

**Commission on Security & Cooperation in Europe:
U.S. Helsinki Commission**

“Demining Ukraine: A Pre-requisite for Recovery”

**Committee Members Present:
Representative Steve Cohen (D-TN), Co-Chairman**

**Committee Staff Present:
Demitra Pappas, Senior Advisor, Department of State, Commission on
Security and Cooperation in Europe**

**Participants:
Michael Tirre, Program Manager for Europe, State Department – Bureau of
Political-Military Affairs, Office of Weapons Removal and Abatement
(PM/WRA);
Todd Biggs, Vice President for Munitions Response, Tetra Tech;
Tony Connell, Ukraine Country Director, Swiss Foundation for De-mining
(FSD)**

**The Briefing Was Held From 11:04 a.m. To 11:54 p.m. via videoconference,
Demitra Pappas, Senior Advisor, Department of State, Commission on
Security and Cooperation in Europe, presiding**

Date: Thursday, December 8, 2022

PAPPAS: (In progress) – and thank you to our distinguished panelists.

The Helsinki Commission has convened this briefing to spotlight the wide-ranging challenges posed by landmines and unexploded ordnance in the wake of Russia's war of aggression against Ukraine.

Our panel will address efforts by the United States and the international community to assist Ukraine with the critical task of humanitarian demining. These challenges are not entirely new. Even before Russia's full-scale invasion in February, since Russia's initial land grab in 2014, Ukraine had been amongst the most landmine-affected countries in the world.

The United States and the international community had already invested in years-long demining efforts in Ukraine's east. Landmines and unexploded ordnance had killed and maimed more than 1,100 civilians by 2022. Among them, I should note, was an American, Joseph Stone, deployed with the OSCE's Special Monitoring Mission.

Ukraine was ranked fifth in the world for civilian casualties caused by landmines and in the top three for anti-vehicle mine incidents. When Russia unleashed the largest land war in Europe earlier this year, the scale and scope of these challenges increased exponentially across Ukraine. Russian forces have littered the country with landmines and other explosive munitions in a reprehensible and brutal manner.

By September, Ukraine estimated a hundred and sixty thousand square kilometers of its territory was contaminated by mines and unexploded ordnance. Current estimates put that figure at more than a quarter of Ukraine's territory.

The situation in areas liberated from Russian occupation as in Kharkiv and Kherson and the outskirts of Kyiv last spring is particularly acute. In addition to laying mines, Russian forces in retreat have intentionally booby trapped homes and civilian infrastructure.

The consequences go well beyond the immediate danger to civilians and are far reaching and, potentially, long lasting. Landmines and unexploded ordnance impede reclamation of these territories and broader reconstruction efforts. About 10 percent of Ukraine's agricultural lands have been rendered unserviceable. Ukraine is losing thousands of hectares of farmland to mines, which could further constrain its critical grain exports to the world.

As daunting as these challenges may be, they are not insurmountable. The United States and international community are already hard at work providing demining assistance, training, and equipment to Ukraine. The Department of State has allocated \$91.5 million to date toward humanitarian demining efforts in Ukraine.

Our first panelist will provide an overview of this assistance. I'm pleased to be joined today by Michael Tirre, program manager for Europe in the State Department's Political-Military Affairs Bureau, Office of Weapons Removal and Abatement, which is spearheading these efforts.

Before I turn the floor to Mr. Tirre, let me note that if you have questions for the panelists, please enter them at any time in the WebEx Q&A box, not the chat function, and panelists will address them after their presentations.

I note that Representative Cohen, our co-chairman at the Helsinki Commission, has joined us on WebEx.

Sir, we're honored, and you're welcome to say a few words if you'd like.

COHEN: Thank you.

Well, I appreciate your having this briefing. It's a very important briefing. We've learned a lot about the mining situations around the world from Princess Diana. She turned a lot of people's perspectives onto this. In Azerbaijan, we've had the same problems with the mining there and the areas under conflict and under controversy with the Armenians.

But in Ukraine, it's another dastardly act of war that the Russians have perpetrated and that needs to be dealt with. We need to condemn Russia for what they've done. I mean, they tried to destroy Ukraine and committed genocide.

So we all today are thankful that Brittney Griner is free. But we should remember all prisoners of war, including Navalny and Vladimir Kara-Murza, who are suffering these days in isolation, as well as Mr. Whelan of the United States and all prisoners all over.

With that, I wish everybody the best and look forward to the information that we glean from our panel.

Thank you very much.

PAPPAS: Thank you, Representative Cohen.

I should note that Co-Chairperson Cohen serves also as the OSCE Parliamentary Assembly special representative for political prisoners.

With that, Mr. Tirre, the floor is yours.

TIRRE: Thank you for the introduction, Demitra, and for the invitation to participate in this briefing. I appreciate how you described the existing mine contamination in eastern Ukraine resulting from Russia's initial invasion in 2014.

This is key to understanding today's context because by the time of Russia's full-scale invasion in February the government of Ukraine already had existing demining expertise, including a mine action law, demining authorities, national mine action standards, and, of course, field experience.

Since 2016, the United States has been supporting the government of Ukraine's response by advising these authorities, training and equipping government demining teams, and also funding international NGOs to deploy along the line of contact in Luhansk and Donetsk oblasts.

The humanitarian impact of landmines and unexploded ordnance was already severe in eastern Ukraine and, tragically, this has been magnified exponentially by Russia's full-scale invasion. One hundred and sixty thousand square kilometers is an initial estimate of the land that needs to be checked for explosive hazards, based on where fighting has occurred in Ukraine and where Russia's troops have deployed. It's an area of, roughly, the size of Virginia, Maryland, and Connecticut combined.

From reporting on the ground and statements from Ukrainian authorities, we know that Russia's forces have deliberately booby trapped objects in people's homes, including children's toys, and even the bodies of people killed by the invasion.

The horrific use of improvised explosive devices by Russia's forces is reminiscent of ISIS tactics in Iraq and Syria where ISIS terrorists sought to inflict as many civilian casualties as possible and made people afraid to return home.

Additionally, international experts estimate that Russia's munitions may have dud rates between 10 (percent) and 30 percent, meaning massive amounts of unexploded ordnance will remain in the ground for years to come. We expect this to be one of the largest landmine and unexploded ordnance challenges since World War II.

Clearing this explosive contamination is a top priority for the government of Ukraine. The lion's share of the demining work is already being done by courageous demining and explosive ordnance disposal personnel of the State Emergency Service, the national police, the State Special Transport Service, and other government of Ukraine operators. Since March, these incredibly brave and skilled Ukrainian demining and EOD teams have found and destroyed more than 500,000 explosive hazards.

As incredible as the government of Ukraine's efforts have already been, the sheer magnitude of explosive hazard contamination is overwhelming. The \$91.5 million in assistance that we're providing over the coming year is designed to strengthen and supplement Ukraine's national capacity and the recognition that this effort has been and always will be led by Ukraine.

In September, we awarded a \$47.6 million task order to Tetra Tech, an American firm, to train government of Ukraine demining and EOD teams to international standards inside Ukraine and provide them with the tools necessary to do their jobs.

The project also includes the deployment of clearance and risk education teams through a Ukrainian NGO called the Ukrainian Deminers Association. Ukraine has substantial expertise and our project is designed with this in mind, to help bring training to the next level, share international best practices, and supply much needed equipment. Sadly, Ukrainian operators have experienced several casualties and their leadership's message is clear that they urgently need this training and equipment.

This project is unique because it's the only internationally-funded large-scale demining training program inside Ukraine, whereas other assistance programs usually require Ukrainians to leave the country.

It's also open to all government of Ukraine operators, not only providing advanced training but also facilitating collaboration and experience sharing between them by holding joint courses. Similarly, it's designed to be a platform for engagement and coordination among other donor countries.

For example, several countries plan to provide equipment but don't have a way to run training courses in Ukraine for those items. We intend this project to help fill in such gaps and create a more coherent international response.

Most of the remaining funds from the \$91.5 million will surge U.S.-funded contractor and NGO demining teams to accelerate demining efforts in areas identified as high priorities by the government of Ukraine.

We expect to deploy approximately 100 demining teams by the spring, which is a dramatic increase from the 22 teams we were supporting prior to the full-scale invasion. Our implementing partners include Tetra Tech and the Ukrainian Deminers Association, the Danish Refugee Council, the HALO Trust, the Swiss Foundation for De-mining, and Spirit of Soccer.

These teams have different specializations such as survey teams to interview communities and find evidence of explosive hazards, manual teams to clear minefields and battle areas, and mechanical teams that can rapidly demine farmland or remove obstacles like vegetation or rubble.

The teams will also include explicit ordnance risk education teams that are critical for teaching civilians how to recognize, avoid, and report hazards.

Currently, most teams are in Kyiv and Chernihiv oblasts but have recently expanded to Kharkiv Oblast. For example, our partner at FSD who's represented in this event deployed clearance teams to Izyum city on November 10. We anticipate that some U.S.-funded teams will deploy to liberated areas of Kherson once the security situation allows and they are tasked by Ukraine's National Mine Action Authority.

Finally, we are strengthening the government of Ukraine's information management capacity so that they can track contaminated areas and prioritize their resources effectively. The Geneva International Centre for Humanitarian Demining, or GICHD, is providing technical advisors and consultants to help the demining authorities manage their national database, revise national standards based on their new experiences, and provide key trainings that improve knowledge and skills at a strategic level.

Ukraine's demining needs are increasing every day. The government of Ukraine has more than 200 demining teams currently with more than 1,000 personnel and plans to expand to

400 teams, or about 2,000 personnel, in 2023. As Ukrainian armed forces liberate more areas we're seeing even heavier contamination and there are not enough teams to adequately cover all high priority areas.

There's a need to continue our support beyond an initial surge to help Ukraine tackle this issue successfully and to lay the groundwork for broader reconstruction efforts, restoration of farmland, and the safe return of displaced persons.

Thank you.

PAPPAS: Thank you, Mr. Tirre, for that overview and for your efforts to assist Ukraine with this critical task.

I would like to turn the floor now to our second panelist, Todd Biggs, vice president for munitions response at Tetra Tech and program manager for the Department of State's Worldwide Destruction Support Services.

Tetra Tech has been working in Ukraine since 2016 and began its current Humanitarian Mine Action project on September 30 of this year. Mr. Biggs served for 20 years as a U.S. Navy EOD officer before moving into humanitarian mine action for the last 15 years, and is a member of the International Mine Action Standards Review Board.

Mr. Biggs is joining us from Kyiv. We may or may not have video. I believe we do, for the moment. He will provide an implementer's perspective.

Mr. Biggs, the floor is yours.

BIGGS: Thank you. Hello, everyone.

I'd like to thank the Commission for holding this briefing and allowing us to discuss the ongoing issues of humanitarian mine action (HMA) operations here in Ukraine.

As it was mentioned, I represent Tetra Tech, Inc. It's a U.S.-based company working with the Department of State's Bureau of Political and Military Affairs Office of Weapons Removal and Abatement to provide humanitarian mine action services here in Ukraine, and, as mentioned, I am calling in from Kyiv.

Tetra Tech has been working in Ukraine since 2016. This current project specific to HMA operations has been on the ground since the beginning of October.

You've heard both of the previous speakers discuss how large of a problem unexploded ordnance and landmines are in Ukraine, and I think it's also worth mentioning just how large Ukraine is from a land mass standpoint.

If you were to lay Ukraine over the United States and you put the eastern edge of Ukraine along the eastern seaboard along the Atlantic Ocean, the western border of Ukraine and Poland

lies in the state of Missouri, and from north to south it goes from the south end of Lake Erie all the way down to the south end of Georgia.

So the country is large. Traveling around, moving from location to location, is very time consuming and at times can be almost impossible with the amount of damage that's been done to bridges, rail lines, and other, you know, movement ways, especially in the western third and the south of the country.

Our primary goal here in Ukraine is to assist the government of Ukraine in growing their ability to manage and conduct the massive task of clearing unexploded ordnance and landmines from Ukraine. We're doing this in several ways.

The first is to establish a joint training facility to allow all the government of Ukraine forces to standardize and advance their EOD anti-mining training and bring it up to an international mine action standard.

We're trying to coordinate this activity with the Ukraine ministries and all of their suborganizations involved in explosive ordnance disposal and demining activities. In addition to the training facility, we're helping in conducting training assessments and equipment needs assessments on each of those different organizations involved in mine action.

This will allow the government of Ukraine and all interested donors to evaluate the amount and type of training that is needed as well as concurrently the amount of equipment and the type of equipment that is needed.

This needs analysis will allow the Department of State and other donors to provide much needed and requested equipment and material to the Ukraine government when and where it's needed. With our ongoing coordination we can then provide training on how to operate said equipment but, more importantly, we can also train how to deploy that equipment for clearance activities.

This training and equipping will allow Ukraine to safely clear and use land currently contaminated with explosive ordnance and landmines.

We know the State Emergency Services Unit (SESU) has trained approximately 40 EOD teams, but at this point do not have the equipment to deploy those teams. Tetra Tech is currently working with SESU to identify what equipment and subsequent training these teams will need in order for them to start working.

This assessment should be completed within a month, which will then permit the purchase of the correct equipment for their needs. We currently have three risk education and nontechnical survey teams deploying into Kharkiv Oblast in the east and also to the Mykolaiv Oblast in the south.

In the coming days these teams will begin to identify areas suspected and confirmed of having explosive hazards, which will all feed into the Ukraine Mine Action Coordination

Center's database. The Mine Action Center will then oversee the assignment of clearance tasks and resources in accordance with mine action standards.

Initially, those will be, of course, critical infrastructure, the things that are going on every day trying to keep the electrical grid up, water infrastructure, bridges and rail systems, hospitals, schools, and, of course, critical industrial areas.

Working with the Ministry of Interior, SESU, the national police, the State Special Transport Services, we've seen an incredible level of dedication and hard work. They are conducting EOD and demining actions daily and are managing to keep the vital services on in most of the country.

They're undermanned. They're under-resourced for the amount of work that is currently being asked of them. They do need equipment and training to keep up with the level of emergency clearance required now due to the ongoing conflict.

Ukraine forces are responding daily to attacks along the front as well as to overnight attacks and to keep the critical infrastructure up and running. Once the conflict ends, the work will shift from reactionary to stabilization and then into the long-term clearance activities. This will require longer-term planning and preparation.

With the generous funding being provided by the U.S. government and all of the other international donors we will be able to help the government of Ukraine not only deal with the ongoing daily emergencies but to grow and increase the overall size and ability of their EOD and demining services across the country for the long-term clearance needs.

The problems being faced are very large but, as mentioned earlier, are not insurmountable. With the continued help of the United States and the entire international community, they can get this done.

Thank you.

PAPPAS: Thank you, Mr. Biggs, and I'm glad that our comms held up.

BIGGS: Yes, ma'am.

PAPPAS: Our third panelist, also joining from Ukraine, from Chernihiv. Tony Connell is the country director in Ukraine for the Swiss Foundation for Mine Action (FSD). He has been with the foundation since 2016 and has been involved in mine action both in the commercial and the NGO sectors since 2000.

He previously served in the New Zealand army for 24 years. Mr. Connell will provide an NGO on-the-ground perspective.

CONNELL: OK. Thank you, Demitra.

It's a great honor to be able to speak to this Commission and I thank you very much for the opportunity to do so.

As mentioned earlier, FSD has been here in Ukraine since 2016. We started off with a very small risk education program and slightly expanded it over time, until 2019 when we had two EOD teams, two Non-Technical Survey (NTS) teams, and two risk education teams.

Unfortunately, due to a lack of funding, we had to suspend operations in 2019 for about 12 months. Then, in early 2020, the Office of Weapons Removal and Abatement (WRA) came to the party and provided funding for us, which allowed us to start – restart operations. This, again, was in the Donbas. We were based in Slavyansk where we had three EOD teams, one of them based in Slavyansk itself and the other two were in Mariupol. We also had risk education and NTS teams in both locations.

February 24 this year came along and, unfortunately, we had to stop operations, obviously. Our personnel dispersed throughout the country left the Donbas.

While they were away in different locations they organized amongst themselves to get involved in the humanitarian – the deployment of humanitarian aid, such as delivering medical supplies, providing fuel for the buses taking staff or just taking refugees to Poland, and providing equipment for bomb shelters in Slavyansk and Kramatorsk. This was funded, again, by WRA.

When the situation started to stabilize, we started to relocate our operations from the Donbas to Chernihiv, a city approximately a hundred and thirty kilometers north of Kyiv. Chernihiv had been affected quite badly in the initial days of the invasion and it was laid siege for about six weeks before the Russians withdrew back to the north.

At this time we started to recruit and train additional staff and we now have a total of six EOD teams, three NTS teams, and three risk education teams. We also have a mechanical capability with, at the moment, one light demining machine, and we're getting a second one early next year – a heavy one. We also have, under purchase action, excavators and front end loaders to give us a rubble removal capacity.

We anticipate having full capacity by early 2023 – March 2023. A lot depends on the weather and the climate.

As Todd mentioned, the Ukrainian people are incredibly resilient. They are incredibly determined to resolve the problem. I've never been in a country where the national staff are so determined to get rid of the problem.

Our plans for the future, we want to continue our expansion into Kharkiv. We've had two clearance teams – two EOD teams – there rotating through for the last month and also risk education and Nontechnical Survey Teams.

In due course, if future funding becomes available we could always look at expanding into Kherson or wherever.

That's pretty much it from FSD. So thank you very much.

PAPPAS: Thank you, Mr. Connell.

We're opening the floor now for questions and answers. If you can go into the Q&A box you're welcome to submit your questions.

We have a couple to kick off. Our first question is, could the panelists give us an overview of other nongovernmental and/or local efforts at demining they are aware of and the extent to which these efforts are coordinated with those government programs and those of their implementers?

What coordination mechanisms work well and where might additional coordination be helpful? We've seen reports including on Twitter of individuals who are demining, and I think that's a reference to that. Thank you.

Whoever would like to take that on is welcome to.

TIRRE: Demitra, I can maybe kick off on that one.

Yeah, certainly, have seen reports in the media of individuals helping on their own initiative as well as crowd sourcing initiatives to provide training or equipment. So there's a lot of different efforts going on. And kind of as the question's hinting at, there is an inherent challenge there of, I think, coordinating those and integrating those within broader, more coherent kind of assistance mechanisms and packages.

So there's, certainly, a risk there that allowed those – that assistance would be provided directly to, say, local units or to a particular operator and managed at that level but not necessarily be tracked at a national level as well.

Beyond that, I couldn't speak to the extent to which, you know, the national authorities are effectively tracking or not more local efforts on the ground. But I'm sure that's something that is on their radar and there's always room for improvement.

For the second question about what coordination mechanisms work well and where additional coordination might be helpful, as well as kind of lessons learned from other demining efforts, you know, I think, just to – it's worth noting that the Ukrainian kind of mine action architecture is complex.

They have a National Mine Action Authority that's interministerial in nature, high level, which kind of sets policy for demining efforts nationwide, and that's coordinated by the secretariat, which currently in times of conflict falls under the Ministry of Defense. And then there's also two different mine action centers that are responsible for tasking and accrediting operators, conducting quality assurance, quality control, and those two mine action centers have kind of overlapping mandates under different ministries as well.

I think we've seen improvement in terms of coordination between the different authorities in Ukraine. But, I mean, speaking frankly, it's still a rather complex environment and can sometimes cause some confusion about the exact approval mechanisms and that's really what our project with the Geneva International Centre for Humanitarian Demining is trying to help with in terms of effective information management and the relationships between the different authorities.

And I should point out, too, that prior to the invasion our office had some grants with the OSCE project coordinator in Ukraine that originally helped advise on the original establishment of these authorities and the national mine action law, and then the effective kind of relationships and coordination between them.

And then I would just say, like, as specific lessons learned it's incredibly important that the government takes the lead on this, that they prioritize different areas, assign different areas of responsibility. Again, this is something that's happening right now in Ukraine and there's a lot of discussion on how to integrate demining with broader strategies for reconstruction and development, and so those discussions are very much underway.

And then, again, going back to that topic of information management, it's very, very important that at a national level the government's tracking where demining efforts are currently taking place, which areas need to be checked in the future. This avoids situations where, say, you need to re-clear a certain area or you've sent the wrong kind of asset or resources to a particular area.

You know, this issue is going to stick around for a decade or longer so it's important that the information we collect at this point in time is accurate and it can help inform future deployments accurately.

So let me stop there and see if any other panelists have something to contribute.

BIGGS: Hey, Michael, this is Todd.

I think the one thing I would add in our discussions here locally is that the other thing that's happening right now is that that here on the ground the ministries in the government of Ukraine are still in a little bit of a reactionary mode in that they're dealing with emergency responses right now daily, and it hasn't quite gotten to a point in the process yet of stabilization, even to start thinking of long-term clearance yet.

And I think that's something that a lot of people miss a little bit is that, you know, the government of Ukraine is still involved in fighting a war and I think that's – you know, that's – I don't want to say that's a "problem." It's bigger than that.

But it does lead them to not have a lot of bandwidth to look long term until then. Now, once that – once the war ends and peace is settled and it gets into that stabilization mode, then, I think, the historical things that have been learned over the last 20 years of demining all over the

world will all flow in and you'll have a lot more people involved, and I think that will help them take control of that and move it along.

PAPPAS: Thank you.

We have another question and that is, can someone go through step by step how demining occurs, for example, from training to detonating and removing the mines? You know, Demining 101, if you would.

CONNELL: I can step in and talk about that, if necessary. FSD – the way we've done it is we recruit from the local population in the area in which we're working. It doesn't require any specialist background knowledge or training, although it is helpful to a certain extent.

The initial demining course takes about four to five weeks and that includes the use of detectors, recognition of different types of mines, excavation drills, first-aid, casualty evacuation drills, and the list goes on.

We then deploy them into the field and our operations teams of personnel on which we have an international team leader. We have a driver and a translator for him. We then have a team, national staff, as deminers, two of which are trained as medics to give immediate first aid in the event of a casualty, heaven forbid that happens, and then we have a driver for the ambulance vehicle.

The team will deploy each day. They work a cycle of – (off mic) –

PAPPAS: Tony, I think we lost your audio. That's unfortunate. We'll see if he can get back in.

But, in the meantime, I am curious what are the most common types of landmines that you're finding in Ukraine in terms of the anti-personnel mines in particular?

(Pause.)

Mr. Biggs?

(No audible response.)

We seem to be having some comms issues.

BIGGS: We were –

PAPPAS: Oh, there you are.

BIGGS: Yeah. It jogged off there and it came right back on.

As far as mines go, they're mostly Russian at this point, as you would expect – PMN type personnel mines, OZM-22s – 72, sorry – anti-tank mines. We've got a whole – TM-62s. Sorry. My technical manager is reading off numbers to me.

But to keep it fairly simple, they're mostly, for the most part, anti-personnel mines and anti-tank landmines, which are very similar in nature, just much larger.

TIRRE: And, Demitra, I just popped into chat a link to an explosive ordnance recognition guide that GICHD has put out that includes many different examples of the types of landmines but also unexploded ordnance that operators are kind of finding on the ground in Ukraine.

PAPPAS: Another question related to that – are there many improvised explosive devices or are we seeing mostly mines and UXO?

BIGGS: Yeah. Mostly at this time we're seeing older type booby traps. We're not seeing a lot of large use of IEDs. There's a fine line there between which ones are IEDs, which ones are, you know, older school booby traps, if you will.

I'll relate this a little bit to Iraq and Syria where ISIS used a lot of very technical improvised explosive devices and we are not seeing that yet in the country. But we are seeing lots of things booby trapped in the older style of just, you know, trip wires and things like that.

PAPPAS: Yeah. We've read the stories about those being located in civilian homes, which is extremely reprehensible.

You mentioned in your presentation also the impact of mines on critical infrastructure. We're well aware of, you know, news reports of drones hitting critical infrastructure.

Could you detail a little bit more, what the impact of landmines or ordnance has been on infrastructure?

BIGGS: So on infrastructure itself, the landmines not as much other than on roadways and around bridges and in places of crossing. They have landmined lots of roads, places where a bridge is out and you would have to go right or left to get to the next area. They then would lay landmines to make it even more difficult to go from point A to point B where you end up having to backtrack and go miles and hours out of the way because of the landmines.

But on the critical infrastructure itself, you are correct. It's drones, it's missiles, it's long-range artillery that are taking out, you know, major railways. You know, big targets are, you know, internet and cell phone towers, electrical – you know, infrastructure of all types, and the same with water – water pumping stations, those kind of things.

And so– all of those. Today, the electricity here in Kyiv was off for – in different parts of the city off and on all day as they were trying to repair things. But as I did say is they're doing an amazing job of getting up every morning and repairing what was blown up the night before.

PAPPAS: Thank you.

CONNELL: We're also seeing quite extensive use of cluster munitions around the Chernihiv area, and also there was in the Izyum area a fair degree of what they call PFM-1s and PFM-2s, which are like a butterfly mine. Very, very untidy.

PAPPAS: Thank you.

I'm aware that prior to February, UNDP, the OSCE, and other international organizations were working on demining in Ukraine. You mentioned the GICHD, the Geneva International Centre for Humanitarian Demining.

What role is there for other international actors? It's going to be a gargantuan task, and are they on the ground yet?

TIRRE: I can, maybe, start off with this.

You know, I think the main challenge as this space continues to get more crowded is to find the real value add of new actors and so, you know, certainly, I think there's spaces that can still be filled by new actors coming in but it might be challenging not to simply replicate what others are already doing.

UNDP is still involved in mine action in Ukraine. They're doing a good job kind of coordinating at a local level between the different operators and the government of Ukraine. So within the U.N. protection cluster system, there's a mine action subcluster that the operators and government of Ukraine participate in.

And then UNDP is also getting some funding from international donors to provide equipment to the State Emergency Service. The OSCE, the, like, successor office to the Project Coordinator Ukraine, I believe, is intending to get involved in the mine action space but they're still kind of figuring out exactly what that looks like.

PAPPAS: Which countries are donating equipment besides the United States?

TIRRE: Quite a few.

So I have a list going of about – including the United States—about 19 countries that are – that I know for sure are providing assistance or are very likely providing assistance, based on kind of statements from the government of Ukraine, another nine countries that are more notional or kind of have made public statements saying they're exploring providing assistance.

And then you also have some private foundations and private donors. So, as an example, Bayer Pharmaceuticals, who is the anchor partner for USAID's AGRI-Ukraine initiative that's supposed to be helping Ukrainian farmers and food security, has provided an expensive demining machine to FSD conditioned on my office paying for its deployment under our project

with FSD. So you also get situations like that where private companies or foundations are contributing as well.

And then most of the donors are European so you get kind of the U.K., Germany, Switzerland, some Nordic countries, Estonia, Latvia, Lithuania, Sweden, and then some kind of not unconventional donors but ones that you might not necessarily expect. So, for example, Colombia has expressed interest in deploying deminers or helping share expertise; Croatia; Japan is very heavily involved providing assistance to the SES; and also Cambodia as well kind of partnering with Japan.

So there's a lot of very wide-ranging, I think, international interest in helping Ukraine on this issue. So that's all good. It also, I think, poses a challenge in terms of standardization and interoperability of some of this equipment coming into Ukraine and the training.

So last week there was a Ukraine donors coordination workshop in Geneva well attended by the government of Ukraine, international donors, some of the operators working already in country, and there was a lot of discussion about how to kind of coalesce international training and equipment efforts around the U.S.-led effort with Tetra Tech because as a matter of scale and just the kind of presence of Tetra Tech monitors and liaison officers have in Ukraine, we can provide a lot of that information and analysis on what makes sense to provide the Ukrainians, what kind of gaps there are still in-country.

PAPPAS: Are there lessons learned – you mentioned Colombia and Cambodia – from major demining efforts elsewhere and also in Ukraine, you know, prior to the current war that will help us ensure the best outcomes for Ukraine?

TIRRE: I might kick off on this and then, of course, I know Todd and Tony would have thoughts as well, and Todd kind of mentioned this a little bit, that the government of Ukraine right now is focused on that initial emergency response and there's kind of a(n) international principle for mine action called “land release” which is where you have an integrated process of risk reduction and it means that you save the most expensive interventions or time-consuming interventions where there's actually evidence of contamination.

So, eventually, as a medium or longer-term effort, it'll be important to have most resources focused on that land release process, which is where you can return land to productive use that never actually had any evidence of contamination or further kind of check areas that are suspected and really narrowed down to specific polygons on a map for where you deploy the demining teams and mechanical assets.

In other countries we've encountered some hesitancy to do this risk reduction approach, which is unfortunate because it means that a lot of time is spent clearing areas that really never even had evidence of contamination in them.

So this is a longer-term effort. Definitely, Ukraine should be moving towards this. They already – they're already well aware of the process and have received some training on it previously, including under WRA funding. So it's not brand new to them.

PAPPAS: Mr. Connell, Mr. Biggs, I know you've had many years of experience in humanitarian demining. Are there particular lessons that can be applied to Ukraine?

BIGGS: I do believe there are, especially at this early stage. Like I said, you know, they're still emergency reacting but they're being very open to suggestions on preparing now to plan, going forward and, you know, Michael had said earlier, one of the most important things is to get the government of the country you're in to buy into and lead the plan. And that's one thing that we have seen here is they definitely want to be in the lead. They want to – you know, they want to fix the problem. They don't want to just rely on others coming in here and doing it.

So they – you know, they want our help. They want our guidance. You know, they're asking good questions and they're laying out that plan, and I think for me, personally, from, you know, the last couple of conflicts that we've been involved in after they were over, that didn't necessarily happen up front.

And even now sometimes in Iraq it's not super clear. So you end up with it not being planned and tracked well where the same area may get cleared two or three times because it's just not being managed well by the country.

So I think those kind of things at this stage or the most important is them being open to that, taking that lead, and then learning. For me, I think, that's the biggest one. There's always technical lessons learned and, as an industry, we do a pretty good job of kind of sharing those.

But from a bigger picture for the government of Ukraine, I think taking on that responsibility to own it and then learning and moving forward is important.

CONNELL: I agree with what Todd said hundred percent.

PAPPAS: Finally, my last question – \$91.5 million from the Department of State is quite substantial, but is there a ballpark figure as to how much it will cost to remove mines and unexploded ordnance from Ukraine, whether on the part of the government of Ukraine or any other source?

TIRRE: Demitra, I could jump in on that one.

One of the – it's very hard to accurately estimate it at this point in time, right, because there's no, like, national survey that's been conducted. The government of Ukraine can't access, you know, all areas of its territory, of course, to conduct such a survey.

But the World Bank's rapid damage needs assessment that was released in May, I believe, or June, estimated that it would cost up to \$73 billion to demine all the country, lasting several decades.

How much it'll actually cost in principle or how long it'll actually take it's impossible to say at this point. But they did have, like, a quantitative means of coming up with that figure and

it's not entirely unreasonable, you know, based on the kind of estimates that other organizations, think tanks, have come out with in countries in Southeast Asia, for example, putting the cost of demining all the territory in the billions of dollars figure.

PAPPAS: Thank you.

And with that, I thank Tony and Todd as well, and stay safe in Ukraine.

For more information on mine action, I would highly recommend the Department of State's Political-Military Affairs Bureau's annual publication "To Walk the Earth Safely."

Much more, as we just heard, will be needed for Ukrainians to be able to walk their lands safely. I am confident the United States and international community will continue to stand with Ukraine to ensure that they can do so.

Thank you for joining us today.

[Whereupon, at 11:54 a.m., the briefing ended.]