it's essential. When you are talking about vaccines for infants, where usually RVF has been working for the last 20 years almost, then you are talking about breast-feeding or feeding kids, breast-feeding infants, it doesn't need anything to say. It goes without saying that they need potable water, clear water to drink. And that's why we started engraving in the rocks inside Gaza. As I said, I lived 120 days in this war. I was myself displaced four times, so I know exactly what does it mean, this experience. And I know exactly how you need – where you need to go to save your kids and fight, or your infant.

This is beside the long speech about the lack of hygiene resources. Everything, everything – I can't mention – maybe something will not bring – come into your attention. What do I mean by everything when it comes to hygiene – for a lady, for infant, for regular diapers.

And by the way, even for diapers, we intervene in our behalf to bring people a very big quantity. Yes, we cannot do everything, but we are trying again, and the last five years we've been working in different places. We have been working in two different approaches. The main one is a medium-term, which has run on for like three years – was supposed to run or last for three years and to provide many tens of schools, of overall system with desalination units, which is, I would say, small desalination units, which will be operational with the use of solar cells because of the common problem – the old-term problem with proper electricity or power.

And because of this invasion, because of this war, I would say that we have started working in a different plan which is like emergency plan. It's just an initiative, was approved by RVF management in Washington to intervene to help all type of people, all ages, starting from infants and their breast-feeding, if this is correct, and then by feeding the kids and for the elderly people to get their medications. And the final one was to intervene in the hospital activities – in any typical hospital activities to provide them with the clean water that should be used in chemical testing and surgery and dialysis and every single aspect of those.

Starting last May – last April actually – we've achieved five and now we are on the our sixth project on the field that we have successfully installed six desalination units ranges between 20 cubic meters of distilled water daily up to 2,050 cubic meter in the Kuwaiti Field Hospital, which we are proud of being able to serve inside the hospital.

Though it's a Kuwaiti one, it's very well resourceful. It's supported by a good country and a good people in Kuwait. But still we could put our hands inside the hospital and we are very delighted that we could just initiate the system for the sake of the hospital itself, for the sake of patients, and for the sake of regular people – humble people – in the street.

We have our own conditions for this – our own criteria before. I would say we have – we should have a resource for brackish water to use in the desalination units. If not, then we have to intervene and make it available somehow if it's viable. You know the security challenges would just intervene and prevent us from digging wells. But still, if there is a well that needs to be fixed using high, expensive pumps or buying those we manage.

I have – I'm leading a team who I would in front of you all appreciate and thank very much for every single minute they put –

they sacrifice with themselves. Sometimes we are – in RVF we are doing all our best not to put them at risk but still they are doing all – using all their time. Sorry. They are putting all their time, all their efforts, in different logistic part and technical part, and they're trying to bring those desalination units which has – which was either bombarded directly or lost or damaged for any reason to fully operational and very useful to people.

I should have a table that I'm trying to bring the front view. Hopefully, you will see we've been working in different places. This is the table I need to show you. Hopefully, it's shared. Please let me know this is correct.

Dr. Morrison: Dr. Fakhr, I'm not seeing that but we can certainly add the table into the production that we post online later today.

Dr. Abu-Awwad: I'm trying – I've been trying to share. Maybe you have it.

Dr. Morrison: We're not able to see it. I'm sorry.

Dr. Abu-Awwad: I'm sorry. But we should have –

Dr. Morrison: Yeah. But we will – we will –

Dr. Abu-Awwad: Yeah, please. I will provide you with this table.

Dr. Morrison: OK.

Dr. Abu-Awwad: It's important for us. It's very informative, which fills in details about the sites we've been working on. In this regard, we are looking to work very closely with UNRWA. UNRWA is a very good and resourceful place to work with.

They are securing the security besides which will protect and keep the things that we are doing in good shape for longer term on these unstable conditions and that's why also from this side I would appreciate – I'm thanking them very much for their help, for their long-term cooperation with us, and we're still looking more and more to try to provide those forcefully displaced people or the designated shelters in UNRWA with potable drinking water. Hopefully this will be achieved as soon as we could and as the time and the chance will help us. Thank you.

Dr. Morrison: Thank you. Thank you very much, Dr. Fakhr. And just in full disclosure, I'm a member of the RVF board and we've been very supportive and very proud to see what you've been able to achieve.

I'd like to come back to Jean and Lama. It seems that there's a lot of work that's been done very courageously and very systematically to try to lay the groundwork for what actually needs to happen under continued war conditions but also what needs to happen if there is – if we move into a ceasefire setting. What you've all indicated is people are not just sitting on their hands waiting for a ceasefire. They're pushing, pushing, pushing aggressively in these different ways.

And also, that some dialog across the line, to draw on Natasha's point, with the Israelis is also terribly important, opening that electrical line into the desalination unit, and the like. Just say a bit more, Jean, about your thinking – your bigger-picture thinking on moving forward today. We've got polio now as a new dimension to this. We have, hopefully, in eight days a change in the picture in terms of the desalination possibilities in the electrical hookup. Tell us a bit about how you're thinking on the big picture looking ahead.

Ms. Gough: Thank you. Thank you so much. And thanks to all the colleagues that have spoken. Yeah, it requires constant dialog. I think we are using the polio – not using it – but I think it's a good pressure point to make sure that they open up a little more on these dual-use items. We had in the warehouse 15 generators that we just got approved to go into Gaza to be placed in these wells to make sure that we have more production of water for domestic use. That means for washing hands that is required. I think right now we have more production of drinking water, and we need more production of domestic water.

And that's the piece that we all need to work on more. This operation is one of those operations more complicated because the movement and mobility, we lose a lot of investment that's happened. And right now, we have the question what happened in east Khan Yunis. We had a huge displacement of people where resources that has been put in, water points that has been put in, that has been lost. Rafah is another point that when the incursion happened there, we also lost. So I think water infrastructure is one that requires constant working on. And it doesn't happen quickly.

On the electrical line, I guess, looking at the context, it happened when I came back in April. The desalination plant was something I knew, because I was engaged at the beginning of the design and construction of this desalination plant. So I asked the question, where's the electrical line? And they say, oh, Jean, it's disconnected. I didn't know, because I wasn't here at the beginning. And I said,

well, we should get it connected. And they said, no. That would be too difficult, politically. I said, but it is possible, because I think it's a political decision. Well, because technically, solutions are there.

And I started to put this line across the different member states as an advocacy point across. And I think it happened because, of course, it's good for them, it is good for us. And one of those issues that allows them the more production of water, I think it was a critical timing for it. And this was agreed on the highest level politically of the government of Israel, because, of course, the water quantities were so low that they really needed to take action. So that's one piece of the equation.

And it's from April to now and getting materials for electrical lines. We do have very resourceful people in Gaza. We are also restoring the four sewage-pumping station in Khan Yunis, because the sewage that we saw when we – when we went in May, there was people going back to Khan Yunis after the Khan Yunis, the Nasser Hospital. We put in the sewage septic tanks for Nasser Hospital to reduce the sewage going to that to the streets. We also restored six pumping station in Khan Yunis, to make sure that the sewage will be not in the streets.

Of course, the pumping stations are not – the treatment plants are not operational. Only the lagoon is operational. And so, of course, it was not able to go to the sea. And I think this is a problem that we need to look immediately before it has high contamination of the sea water. So I think that what – I think, the reference that I heard one of the speakers say, that it goes into the sea, because we are using many toilets – (inaudible). One-point-nine million people are in tents, are not used in the sewage system. So there's a smaller amount of people using the sewage system. So we are using toilet – (inaudible). And that doesn't – that's allows that the sewage does not flow then in the streets, nor in the ocean.

However, people will start – if you have a peace, they will start going back to their house – and they're a resilient people. North Gaza, I think, it requires more attention because they only have the – we have to restore some eight wells there to increase the water production that we have. And it's more complicated to get dual-use materials in the north and this is an area that we are working on.

So I think sewage, water, and I forgot to mention solid waste. Solid waste is a huge problem in Gaza because the landfills – the two landfill that was operating are in insecure areas where we cannot go and we are working towards establishing temporary landfills.

However, it has not happened yet. And the sewage – I mean, the solid waste is just piling across Gaza and it breaks my heart to see the children in these dumps collecting things in the daily basis.

So I think that's another item that we are working on as part of the war because the sanitation also includes the solid waste. So solid waste is a huge item that we need to further work on. So I think that the – that as we have done with the 11th line, we are looking into establishing other – the other desalination plant. We are trying to connect hospitals and this is the second phase. Once we get finalizing the electrical line for the desal is looking at opportunities of political support and advocacy to make sure that we get other lines – electrical lines – up that goes to services hospitals and the desalination plant.

So let me stop there.

Dr. Morrison: Thank you. Thank you, Jean, and we wish you all the best on all of that. That's very impressive and it's encouraging to hear that at higher levels you're beginning to see some response for this and these are the types of topics that need to be at the diplomatic table by all states engaging on around what needs to happen here.

Lama, your thoughts? And then I want to come back to Dr. Fakhr.

Lama?

Ms. Samad: So I cannot – I personally cannot understand how we can ever operate under the circumstance. You've heard – I've heard about the power line two months ago and it's still not connected and that's the political challenge. As humanitarians we cannot operate like this. We cannot fix a piece of infrastructure for it to be damaged again. It doesn't work this way.

If Israel has the intention to provide water they can open the Mekorot lines tomorrow. There is no reason why these three lines are closed. How much water do you think the desalinization units are producing? Very little.

They used to produce the sea water. Desalinization plants, three of them, collectively produced only 3 percent of the water in Gaza prior to the war. So open Mekorot. End the blockade. We have six desal units sitting at the border six months. Why are they not inside Gaza? Why do – why is getting things in to the Strip so complicated?

Yes, I agree this is an extremely political decision that needs to be made. In the absence of a ceasefire at least end the blockade. Technically, we all know what to do. But, mind you, even when the war ends UNDP came out and said that it will take 14 years to remove the rubble. Wow.

So there is no reconstruction in the speed that we would like to achieve. This is going to be a very long-term problem. Immediately we need to save lives. We have polio. Like, this is really scary. And –

Ms. Gough: Just to clarify, the Mekorot lines are open, three of them. Today I got the data. Three of them are open at the capacity that's required. So I just wanted to make that clarification. The three of them – the one in the north had the damage last week or the week before. They needed to repair and then they'll open it. And the other two are open. So I just wanted to put that – do that clarification because the three Mekorot lines are usable.

However, it's not enough. There's still not enough water that we need and this is why this other piece because the other production that will exist in Gaza, other smaller desalination plants, all of them has been lost. So I think the production losses the three lines doesn't compensate. So I think this is another level of advocacy that we will need to increase the amounts of water that we could get in from the Mekorot lines.

So the three have been opened, the quality – the quantities that have been agreed upon. However, it is not enough. So we will still continue to put some more pressure to see how we increase more water coming from the Mekorot lines and so, given the devastation that has happened so far on the ground.

Dr. Morrison: Thank you, Jean.

Dr. Fakhr, you and your fellow Palestinian engineers have been able to, as you pointed out, to restore units, clean and safe water in various – five, six facilities. If we move towards a ceasefire what is that going to – what is it going to mean in terms of taking what you've learned about what is possible and how to bring about those repairs? How do you intend to bring this to scale?

Dr. Abu-Awwad: This is very good because, you know, actually because we've been in this for the last five years before this war. Remember at least that RVF has been dedicated to help children but not politicians, which means we still – we will be all the time committed to help children and infants to get the best quantity and the best quality of drinking

water.

So if the – hopefully this will happen soon. If this aggression will stop then I think we will move – we will go back to our older plan with UNRWA which is a three years plan to install in tens of schools – tens of schools we have the financial capacity for this. We already had – having our contractors and our consultants. We've been working on this. We were supposed to start with the first six schools the first few days where the war initiated.

So if this happened and the war will stop then we will go back to our initiative – the long-term initiative, which to install in tens of schools and to start to provide people with the hygiene things and to go back to the essential vaccine campaign, which is considered as main part of the Palestinian basket of vaccinations. I wish it would happen and we would help this.

Dr. Morrison: Thank you, Dr. Fakhr.

We're getting near to the end here. I want to ask Natasha and Michelle to offer some final thoughts there, and then we'll circle back and hear from the three of you.

Natasha and then Michelle. Natasha?

Ms. Hall: Yeah. I mean, just as a response to the speakers, I mean, I think it makes sense from a humanitarian perspective to start to triage the things that are needed because, obviously, everything is not going to happen at once, and I completely understand the need to prioritize potable water because that is an essential element of life.

But it does seem like solid waste management and wastewater treatment or at least wastewater disposal is becoming a rising priority, and I also recognize and written about the tons and tons – the hundreds if not thousands of tons of rubble and human remains in the country or in the territory, and each season comes with its own perils.

So the season it's hot and so we have rising rates of waterborne diseases and dehydration. But soon the rains will come and then we have another set of challenges if we're not dealing with solid waste management properly or wastewater treatment properly.

And, you know, maybe, as Jean was saying, the polio outbreak or the evidence of polio in sewage provides that impetus to get some movement on those issues.

But just a concluding thought. You know, a lot of people in the United States, Congress, watched the Netanyahu speech. The majority of people in the world did not watch Netanyahu's speech. The majority of people in the world, and I feel like I need to say this is an Arabic speaker from the region, they are – they're watching these viral videos of fathers having to amputate their daughters' leg without anesthesia. They're listening to audio recordings of little girls who can't escape an insecure area surrounded by dead family members.

I mean, this is the kind of trauma that will affect Palestinians deeply and Arabs deeply. But this is much broader than the region itself, and I really sort of implore policymakers in the United States to understand the tectonic plates that are shifting right now if the United States is seen as not doing enough to stop a lot of the horrific sort of humanitarian catastrophe that we've been witnessing over the past nearly 10 months now.

This will be used by U.S. adversaries for the foreseeable future. They will exploit this trauma and they'll have audiences for it, and certainly even U.S. allies will use this as examples for the United States having to support them no matter what kind of human rights violations or suspected war crimes they commit. So I think that, you know, the United States, and hopefully they are beginning to understand this, but I think there are larger strategic ramifications if something isn't done very, very quickly and over the long term, I think, for Palestinians.

Dr. Morrison: Thank you, Natasha.

Michelle Strucke.

Ms. Strucke: Couldn't agree more with Natasha. And I would caution that messaging about Band-Aid solutions. So any of the improvements we've seen, I think we've seen a host of administration officials that come out and say, this is progress. Here it is. Here's the progress. But that progress should not mask the unprecedented scale and speed of human suffering that has been caused, which is evidenced by the massively acute food insecurity, pernicious issues with water, and now potential disease outbreaks that are going to potentially spill over borders. So sort of it's good to talk about progress, but I think understanding the scale of suffering is an extremely important factor.

And I think it was an interesting sign that as we watched the

presumptive nominee for the Democratic Party, Kamala Harris, you know, in her – in her press release – or, her press briefing after meeting with Prime Minister Netanyahu, say that she would not be silent about Palestinian suffering. I think that was significant, because a lot of criticism here in the U.S., and outside the U.S., has been that this suffering has largely been minimized and, kind of, massaged.

I wanted to say something about that is that our – this current administration that's still in office, these are experienced, stellar public health professionals that were honed in the crucible of COVID and Ebola. The reason we're not talking about Ebola is because they acted swiftly to bring resources to try to make sure that did not spread. Polio should be a wake-up call for them. And they should be using those skills to put all the attention they can muster in the White House on this issue.

And then I wanted to say something about children, particularly watery diarrhea issues. When our U.S. audience hears these, they might think about themselves and how this sounds minor. These are things that kill. Heat, extreme heat, kills. We see that over and over again. Diarrhea kills. They kill young children. They kill infants. That is the future of the Palestinian population. They're watching their future, their own children, die from these things.

And I wanted to say too that, as a person whose grandmother had polio, was operated without anesthesia, and was for life afraid of doctors to the point where she died not going to a doctor when she should have, and that's in, you know, the richest country in the world. The generational impact of mistrust, distrust of institutions, of the idea that anyone is even going to come to help them, of the international system and our norms that this population is facing should not also be discounted.

I don't think it should be viewed just from a potential further extremist kind of view, which is the way our national security community often looks at that, but a human level. This broadcast is about the human toll. So the generation of people that are experiencing watching their children, as Natasha said, get operated on without anesthesia, this will have a lifelong impact on every single person it touches.

So again, I just want to implore our Washington policymakers that watch this that they have the – these are choices. War does not need to be fought this way. And these are policy choices that they should be able to continue to put pressure on to intervene and

draw lines to say when this is just unacceptable.

Dr. Morrison: Thank you, Michelle. We're getting to the end. What I'd like to ask – I'd like to start with Lama and then to Dr. Fakhr, and close with Jean. I'd like each of you just to offer us final thoughts on what the core message is that you want to leave with our audience. Our audience is predominantly one looking at U.S. policy here in Washington. It's not exclusive to that, we have lots of people tuning in from around the world. But what are the messages you want to leave with us here today? What are the key messages? I'm going to talk with – I'd turn to Lama to start us off, and then Dr. Fakhr, and then close with Jean Gough.

Thank you, Lama.

Ms. Samad: Yeah. Yeah, so I think – I think the most important thing for everyone to understand is that the situation in Gaza is beyond catastrophic. We all need to move fast in order to save lives. We do absolutely need to have a ceasefire at as soon as possible. And we cannot delude ourselves into thinking we can solve the problem in a year or two. This is going to take a very long time. There's a lot of policy changes that need to take place. And people need to be held accountable for this problem that was created. Thank you.

Dr. Morrison: Thank you, Lama.

Dr. Fakhr.

Dr. Abu-Awwad: Always I wanted to say that beside the psychological – in addition to the psychological and medical problems that could arise or could just predominant, I would say the talks, the different speeches, the different positions that had been mentioned in the last couple of days positively are too little and too late. I'm not going to intervene with politics and its explicit meanings, but I say even the – some of the American administration have said something positively, it's too little. It's too late. Myself, I lost 280 people from my extended family. I lost 280 people out of my own family. And that's why I'm saying this is too little. What we should do, and I feel, I would urge every single American citizen, every single American association who is interested in stopping this killing, to join the forces of RVF and to provide people with resources to live in dignity. That's it. Thank you.

Dr. Morrison: Thank you, Dr. Fakhr. Jean, thank you for being with us. Your final thoughts.

Ms. Gough: Thank you, all colleagues. I endorse what the other ones have said. And I just want to add one that keeps me worried and is not part of the discussion, is mental health and children learning. Children have been out of school for nine months. There's no learning happening at no scale that it requires. So I think, for me, that's a lost generation. It is something that is not in the policy – at the policy agenda as yet. We have not managed to ensure that learning is something that we all want to be together. Children need some structured activities. And I think the mental health of people in Gaza, especially children, the future of Gaza, is under threat. And we really need to act now.

Everything – when I'm in Gaza and I walk and I see these children just wandering around, losing their life. It hurts me. And it pains me, because it could be the children of all of us. So I really think that getting learning, getting mental health back on the agenda, and the policy discussion, is important. It's as important as water. It's as important of other health. So I just wanted to leave that message, because it's not part of the discussion that we all are having. And I think the psychological impact that will happen in this generation is something painful.

And I think it's difficult to describe the situation, as Mr. Awwad said, in Gaza. You can't imagine only being there. You must feel the suffering of people in and out. When you go to the hospitals, when you see the mothers asking for milk, asking for food for the children, and seeing the children collecting water, losing their time there, where they could be learning. So learning for me and mental health are other policy actions that needs to happen as well to stop this crisis. Thank you so much.

Dr. Morrison: Thank you, Jean.

We're at the end of our time now. I just want to offer some special thanks. My colleague, Sophia Hirshfield, along with Anna Russin put in a prodigious amount of time in preparing and coordinating for this episode, and the earlier episodes. So special thanks to them. Our remarkable production team, Eric Ruditskiy and Dwayne Gladden. Thanks to them for putting this all together. It's a complicated production, as we've seen. And my thanks to my colleagues, Michelle Strucke and Natasha Hall.

For the four keynote speakers that we've had today, Jean Gough, Lama Abdul Samad, and Dr. Fakhr Awwad, and Hamid Jafari, you've all made remarkable contributions today. You've all shown remarkable commitment and courage in the work that you've

carried out. And we're very grateful to you for all of that, and for joining us today. Thank you. We will post this video on the CSIS home page, CSIS.org – O-R-G – along with a transcript in an hour or two. So thank you so much.

(END.)