



IPI ROUNDTABLE

Crowdsourcing and Conflict Prevention

When:

Wednesday, November 9, 2011, 1:00-3:00pm

Where:

Trygve Lie Center for Peace, Security & Development
International Peace Institute
777 United Nations Plaza, 12th Floor
(Corner of 1st Avenue and 44th Street)

TRANSCRIPT

Chair:

Warren Hoge, *Senior Adviser for External Relations, International Peace Institute*

Speakers:

Ozonnia Ojielo, *Coordinator of Conflict Prevention and Recovery Team, BCPR, UNDP*

Beth Liebert, *Product Manager, Google*

Nick Martin, *Co-founder and President of TechChange*

William Tsuma, *Programme Manager - Preventive Action and Human Security, Global Partnership for the Prevention of Armed Conflict (GPPAC)*

Transcript edited by IPI

Warren Hoge: Good afternoon. I'm Warren Hoge, IPI's Senior Adviser for External Relations, and I'm happy to welcome you here to this roundtable discussion on crowdsourcing and conflict prevention, co-hosted by IPI and the Bureau for Crisis Prevention and Recovery of the UN Development Program, known in these parts as BCPR UNDP.

Crowdsourcing, as you know, is a methodology involving the use of new technologies and social media for gathering and sharing real time information generated voluntarily, and sometimes even anonymously. The critical importance of exchange of information and of the impact of crowdsourcing has been much commented on this year, the year of popular transition processes in the Middle East and North Africa. Crowdsourcing plays a growing role in the fields of crisis mapping and humanitarian assistance, and an area of particular interest to us at IPI and in the UN community in its contribution to conflict prevention and early warning. But the best way to assess its value and map its future is for me to get out of the way and make way for some people who are knowledgeable, practiced, and forward looking in this area, and we have four notable experts who fit that description here today. You have their full biographies in your paper, so let me just introduce them briefly in the order in which they will speak.

Ozonnia Ojielo is the coordinator for conflict prevention and recovery at the Bureau for Crisis Prevention and Recovery, BCPR, that was created by UNDP 10 years ago and now has

some 100 field offices working around the world to restore the quality of life for men, women, and children who have been devastated by natural disaster or violent conflict.

Nick Martin is the co-founder and president of TechChange, the institute for technology and social change that envisions a world where a highly trained corps of creative and tech savvy professionals can effectively and quickly respond to the most critical humanitarian development and peacebuilding challenges of our time.

Beth Liebert is a product manager for custom maps in Google Maps, where she helps develop tools that enable consumers to create personalized, collaborative maps. She has worked closely with google.org's crisis response team to address the needs of users in crisis situations who often use maps to collect and disseminate information to the public.

And William Tsuma is the Program Manager in charge of preventive action and human security at the Global Partnership for the Prevention of Armed Conflict. The Global Partnership is a civil society led global network which seeks to build an international consensus on peacebuilding and the prevention of violent conflict.

So let the rapid communication begin and Ozonnia Ojielo, the floor is yours.

**Ozonnia
Ojielo:**

Okay, thank you very much, Warren, and I join you in welcoming everybody to this afternoon's conversation. When I sat down, I was actually astounded, and I thought that IPI had scored a coup in getting the old man from South Africa to come to this conference, because I looked across this table, I saw the name Mandela, and I wondered, how could they have done that for such an important discussion? So not to put you on the spot, but it's amazing the similarities, but also how happy we are that we have a full house. It shows that this subject is very live, it's an interesting subject, but also that in the places around the world, where we all work, there are huge challenges. We've done a lot of work at the local level. Scalability remains a problem, and how do you prevent countries from either sliding into violence and conflict, or how do you help them to begin to capture information in a timely manner, in a way that they can prevent armed violence and conflict.

Hoge:

I just want to interrupt you a second that I, talking with Ozonnia a minute ago, I said to him something that's true. This is the youngest audience I have seen here in the three years that I've been at IPI.

Ojielo:

Which means that the subject is alive, and it's an interesting subject! So I have just actually a couple of remarks to make, and perhaps if an opportunity will present itself, I might add a couple of reflections from my own personal experience, but also from the work that BCPR does on behalf of UNDP, and together with the rest of the UN system.

By way of introduction, I'd like to say that we welcome this opportunity to discuss how the use of newer technologies can strengthen local conflict mitigation and prevention structures. The aim of this roundtable discussion is to shed light on the possibilities of the available technology for crowdsourcing and share the lessons learned so far in order to explore further how the use of communication technology can strengthen local and national infrastructures for peace.

A new generation of information sharing has emerged where people can communicate with speed and ease, and this gives greater power and opportunity for people to monitor and share real time information around conflict, crisis, and peace initiatives. In 2007 alone, the impact of social media in political transition processes has been quite evident, and the latest developments in the Arab world and many African countries are testament that this proliferation and impact. So the voice of the people is increasingly communicated through newer media channels such as Facebook, Twitter, blogs, and text messages, rather than merely transferred and controlled through traditional media and elected politicians.

The constructive use of newer technology tools provides a crucial opportunity to strengthen broader participation and inclusion in political transformation processes and conflict prevention. Information plays a central role in the field of conflict prevention and peacebuilding. Early warning aims to give notice that a conflict situation may be emerging, and interventions are organized to encourage that conflict to take a nonviolent course. So the use of available technology can localize the warning and response mechanisms aimed at preventing violent conflict, and hence give more ownership and responsibility to the people impacted, and I think there's a host of experience from Kenya to Ghana and many parts of

the world where the localization of early warning systems, but also an increasing effort at rapid response or timely response, has led to the prevention of conflict and violence and saving of lives.

So over the past few years, crowdsourcing information, thanks to extensively expanding access to mobile devices and social media has emerged as a complementary tool for early warning. Technology offers the potential to rapidly grasp and react to proximate information, especially around rapidly changing situations like those related to elections and political transitions. However, technology also affords the potential of involving and mobilizing communities of action to respond to signs of early warning locally or rapidly share the information to the appropriate response mechanism. The challenge, of course, remains as to how these innovative social media tools and user generated information can be utilized for and translated into localized and participatory preventive multi-stakeholder action in potential conflict situations, and maybe I should illustrate this with some practical example, given the post-election violence in Kenya.

At some point, I will talk about what happened last year around the constitutional referendum, in Kenya, but Kenya is going to have general elections next year. For that experience, civil society together in the context of a group called the Uwiano platform, which includes statutory commissions of the state, it includes civil society, it includes UNDP, it includes actors like the police, have come together and established a strategic framework for 2012 elections.

What is interesting is that in that framework, we argued that the biggest threat that Kenya will face in the context of the 2012 elections is not the threat of violence, it is the threat of poorly organized elections, of an electoral management body that is not credible, that doesn't offer transparent and open processes. So the strategic imperative for 2012 in Kenya is not the prevention of violence. The strategic imperative is the organization of free, fair, and credible elections. So then it requires multi-stakeholder engagement that brings together the electoral support constituency, the peace building constituency, and the human rights constituency to come together and establish higher levels of accountability, first to support the electoral management constituency to organize free, fair elections. If that happens, it would take away 80% of the motivations for violence around the elections. Then you have another 20% remaining who will use the elections as a trigger for different kinds of grievances and other kinds of issues, and so the rest of the strategic framework will address those issues in a way that involves actors at different levels, villages and communities and local government, but also at national, leading up to the use of a national body called a National Cohesion and Integration Commission that plays a role of a quasi-national peace commission, but also using the security agencies.

So the point is, I think needs to be well taken, about the role of multi-stakeholder engagements, and the kinds of things that are possible across different levels of society, but also the strategic entry point using the elections as a framework and not the prevention of violence, and so then you have a potential for better success in the context of elections, and I think the same will apply for many other countries also in similar situations as Kenya.

In terms of our history as the UNDP, since 2002, we have supported a number of countries in fragility in building resilience by strengthening what we've called infrastructures for peace, and I think the allegory here is very well taken in the context, if you compare it to the health infrastructure, how states and governments prepare to prevent people from falling sick or when they do, the mechanisms, the capacities, the resources, and the skills that are available to address the ailment is the same allegory we've adopted in terms of an infrastructure for peace, the preparation, the capacitation, the planning, the organization, the resourcing that prevents the occurrence of armed conflict, the occurrence of violence, so that the kinds of impact or legacy that an armed conflict creates in a society, the need for revenge, the challenges of accountability for the violations that have taken place, if you take all of those away, there's a greater motivation and inclination to hold on to the peace, to secure the peace, so the infrastructure for peace agenda then, is something that the United Nations Development Program is, in the tech service lines has become central to our work in conflict prevention and recovery. And so this infrastructure for peace, we'll call them a dynamic network of interdependent structures, mechanisms, resources, values, and skills, which through dialogue and consultation contribute to conflict prevention and peacebuilding in a society.

I think I just need to make one qualifier here. The idea of using them for dialogue and consultation is not specifically limited to the prevention of violence or the prevention of

armed conflict. What it helps to do, is establish a permissive environment for discourses on every issue that a country faces. So if they have an economic crisis, if they have a political crisis, they have a social crisis, a health crisis, if you don't establish that permissive environment, even the quality of trust among political actors to build consensus on those issues that affect the country is limited, and so you don't have people getting in outbidding for position in political grandstanding so that they can mobilize support on that basis. So the principle of the use of dialogue and consultation simply allows us to create a space that actors in a country with sufficient goodwill on all sides can interrogate the issues that they face as a country and find solutions to them, so whether it applies to an organization, to a community, to a village, or to a country, the principle is basically the same.

So in this regard, the use of crowdsourcing then provides us a simple and low cost way of giving opportunity for mobilizing people for localized and participatory preventive multi-stakeholder action in potential conflict situations. So for us as UNDP, we are currently exploring how to further integrate crowdsourcing into our work on infrastructures for peace and conflict prevention so we can engage local people in collaborative efforts for an early response, and let me just give about two or three examples of the kinds of things we've done.

If you take the context, I return to Kenya again, last year, in August last year, Kenya engaged on a national process to ratify a new constitution. Anyone familiar with the history of Kenya will know that the search for a new constitution has taken 30 years, and many leading Kenyan politicians and human rights actors lost their lives in that quest, so it was a momentous historical occasion for the country to go so far as to have a draft document that was subjected to referendum for ratification. The referendum process was occurring 18 months after violence, during which more than 1,300 people had died, and more than 600,000 people have been displaced, and as I speak today, you have tens of thousands of people in transit camps who cannot go home because of fears of insecurity. So that is the environment. Then you have a coalition government that blows hot and cold in terms of the capacity for consensus building among its constituent parts, but that's the context in which the constitutional referendum took place.

So the first key question was then to ensure that the interim electorate would organize a free and fair process, but second, given the fears that, and the legacy of the post-election violence, how do you ensure that the referendum could pass off peacefully, and what would support the key actors in Kenya to do was to establish the Uwiano platform, which in Swahili means cohesion, so a cohesion platform of key actors coming together and using cell phone technology, which was free across the country. Anybody in any part of the country could send a short message service for free, and the setup is a situation room in the national coordinating institution for peacebuilding and conflict prevention and stack it with volunteers to collect the messages, to verify the messages, to analyze the messages, but to quickly organize remedial action. Otherwise the response component will largely be missing. And so people could send messages from any part of the country, have that responded, and to build a partnership with civil society and district peace committees across the country.

That partnership allowed us to train them and to prepare them to respond, and in the context of the referendum, we organized 356 different kinds of responses around the referendum period. Most of them will involve meetings, consultations, public assemblies to dispel rumors, to have people from both sides of the divide shaking hands, and demonstrating to the public that they are not enemies, that they are friends, or to have consensus building meetings, trust building meetings, football matches, joint activities, to share confidence that this process will come and pass, and there'll be no violence.

And I think the marker was the fact that the humanitarian community in Kenya, in terms of their planning for the referendum, have built a best-case scenario that 5,000 people will be displaced around the referendum. That is the best-case scenario of the humanitarian community, and worst case, of course, was 200,000 beyond. They spent \$2 million organizing from food to non-food items, mobilizing transport, deploying volunteers across the country. The Uwiano platform developed a conflict prevention strategy around the referendum that did not anticipate that any lives could be lost, because it's not about statistics, it's about people. And so the deployment of civil society, the partnership with the security agencies on the basis of which real time conversations were had with the police, sharing information, and getting police divisions in different parts of the country to respond to signs of threat where the information had come through that people had been threatened, or people might be attacked, and who had documented cases where attacks were organized,

but through the SMS technology, people were deployed, the police was deployed, arrested the people, and no case of violence took place around the referendum in Kenya.

So from the software that we used that allowed us to trap, track, and map in parts of the country where the messages were coming through, that allowed us to get information about the movement of electoral officials, even when their boat sank as they were going to the police station, who were the first to receive the information and to share with the electoral management body, and they sent replacement staff, and total SMS's received around the one week period was more than 20,000. That's the kind of principle and the engagement we're talking about, which is why the referendum in Kenya worked very successfully.

Then you come to a place like Kyrgyzstan, where as part of the preventive measures that we've taken towards mitigating the risk of election-related violence during the presidential elections that took place last month. We supported the development of an online platform which is also based on crowdsourcing technology. We had trained monitors who we had placed at police stations to monitor and measure tensions, but also to map violations of the electoral code of conduct. The Ushahidi Kyrgyzstan platform was then able to map the geographical location of monitor-sent information using SMS. Besides verified content from the official and the trained monitors, other online and mobile phone users were able to contribute information to inform relevant stakeholders that were required to respond, which include the electoral commission, the law enforcement agencies, civil society, but the results of this pilot has encouraged us to expand this into an early warning, early response system in Kyrgyzstan that included a crowdsourcing component.

I think the early warning component is also a very critical dimension of this discourse, and I think it takes me back to the experience of Kenya, where we developed a template that allowed us, if we received a funding request from a civil society group, a community group, with a maximum of 48 hours to process the request and to disperse money to them, which allowed them, before things got out of hand, to respond effectively. So all of the 356 cases were processed from that 48 hour period that put money in their hands, and what was fascinating was the biggest amount of money requested was less than \$2,000, and the total cost was about \$750,000, while the humanitarian community has spent \$2 million preparing for a displacement that never occurred.

I think the last example I like to give before I conclude, it's about two more examples, actually, about Nigeria. Many of us are familiar with Jos, the central state, where both the conflict is about political and economic dimensions, but is shaping out as the religious conflict between Christians and Muslims, but is actually about identity and identity politics and the use of the state to privilege groups against others, that's the historicity of the conflict. But Jos was preparing for elections that took place in Nigeria last year, and all the predictions, all the analysis, was that Jos was going to be violent. By March last year, one month before the elections, it was too late for us to develop a sophisticated platform, but what we did was very simple, was still the use of SMS technology in giving people cell phones in deploying them across the country, in having a central number and a central database that people could send messages to, but linking civil society actors to the security architecture with the police and having the space where they shared information, where they did the analysis together, and where they planned a joint response.

What is fascinating was that, given the historicity of violence in Jos, the 2011 elections came and passed. That's what's fascinating about Jos, not a single case of violence. It didn't mean that violence was not planned, but in the constituent communities where you had actors actively planning for violence, to have peace monitors, local community leaders, faith community leaders, political actors as part of this network of NGOs that came together with a central clearing house that accepts information, analyzes them, to link up with security agencies, it allowed them to prevent violence in the election.

So what has happened in Jos has given us motivation, in now discussing with the UN system in Nigeria, can we begin to think strategically of an early warning response for Nigeria? Given the size of Nigeria, the use of technology is the only way. We can map, monitor, track events in the entire country, and plan for response. Nigeria has a population of 150 million. It's a federal state with autonomous regions and multiple level issues of conflict. Its issues around contest between the state, the central body and the state body, so the complexities are immense. So it's only by using technology that we can advance that process. So the process for us has begun, about how to support the government and the people of Nigeria to frame an architecture for peace that relies a lot on crowdsourcing

technology that hopefully can contribute to lowering the level of violence in Nigeria and begin to transform some of them.

I think the last example I want to give you is about Liberia, where we've worked very closely with the Ushahidi Liberia, the West African Network for Peacebuilding, who is the largest civil society organization in Africa, but based, with a focus on West Africa, and the national peace building office in Liberia. We have now developed a proposal with the aim of supporting the integration of crowdsourcing in the Liberian early warning and early response system, and our aim is strengthening the response aspect by ensuring more coordination and including the existing infrastructures for peace.

So in conclusion, what are our next steps? For us as BCPR UNDP, we are working to develop a larger program on crowdsourcing for conflict prevention as part of our work on strengthening national and local infrastructures for peace. That should allow us to offer this service to engage, to advise, and to support many more countries around the world. We have already provided and developed a background paper that documents the experiences so far and the reflections on the future programming. So we hope that today's discussion will help us to enrich that document, and we want to publish that. So if we cannot be present everywhere, the knowledge should be available everywhere, so that people are aware, and they can decide how they want to take this forward themselves. The aim of today's discussion is to shed light on some of the many questions related to the application of crowdsourcing for conflict prevention. That is, by the credibility of the information, the role of government vis-à-vis civil society, and the contested issues here, whether the state wants to use it as a form of intelligence gathering.

So at what level do you engage the state? And yet, the state has responsibility for providing security as a duty to protect the citizens. So what is the nature of the engagement with the state? Are there any markers about when you feel that the technology is being used for negative ends, or at what point do you feel that you have confidence to begin to engage with the state? Can civil society effectively do this on its own? The real issue is not the collection of the information. Tremendously, over the years around the world, we collect the information. Where the gap is, is in the response. How do you organize effective responses if, for example, the state is also part of the problem? And I think that this discussion will certainly benefit from the quality of the people around the table to enrich this discussion, so we can put out the evidence to a global community. The whole question of access to communication tools and outreach, and whether crowdsourcing methodology is more suitable in relation to specific events such as elections, and the question of a more long term role for crowdsourcing as part of a country's infrastructure for peace. So, we welcome an opportunity to get your input into the discussion, but also to share new ideas for constructive application and use of newer technology for the prevention of violent conflict.

We thank you very much. We're looking forward to an exciting day, and welcome once again. Thank you.

Hoge: Ozonnia, thank you very much. We're now going to lower the chaise, because our next three speakers have presentations, and Ozonnia, my background is not academic, it is journalistic, and so I particularly love people who speak with examples as you just have, so thank you again for that presentation, and in a moment, we will move to Nick Martin, who I notice is one of three Martins in the room, unless there's some more on this side whose signs I don't see, and Nick, the floor is yours when you're set to go.

Nick Martin: Can everybody hear me? Okay. I think that first talk laid very nicely a framework for crowdsourcing. I'm going to talk a little bit more about the technology behind crowdsourcing that makes it possible, so maybe just a question to start, how many of you have trouble keeping up with technology? Show of hands? Yes, I do too, and I run an organization called TechChange. So in all seriousness, there's no question that the pace of technological innovation is staggering. We are living in a world where 90% of the Earth is covered by cell phone networks, where a quarter of the people of the world have access to Internet, and where Facebook is on pace to reach roughly 1 billion users in the next year.

So existing technologies are evolving rapidly, new technologies are being adopted and created everyday, many of which have implications in the international development and peacebuilding landscape. So one thing is definitely clear is that tech is developing a lot faster than our organizational capacity to manage it, so we like to start a lot of our courses at TechChange with the thought that technology is a magnifier of human intent. Technology is a magnifier of human intent, meaning it can be used for nefarious purposes, or it can be

used for the purposes of democratic change, so our challenge is to leverage it, to train people, to create infrastructure, to make sure that it's used for the latter. That may seem like an obvious point, but I think it's important to approach technology with the appropriate degree of expectation. We can't expect it to solve all of our problems if the strategies and the policies are not in place to effectively leverage it.

So we heard from Warren Hoge a definition of crowdsourcing, go real quick here, this idea of a methodology that allows us to gather and share real time information from voluntary and sometimes anonymous sources, it's often associated with data visualization and mapping. What are the primary challenges that are associated with crowdsourcing, and again, these are particularly related to the technologies that we rely on to support the process of crowdsourcing.

The first is that everybody is both a consumer and producer of information, so the challenge on our end, as practitioners in this space, is to focus on that user acquisition and that outreach. How do you close a feedback loop so that somebody who you're expecting to have information from trusts the system enough so that they're willing to share that information in a way that doesn't jeopardize their personal safety and livelihood? That's a big challenge.

And then this notion of a tradeoff between time and accuracy. So in a crisis, it would be great if we could wait two weeks to verify all information, but the reality is that in a conflict prevention scenario, good enough information right now is probably a lot better than perfect information in two weeks. So how do we define these thresholds, how do we determine what information is good enough becomes a really critical aspect of our approach?

And then finally, information overload. If organizations have done a good job to really provide a framework for people submitting information, once that information comes in, how do we manage it? How do we create strategies and policies so that we can verify and analyze massive amounts of data and curate that data, and that's really where this field of technology is moving, and that's what we're particularly excited about at TechChange.

So how do you crowdsource? Ozinnia mentioned Ushahidi. I imagine a number of you are familiar with Ushahidi, it's a very popular mapping platform. Some of these other ones, you may not know, but for those that don't know Ushahidi, it's an open source project which allows its users to crowdsource crisis information from a variety of sources, from Twitter, from SMS, from email, from web reports. Swift River is its plug-in that will allow users to manage and verify data more effectively in real time. Frontline SMS, down here in the corner, is a free large scale text messaging service that many NGOs and nonprofits use. It can be implemented without the use of Internet.

Geochat is a similar type service developed by a group at Instead, and it allows anyone anywhere to chat, report, and get alerts on their phone. And finally, Freedom Phone, for those of you who might be working in environments where literacy is a big challenge, Freedom Phone is an interactive voice response system. So imagine trying to purchase your airplane tickets, and you have to go through a series of automated scripts during your call. This kind of system can be built and implemented to get people information, particularly those people who cannot read. And then finally, Twitter. How many people are on Twitter in this room? Do we have a lot of Twitter users? Oh, wow, great! So Twitter, I think, is definitely proving to be one of the most powerful tools in this space, and I think we all saw a lot of innovation around it, particularly with the voice-to-tweet function in the Arab Spring in Egypt, and we are particularly excited about Twitter's evolving use to enable us to better respond to crises and prevent them.

So Ozinnia also mentioned Oleano and Amani 218, heard some great examples from Nigeria, Kyrgyzstan, Liberia. I'll just share two others that we really like at TechChange. One is something called the LRA crisis tracker, and this is a realtime mapping platform that was developed to bring a level of transparency to the atrocities of the Lord's Resistance Army. So it was developed in collaboration, I think some UN agencies were involved as well as Invisible Children and a group named Response. If you go to, I believe, LRACrisistracker.com, is the URL, you can actually see the map and see just how interactive and visual it is, and again, trying to present a case for a greater degree of transparency to those that are committing atrocities is actually a really powerful way to create a narrative around a map.

And then another one we included in here was a project called Unlock. It's a mobile phone-based information collecting system managed by the Fund for Peace, also in Uganda, and a really powerful project as well. Clearly there are a lot of uses of Ushahidi in some of these other tools, but a lot of them tend to be more focused on the crisis piece of the conflict arc, and so we are particularly excited about being a part of this discussion to look at, how do we focus on the prevention piece, because the prevention piece is so critical for averting, many times, the cost, the enormous amount of upheaval that a crisis would yield, but the technologies really have not been used extensively for prevention to date, so we are very excited about that. So what we'd like to do now is actually, I'm going to invite my colleagues up. We're going to do a quick exercise so you all can actually see how somebody would submit information via text. So I'm going to invite my colleague Jordan up, and we'll show you the platform here.

Jordan

Hosmer-Henner: So some of you should have cards on your table. They have instructions, times, dates, so if you want, just go ahead and text message into that number that's on there, it should be written down, and technically, how this all is working is, I have a laptop over there hooked up to a GSM modem, which is incredibly common all around the world, and that's hooked up to the wireless network here, so that when a message comes in from any of these phones, it goes over the cellular network to that laptop, and then from that laptop, it's uploaded to this crowd map deployment of Ushahidi. So as people start sending in messages, what's going to happen is they'll show up automatically in the back, the back end of this system, so the first message came in, it's what kind of monster, and the premise was that a monster, half-mothra, half-Snooki is attacking New York from Brooklyn.

But what you can do here is you get to see the number that it came in from, so who's (646) 873-0609? All right. So you can see the number that comes in, and then, so if we want to verify that, we would actually be able to create a report and map that as an incident onto this map, so if we want to put it in Brooklyn, we can move the target into Brooklyn, we add a title, monster, and then this, when we plot this, this will now show up on the public map that we're creating, so we have to select a category. These can be used, you can plot positive incidents of crowdmapping, you could plot violence, you could really, anything you want. So then here, we go, approve, and verify, and now this report is going to show up on the public map.

So this is the public map, this is what it looks like to a citizen who comes to this website, and when we refresh, that Brooklyn incident should show up. So there's Brooklyn, we click on this, and it says, monster, more information, and one of the things you can use with this is actually to create specific reporters. So, say, and that really brings in the concept of bounded vs. unbounded crowdsourcing. So, say we have fifteen UN staff members deployed around the country. We know that the information coming from them is going to be verifiable, it's going to be something that we want to trust. So we're going to create reports very quickly, but we may be getting messages from random people that we don't trust, so monster smashed a building at intersection of Williamsburg and FDR Drive. Say we have conflicting evidence from a UN official that we definitively trust. Well, we can just delete that message, and no one will ever see it. It will never show up on the public facing map, but these are all of these messages that are coming in from the different reporters, where you can see who they are, what they've done, and you can create a report including that timestamp on the public map.

Martin:

Great. And so for anybody that is interested in a deeper look at how these technologies work, we're happy to sit down with you and show you. It actually takes about five minutes to set up Ushahidi's web based version of their software. It's called CrowdMap. The challenge is really not setting up these technologies, it's creating a program that is really effective and efficient in and around that technology. It involves, as Ozonnia mentioned, all the multi-stakeholders from various levels, and I'll just close here with my last slide, but that integrated and multi-stakeholder process is so critical, and then also the ability to train people effectively in how to use these tools, and that's really the piece of the puzzle that TechChange is committed to, training not just individuals, but organizations and communities and finding the solutions that are right for them. We believe very strongly in not going in and trying to impose a technology onto a country or a community. It's about what they already have in place, what kind of infrastructure they're already using, working from that to enhance and map a solution onto. So if you're interested in our work, or you have any questions, please, we invite you visit the TechChange website, and here's some contact information, and for those that are eager, I think, if you text #question to this number, it will give you an

automated response using frontline SMS to, just to give you another sample of how these tools work.

So thank you so much, I'm looking forward to your questions.

Hoge: Now we're going onto Beth Liebert. Beth, I hope I'm pronouncing your surname correctly, who is the Product Manager for custom maps in Google Maps. Beth, the floor is yours.

Beth Liebert: Well, as we're getting set up here, I'm just so thrilled to be here to understand all these cases on crisis prevention. So I'm a product manager. What that means is that I help set the direction and definition for products as they are developed and make decisions about what it should do next. So what's most useful for me to hear is about all these use cases, about the elections in Nigeria or Kenya or wherever, and some of the challenges there, so that we can build into our tools the things that are needed for those types of things. So I will talk a little bit about how maps have been used in the context of Google for crisis prevention and dissemination of information as well as some of the gifts and some of the challenges that come along with it.

So our mission in maps is to build upon Google's mission, which is organize the world's geographic information, make it universally accessible and useful, but what's interesting about maps is, unlike search, where our job is really to pull from web documents that already exist and try and surface the most relevant ones, with maps, we have to know the truth, so we have to know that street is actually there. We have to know that that business is actually there, that that's actually the phone number that you can use to call them, and to do that all over the world is a huge challenge.

So how most map data gets onto Google today, most of it is from licensed data. That's how most mapping providers work. That means a third party already has this data, and we pay them a fee in order to show it on our own product, and that's great for getting started, but it leaves a lot of things out. For example, this is Abbottabad, Pakistan, which is known very well for where Osama bin Laden was found. This is a pretty good representation of what you can license in terms of the data, it's from Bing maps, and you can see the resolution of the roads is very rough, you have a vague idea of where the cities are, and that's about it.

This is Google's map of Abbottabad, and compared to what we saw before, it's incredibly rich. You see individual village roads, you see actual places, you see Osama bin Laden's hideout compound, and all of that got there immediately after the incident. Actually, a lot of people were confused, like, how come it was on Google this whole time? Couldn't we have found it earlier? And so you can see that there's an amazing benefit in immediacy to giving our users a tool for which they can actually add edits to the base map, and that's how this has gotten here. You can't license this data. It may not even exist on a paper map, let alone an online map, but we've opened up the tool so that people can contribute this. Often there are local people who know exactly what's there.

Now as great as it is to get this information, it certainly comes with its challenges. This is the place details page, same type of page you might see for your local sushi restaurant or whatever, you can see the picture of the place is actually from a TV show called Arrested Development, the reviews of the place are things like, "You know, the accommodations were okay, but it smelled a little bit too much like goat, and it took me about 10 years to find it," so the lesson is, never underestimate the creativity of your users, so if you have to open things up, you have to have a process for vetting the information before you go out.

So our tool that we use to get a lot of those edits is called Mapmaker, and I'll talk about an example where it was used in Sudan to map Southern Sudan. So Mapmaker is a tool where anyone can access it, draw lines, add points, say this line is a bike path, a road, a river, whatever it is, and submit that to Google, and what happens on our end is it goes through a pipeline of moderators, so if it's, we have smart ways of auto-approving things and other things that need to go, actual human moderators sit in India and do this as their full time job, and that's how we're building up these maps.

So in Sudan, there was a big effort alongside the UN to organize local community leaders, both within Sudan and with the diaspora in the US and Nairobi, to train them up on this tool and get their friends involved and start mapping, and the impact of this effort was incredibly significant, so it went from one of the least mapped countries to one of the most mapped. We've got fresh new imagery. We went from a dozen edits a week to thousands of edits per week, but the key thing is, this effort is still going on, it's still sustained, because of the way it

was organized was to get people who were locals and actually had a stake and actually cared about mapping Sudan, not just a one time blitz, so these efforts still continue today, and I think that's really important, and just to drive this point home about how effective this is at collecting data, only Google and Open Street Map, which are the only two tools that kind of open it up for crowdsourcing data, to this day, are still the only ones who show South Sudan as its own country. So you look at Bing, you look at Yahoo, MapQuest, it's still just one big country, because they're, again, depending on licensed data that doesn't get updated for years.

So what happens when you have the base map data that is going to help you get from point A to point B, which is a huge impact on being able to help these countries, and you want to put your own annotations on it? That's where custom maps comes in. It's also called My Maps. So we see this picked up a lot whenever there's a major incident. People use it to organize information on a map. It's a great tool for being able to create and publish a map online without needing any technical skills. So you can just simply put icons on a map, give them titles, and share with a link.

So this is an example from the London protests, the riots that happened, I think earlier this year, and it is a map designed to help keep protestors safe. So it tells you, where have there been incidents of police violence, which police, where have police with dogs, police dogs been deployed, which is the little paw print icon, where have there been abuse, and they look at Twitter, and they put this all on a map and order it by time as best they can. So this map became so popular that it inspired an entire website and mobile application to help keep protestors safe. In fact, if you look at the traffic to this tool, you can track major incidents around the world just by looking at page views. So this is page views to the overall tool, not any particular map. So each spike represents a hurricane, earthquake, a fire, some major event that happens, immediately gets put on a map, and we can see it in our logs.

One specific example, this was from the earthquake that was in March in Japan. So when the earthquake happened, someone started this map which helped crowdsource data about where the shelters were. So anyone who had a place where someone could stay or food or tea or anything, because the subways went out, would put this on this map, and then this got published and disseminated. Now not only is this very rich information, but what I find most incredible is how immediate it was. Again, you can track within the hour when the earthquake happened just looking at the traffic to this tool. So you can see, earthquake happened, bam, this map gets picked up and shared by everybody, because there's something about information on a map that people find really useful during a crisis. Something that local and impactful.

So it's wonderful that we can get all this information out there, but there's certainly challenges to it. So with these custom maps, for example, particularly the ones that are open collaboration, within a few days or weeks, they are almost always claimed by spam or irrelevant edits or just things that just get thrown up on the map, and unfortunately, I don't think the tool's design, wasn't designed originally to handle that, and so doesn't have a very good answer for that.

The other big challenge with custom maps is discoverability. While it's great if you can find the map, and the information is useful, getting there is a really big challenge. Often they're picked up by newspapers, and that's how they get shared and discovered, but without that, they kind of live in a silo, so I think the big challenges here I see are incentivizing the content to be created, and I see these as ways to achieve that that we can do better at, so giving people feedback, for a regular user, just knowing that somebody is using it is all the motivation you need, so seeing how many views your map got, for example, is hugely motivating. One thing we learned with the My Maps custom maps tool is that people use it because they already know it. An earthquake happens, you're not going to go train yourself on some new tool. You want to use something you've already used, you're familiar with, and that is just dead simple, and that's why it gets picked up. So we make sure this tool works for crisis situations, but also to map your favorite thrift stores, or your surfing spots, or whatever you want, because you'll use it on a regular basis. Another thing that we need to do better is collect it from mobile, which we heard a lot about in the last presentation.

And finally, that discoverability aspect. What can we do better about that? We need a notion of map rank, just like we have page rank, and ironically, Google has not solved this very well. How do you surface a map on a map when it's relevant? How do you know what content matches the keywords when it's geographic content? And that's going to go a long

way to filtering out all this noise, because a lot of maps are really not that needy, that's just, you keep track of a couple points, that's it. How do we get the good content out there?

And finally, I think the last point about structuring data is a direction we'd like to go, because we'd like to make it easier to, instead of just putting a title and description of this thing, and that's fine, but being able to structure it, saying, type of incident, number of people hurt, etc, you can sort of structure the information you want to gather from people, and that helps set expectations with the crowd about what information is most helpful so that you can get the information you need to respond.

So that's all I have to say, and again, I just want to reiterate how excited I am to learn about all these use cases. I will send this presentation out with the rest of them, and my contact information is on there. So thanks.

Hoge: Thank you, Beth. And now we'll hear from William Tsuma, the Program Manager in charge of preventive action and human security at the Global Partnership for the Prevention of Armed Conflict.

William Tsuma: Thank you very much. Also thankful for the opportunity to be here and just to listen to the vast experiences of those who have gone before me, and what I'll do is I'll start throwing a spanner in the works, and start reflecting keenly and practically on the challenges of crowdsourcing in the field of conflict prevention, and beginning with the premise that, in many situations, crisis situations are very different from conflict contexts, and it's important that we internalize and realize some of these realities even as we reflect on what modern technologies, and particularly what crowdsourcing, can do.

Most importantly, as we think about the conditions under which crowdsourcing can indeed contribute to the prevention of violence, and beginning off by saying that the prevention of violence is indeed a very complex process, and complex in the sense that it needs to be grounded within contextual realities that vary across countries, vary across regions, and even across cultures. I would suggest that we be careful not to slide back into the culture of reaction instead of focusing on prevention, and this is very possible. We've seen it over and over that despite and in spite of the investment of early warning systems, what we've continued to see is a reactive process to violence, and further reaction when the violence has been quelled, but when the dangers are glaring. When it's a crisis, we still continue to react, and crowdsourcing indeed provides an opportunity for us to be able to mobilize multi-stakeholder prevention measures, but again, we need to critically reflect upon some of these issues, for example.

One of the aspects that we talk about within the field of prevention, we need to be critically aware of the increasing evidence of state control of information, which is basically regarded as surveillance, and Ozonnia attached on that already, that there are situations, contexts, and countries where the state controls early warning information and regards it as part of surveillance. As we also admit that the state still plays a very central role as a custodian of security, and that spaces for engagement beyond the state are not always open, and they vary from region to region, they vary from country to country.

I was stranded in my own village in Kenya after 2007, I had to fly back to Europe through Entebbe, because we did not have air time, so all you could see was offline. We did not have network, for example, during the 2007 elections, we did not have recharge cards, SafariCom, Zain, they all ran out, and so what you could see was a situation where you cannot communicate, and that is a reality in many countries where conflict situations are embedded in competing interests, they are not neutral as socio-political processes, and we need to bear that in mind, and also to reflect on the fact that, as certain states within conflict countries are also utilizing this opportunity to enhance what is now called control 2.0. So while we are talking about information and communication 2.0, there's also control 2.0, where these information ecosystems are being captured and being used to lead to sort or reduce or minimize the opportunities for civil society multi-stakeholder processes beyond the most eccentric processes of violence prevention.

What we have, find interesting, and Ozonnia touched on this very critically this afternoon, was the aspect of establishing mechanisms where they can be coordinated in collaborative processes with existing capacities and infrastructure to respond to violence, and this is just not at the national level. I will use an example of an exercise that I was a part of in September in Nairobi during the week where the International Day of Peace fell, and what

we did for the first time, we decided we wanted to have a map of Kenya with green dots instead of red dots. Basically, what we did during this multi-stakeholder process, was to map and manually identify the areas within the Kenyan map where we have existing local structures of peace, for example, which includes peace monitors, which includes field monitors, which includes local peace committees. What was very interesting was to see that there are existing local mechanisms that can support, not only support, but also coordinate the response that is needed, that can be generated out of early warning mechanisms, but what was also very interesting is to see how those national processes could then be linked into existing regional processes.

For example, at the C1 mechanism in West Africa that echoes early warning and early response platform. So what we are saying is that early warning systems benefitting from crowdsourcing mechanisms and methodologies have to be embedded within existing national early warning structures, but also linking them to the regional and continental platforms, acknowledging that the conflicts and the violence that we're seeing practically have regional dimensions. And at times, the best platform to engage in the processes of response without getting into the subjectivity of local politics is to bring the discussions to the regional level and engage the regional intergovernmental bodies at the same time, but that means that there has to be direct linkages between the national and the local, and at the same time, the global and even , sort of the regional, but also at the global level.

From a practice perspective, there's also the question of spaces for civil society participation, which is very critical as we think about the conditions under which crowdsourcing can indeed contribute to prevention, and in this case, when we're talking about civil society, we are not talking about NGOs, but we're talking about the public, the citizens, the civilians engaging in political processes, and we all have examples of countries and contexts where that space is shrinking, and if that space is shrinking, then crowdsourcing can easily become a space for the elite to engage, then it doesn't become any different from the first or the second generation of early warning, because what you want to see, you want to see my grandmother and your grandmother able to engage in citizen-based early warning systems. That is only possible if the early warning process and the response can be generated as well at the local level in the communities and the local villages and the public as a whole have the capacity and the environment to be able to engage in processes of, in political processes to hold governments accountable, but also to hold policymakers accountable at every level, and therefore such citizen-based early warning systems embedded under the methodology of crowdsourcing then depend on such spaces of response.

The other thing that we think is very important, and as we talk about crowdsourcing, is that user-generated information also has the potential to lead to unintended results. Unintended consequences of information flow in as far as the credibility, but also the authenticity of information is just as real as life and death. A very good example is this SMS here, which says you're given two days to vacate this estate, failure to which, you and your family will be burned alive. In such a situation, this is information that is already in the public domain. It's already been sent out. Whether it's been verified, no one knows, whether it's, you can see the number, it's basically 072, that's it, so there's a question of, how do you verify information that is anonymous? The reality is that within the context of conflict, and in a heated and charged context, this is an SMS that can easily send an entire village, an entire location, to war.

Now what is important to reflect is how to develop systems that have the potential to ensure credible verification of information, but even if any information is true, how do you dispatch this information so that it does not worsen the situation, but rather provides an environment for dialogue and reconciliation? The Government of Kenya advises that the sending of hate messages inciting violence is an offense that could result in prosecution. As a response mechanism, how do you ensure that such pieces of information than, are acted upon? Ozonnia talked about the national cohesion agency in Kenya that is responsible for ensuring that there's no political intimidation, for example, within the political space, but also what is critical for us as we reflect on crowdsourcing for programming is then to be able to ensure that we have mechanisms in place that are embedded within existing local structures so that the verification of this information before it goes to the public space to be acted upon is verified at different levels. Therefore, that means that we should not ignore the traditional mechanisms and structures of peacebuilding or the traditional tools that exist, but to use them as a foundation upon which response can be mobilized, but at the same time, where such information can be verified.

And so as just to provide my last slide, as we think about shifting and anticipating violence to mobilize collaborative prevention, what we are hoping to do, or what we are hoping to see is that the process of crowdsourcing for prevention would provide a platform where multiple stakeholders, multiple groups at the local level, but also at the national level, and at the regional level as well, engage along the continuum of conflict, because it's evident that conflict is going to be a part of our life. What we can do is to ensure that the level of violence is reduced, and if possible, that we've got the capacity to respond in a collaborative manner, acknowledging that no single stakeholder has the capacity and the mandate to effectively engage on these issues, but if all these systems that we are discussing, and if crowdsourcing tools to strengthen early warning are embedded in existing infrastructures and capacities of peace, then we feel that there is a possibility to indeed engage on the continuum of conflict without necessarily escalating into violence, and so that just briefly highlights some of the key challenges, but also conditions that we need to bear in mind as we discuss the role of crowdsourcing for violence prevention.

Thank you.

Hoge: Let there be light! William, thank you. We've got 45 minutes or so for discussion, for comment. The way to get my attention is to take your sign and just put it on the side like that, and I will call on you in the order that I see those signs. Very good. We'll start here. I can't see the name on the sign, but can you tell me? Mr. Kumar, thank you.

Chetan Kumar:

Thank you very much for that clearly very fascinating discussion. A couple of additional points that we might want to highlight. I think some of them were captured by Mr. Tsuma at the end of his presentation. And what was common to the four experiences that were mentioned earlier by Ozonnia in Kenya, in Kyrgyzstan, in Liberia and in Nigeria, was that each one of them represented a mediated result, so the nature of the alliances, the coalitions that carried out the early warning and response was a mediated effort. Ozonnia himself mediated the partnership, the Weyano platform in Kenya, but similar negotiations took place in other countries. When the response was provided at the local level, it was also a mediated response. It wasn't just the cops showing up and saying 'you, you're bad, you, you're good, bad guys go to prison'. It was actually bringing people who were about to attack or fight each other together and then mediating right there on the spot a consensus, an agreement, a way of moving forward that prevented violence from happening. Of course, in that context, those who were already ready to throw the bombs and had the guns were in prison, but that had to be the case, but that was put in a context where people saw that, not as a political action, but as a mediated response.

The broader point is that technology is one aspect of this, and it's a very critical aspect, because you don't have the effectiveness, the speed, the participation, the empowerment that comes with technology if you don't have that infrastructure, and on the other side of the infrastructure is the software, the human software, the skills to actually respond in the right way, and the one factoid that I'd like to point out is in the past ten years, we have spent roughly twenty-five times as much resources in building the capacities of multilateral and international organizations to conduct mediation than those of domestic or internal actors, so there's a huge discrepancy there. The international investment was probably needed, but I think we need to invest in the other side of the coin also. The kinds of conflicts that you have today, multi-level happening at different levels of societies, not discrete conflicts that you mediate once and get out, but rolling, roiling turbulence that evolves, all of this requires the capacities to accompany this change to mediate constantly, exists within societies themselves, and it's accompanied by the tools we discussed today. I'd just like to highlight that point.

Hoge: In the absence of any question at the moment, William Tsuma, would you like to respond to that and any other members of the panel as well, and then we'll go on to other questions.

Tsuma: I fully agree with Chetan that when, if you look at the dynamics of conflicts and how they're manifesting in many contexts, for example, it's very difficult to localize them and put them within a given boundary, and that's why we still very much insist that any form of response architecture or infrastructure has to be embedded within existing capacities. And these capacities are not just at the local level, but rather they are at the national level, but you need to link them up at the more regional level, and there are examples where it's been extremely difficult to engage or intervene on a given conflict because of the sensitivity of that particular conflict.

And right now, for example, there's that going on with the intervention of the Kenyan government into Somalia, and the linkages of the Horn in East Africa in that particular process, it becomes extremely sensitive to have this discussion in Nairobi, but probably possible to have it in Arusha at the East African community level, or in Addis Ababa or in Djibouti at the EGAD level. So realizing that response mechanisms in that case might be useful to broaden this debate to a more regional level, but at the same time engage with existing local capacities at the local, but at the same time at the national level, so I fully agree with Chetan, and at the same time, the capacity to respond has to be enhanced, because that is one of the things that we have been struggling with from a practice point of view, and speaking of civil society organizations, we still struggle with the capacity to be able to respond. What responses are we looking for? What do we regard as a preventive measure, for example, and in practice, it becomes extremely difficult to define and even conceptualize them, so I fully agree with this remark.

Ojielo:

Thank you. Just to add a few more issues to complement what both Chetan and William have said. If you look at some of the software that's out there in the public domain, there is a question, what kinds of information do you share with the public? What's the purpose of the early warning infrastructure? If it's a publicly accessible system of software that allows everybody to put information into it, is that what you want to achieve? If, for example, civil society in the country or community is weak, the state is in denial or unable to respond, maybe you want to use that as a strategic response. The idea is then to generate action at other levels, at the international level, at the regional levels so that the state, they can engage the state in crafting a response.

If the state, if there's some wind of opportunity engaged with the state, what should be the nature of the infrastructure you create? I would argue that infrastructure should be local, should be internal, and you have the conversation with the state. Then there is a question, what kind of information is available to the public, so the experience of what happened in Ghana, in Jos, and in Kenya, if somebody sent information that says, 'this ethnic group are the killers, they want to kill us', do you want that information accessible by anybody? Or do you put out just a summary of the information you've collected, learned that, nicely, without being specific, but focus more on the prevention, focus more on the collaboration, focus more on the opportunity for people to be part of the architecture or infrastructure for peace, so I think that's something we need to discuss, and hopefully the, I think the software is available to limit the information that's available to the public, have a central institution that gets that information, analyzes that, and puts out the evidence.

But the problem, in terms of the community response, is where the civil society in the country capacity is weak, or where the state, by existing policy, has actually constrained the operation of civil society like William has mentioned. I think that a lot of our energies have been devoted to supporting the new civil society, and very often, we have ignored the organic civil society, and if you look at, in all our countries, particularly from the developing countries, the organic civil society was actually at the forefront of multiparty processes of democracy, of liberation, of the fight for independence, what is it, the teachers' movement, the trade union movement, the corporate civil society, and we, it's almost like a disconnect between them and the civil society we see today.

So the civil society we engage with today registers NGOs and combating proposals, and we'll give them funding, and we haven't targeted the other civil society that historically has numbers and people on the street. If the teachers' union says, we want everyone out as part of a peace brigade, that gives anything from 100 to one million people depending on the country in question. We haven't targeted that segment of civil society. I think there's a question of, I like the point that William mentioned on, during the election, they couldn't have access to cell phones, and I think that perhaps contributes to why the technology has become advanced, If Ushahidi in the past, was only about SMS from the Kenyan violence, now from fax messages to Twitter to Facebook to TV and radio broadcast, anything is possible right now. So I think what diversified the, how we collect information in a way that if sources fail, there are other complementary sources that could have addressed the question.

On the issue of regional mechanisms, I think maybe their role is mostly normative, so you create a normative structure that everybody feels some obligation to respond to. So far, the country experiences work much better than the original experiences. What are we speaking about, West Africa or East Africa, you take East Africa, for example, you bypass the state itself, which has a responsibility to respond, and you set up an institution, like an NGO to collect the information and to report to regional mechanism, bypassing the state, then you

share the information with the state three months after. How can that be called early warning? And that is part of the problem that people have with West African experience as well. So in Ghana, we have the government develop a process that allowed you to collect the information, but it raises a fundamental question, the nature of the engagement with the state, the nature of the interaction. See, the early warning in Kenya is fascinating, just to problematize the issue of the state. Historically, the security agencies, and particularly the police, have been a force for protecting the executive against the people, and as late as 2009, the Special Rapporteur on Summary and Extrajudicial Prosecution, says the state is the number one factor of impunity in the country.

So you have the security service, the police, that has waged war against the people, but it also has responsibility to protect the same people, so what kind of engagement do you have? So we began by having this conversation with the police, who says, well, you have a history. So either you respond to that history, or you try to clear the history, and the referendum is an opportunity for you to address the history while the structural reforms about police reforms need to happen. So we engage the security institutional in this, only it was not only a reformed state, it was perceived as a perpetrator, but it has a public duty, mandated by law, about protection, under the constitution. So it was the same police that we engaged that protected people and cleaned up its image and is beginning to have internal reflection and internal transformation process. In my work in Kenya, I'm not saying that's a template for everywhere, but rather than be very dismissive of these decisions of the state, I think the analytics will help us to determine, do we engage with the police, or don't we engage, do you have the jendama or the paramilitary force, or which agency of the state is the most critical interlocutor do you want to engage with?

The last point I want to make here, it's about, when you talk about the question of information credibility and authenticity, it is a critical issue, and so collaboration becomes important, but bear in mind that if there is threatened violence, how long do you spend on corroboration? If you had that kind of SMS, and the person says, "our house is surrounded and they're trying to kill us this night", like we had in Kenya around the referendum, we simply believe that no one would send such a message if they didn't have a real threat. And so we simply called the police, they didn't have the information, we called the civil society panel, they didn't have the information, but with our contacts, they instructed their security agencies, go protect the family. So we didn't have the opportunity of corroboration, but we looked at the dependence at the immediacy of the threat and violence, and we deployed the police, and they went there, they found 15 young men with machetes, and the cops and everything, waiting for nightfall to attack the family, and it happened in five different locations, and they arrested them. So lots of issues to interrogate, but I thought I should, I should share this as well.

Hoge: I think we'll take two questions at once. First of all, Jos de la Haye here, and Kristina Koch-Avan. Forgive me if I'm messing up your last name.

Jos de la Haye: My question is more on the response side, so the crowdsourcing mechanism, it's clear that it reduces the time to know that something is happening, which of course then creates the expectation that it also reduces the time to react to respond, and then comes my question. What types of responses do we have to quickly respond? I mean, do we know that? I mean, because it's a new phenomenon, usually we had a lot of time to respond, and we could think, and then we would react, but do we already have a clearer view on the examples that we're giving? Is there kind of a typology of responses that are effective within a short time frame, the sending out of mediators, if you have a team of mediators standing by, that's one thing, but are there any other examples?

Hoge: Panel, note that question, please, and we'll go to the next one.

Kristina Koch-Avan: I'm actually going to continue on that vein, so I was thinking about some of the same things as you, Jos. I was thinking about the application of these kinds of tools for internal UN purposes, because indeed, in peacekeeping in particular, we have a crowd of staff out there, including troops from different nationalities, and our traditional operation centers and reporting mechanisms have managed information from the field in a very hierarchical manner, and this serves a positive purpose in weeding out spurious information, but it also has a negative aspect of perhaps not allowing us to track more effectively potential trouble spots or receive spurious information that actually is a trigger.

And so, I would like to hear about what you think about the potential application in peacekeeping contexts if you also have information that it's being used by other military operations for this kind of early warning and sort of hotspots analysis and what some of the results are. And likewise, as the United Nations works more with partners, and not just with ourselves, I also see great opportunity for the UN to use this, but to open it up to partners, so you could have, if you have a village in the Congo, maybe you have a forward operating base with a small contingent, but maybe you also have a civil society group that you trust, and they are also inputting into this, and this gets to what Jos was saying about improving our capacity to react more quickly and act preventively, so I'd be really interested to hear more from that perspective.

Hoge: Thank you. Panel, once again, remember that question. I now have a third, Zubaida Rasul, please.

Zubaida Rasul: Yes, thank you. Actually, it goes in the line of the previous speaker, because I wanted to make two comments, first to Google Maps, thank you very much for that very interesting presentation, but I have to tell you that your maps are being used in the field. In fact, until 2010, I was in the Congo, and we had a number of hot spots emerging, and we used to run to Google Maps. I mean, we had our own GIS system, but we used to go to Google Maps to kind of find the exact location of what was going on, because this is diverse. You can't be sure about the waterways, the road links, and we found it pretty useful, and we found it pretty accurate, because we had to plan missions sitting in, sometimes in towns or log bases that are far away from location, and we found it very useful, so I want to encourage you to do whatever you need to to allow us also to be able to use that for planning, and we did use it for our own purposes, but we did resort to it almost every day, so I want to say that.

And secondly, I wanted to speak to the point about the civil society. Of course, we tend to focus on Africa, but civil society has now evolved a lot in the last 15-20 years. We have technical civil society, we have the Ma & Pa civil society at the grassroots level, and of course, between regions, you're talking Latin America, Bolivia does not have so much access to Internet as you would want them to have, or to Internet connectivity as compared with Congo, which the only connectivity they have is by cell phone normally, so I want to point that out. There's differentials in access to, by regions, by continents, but also by the nature of the civil society, because in West Africa, the technical civil society is highly evolved, because they have been through almost 15 years of conflict, grave conflict. They are all very organized and feeding upwards into ECOWAS, and Dr. Tsuma mentioned that the regional organizations are very important, but ECOWAS is, or can be perceived as being a little ahead of, in terms of the African peace and security architecture in developing the early warning and conflict prevention network, in developing civil society feed-in from the bottom up into that system, and they have it very well worked up, but of course, it's still in the setting up stage, but I want to be careful, because I think that two-way passage of information can incite further instability, and the reason I say that is, I'm not sure, and my question is really, who determines what is passed back? Because, as you know, on the one hand, we are saying, let's not edit information, on the other hand, we're saying, let's edit it. So that's a question, but I just want to point out all those variables. We have all kinds of different kinds of civil society these days, and they also are linked to political processes, in some cases, not linked to political processes, so I'll stop there.

Hoge: We'll answer those four questions now at once. By the way, there'll be time for three more, so while we're speaking, just, again, well I see one here, you'll be the first in the next round, and why don't I ask in particular, Beth and Nick, if they had anything to say since they hadn't chimed in yet, and why don't you go first, Beth, and then Nick, you can follow.

Liebert: Well I'm glad to hear that Google Maps is being used. We hear it used by all sorts of organizations, of course, for actual day to day work use, and that's the direction, I think, that a lot of our tools are moving. Kind of the mission I see, like custom maps and what not, taking on is democratizing GIS, because GIS, if any of you even know what GIS means is a very stodgy industry, and it takes weeks to even learn how to use the tools, and it's a huge bottleneck if you have some sort of geographic question you need to answer, but you shouldn't have to know what GIS means to use Google Maps, right? And so that's the direction we wanted to take it. What that also means is making it better for organizations to share information on a map and analyze it and contribute to it, so I'm so glad to hear that it's being used, and I'd love to hear more about the process. In fact, that's something I'd like to hear from the people involved in these kinds of planning processes, where are the slow parts of it? If it becomes easy to find a place on a map, what else happens in that process from getting the information to deploying somebody, I'd like to understand that better to see where

technology could play a role in speeding that up or bringing more information out there. So I'll stop at that.

Martin: Okay, I'll try and capture a few of these questions. To your point about how else can the UN be using Ushahidi beyond the crisis window, we've actually seen some great cases of Ushahidi being used to track the dispersement of aid, and also to map projects in the same country by different organizations, so that if you're Mercy Corps, you can see what DII is doing in the same country, so you have a better situational awareness of the work going on around you. And I actually would make the case that in many circumstances, these sort of longer tail projects have more impact and more value for mapping than a crisis like Haiti, and we haven't talked a lot about Haiti, but just for those that may not know, Ushahidi was used in Haiti, and it was kind of the first time that Ushahidi ever had a really critical mass beyond the Kenya referendum, and a lot of the reports that came in were not sent directly to Ushahidi, they were actually pulled from Twitter and Facebook and other platforms. So I think getting people to use these platforms takes so much time, getting, building that local trust, and then once they were submitted they were all in another language, they were all in Creole, so we had to get people translating those messages, and so the end result was lots and lots and lots of grad students working around the clock to plot these statistical points onto a map, and I think we can all agree that that's not a really sustainable way to manage a crisis down the road, so I would say that, and then I think again, once, a bigger point, once you solicit information from a crowd, from a citizen, from a local NGO, right away, an expectation is created that something will be done for them in the future. Even if your only instinct or operational goal is to provide information for international community, there's still an expectation there, and so I think we need to do a lot more to figure out, if the end goal is not to give them information, we need to give them something. We need to find a way to build that trust. Otherwise, what often happens whenever technology is used in these circumstances is people will send one text, and then they won't get a text back, and then they're done, and so we don't have any user, what we call loyalty, at stake, and that's a huge challenge pretty much across the board.

Hoge: Well, I think we'll move onto three more questions, unless anyone, would you like to say something.

Ojielo: I'm sorry, you asked this question about response, but maybe I begin from where Nick stopped, that, for example, the model we have in Kenya, once you send an SMS, there's an automatic response that acknowledges your SMS has been received and thanks you for the SMS and that it is contributing to the promotion of peace in Kenya. And second, as part of the quality control to call back on phone, particularly the information has some threat mechanism, you have been threatened, your personal information about something that's about to happen, so part of the verification process is actually to call you back. So it gives you a sense that your information is useful and might contribute to something. Where we have not succeeded, it's after the action has indeed threatened violence, or event has been prevented, to call people back. During the referendum, we had 20,000 SMSes, so I'm not sure how many we can call back, but then the reports of all of that, all the interventions might help, but the fact that there's an immediate acknowledgment as part of the corroboration, includes call you back, hopefully to get more details, might help.

Just one more question on the question of response, I think the start is to first of all talk about organizing capacity, and I think Chetan mentioned that point that you don't begin a response architecture if you don't have local capacity. So local capacity is to map what's available. When showed the map of capacities around Kenya, so there are some spots that you find were blank. So if you don't have capacity, how do you generate local capacity? Is there a civil society movement, is there a women's group, is there an organic civil society and their local structures with their capacity to respond? Then you train them in what is negotiation, consensus building, conflict resolution, but they will need to appreciate why they are part of a response spectrum and what their roles could be. The specific activity they embark upon is determined by the local context and the nature of the engagement between groups or from organizing a football match, because the local context shows that there's no space where people come together, from having an event at the local market to show that it's safe for a woman to come to the local market to exchange and barter and trade, from having a reconciliation with you, from having elders address joint gatherings, all of that would be extremely useful.

But the other thing it's about, but the local response is about coordination. Local coordination is missing. So in all the experiences that I've worked in and I've seen, we are very strong at the national level in generating the information, and most times, it's post facto, but we're very

weak in organizing response, which needs to happen at local level. So the local level coordination is part of the response infrastructure. So how we addressed it in Kenya was to have the peace monitor who convenes regular meetings using the preventive lens, so as elections are going to take place in Kenya next year, we've activated the SMS platform already so people can send SMS's now about local events, about potential threats, so people are using the preventive lens, not a crisis lens in responding, but we're testing the capacity of community groups, of the peace committees, of the peace monitors, to work together. We're encouraging them to come with joint proposals that allow them to respond to the presenting problems as we see them, so you are strengthening the response infrastructure so when the big issues happen next year, then they're better able to respond.

The adapting, we had a small amount of money available, and we decentralized the authority structure. We set up a joint secretariat where we got people from all the various participating institutions, there's a manager who has authority to approve funding, and we called ourselves a committee of principals, which meant people from the various institutions who met regularly for quality control to review what they did. So you have to have money available, that once a proposal comes in, money could be disbursed immediately, and in the context of Kenya, it was 48 hours maximum that allow them to do the intervention, to report on it, you track, you monitor, you go back again, you build capacity, but you do an assessment of the threats, so the response is not in vacuum. It begins with an assessment of the potential hotspots of what might happen, the potential response strategies, then you build local capacity, you help them to coordinate, you have money available that allows them to respond effectively. Thanks, Warren.

Hoge: Okay, William?

Tsuma: Just to add on something to Jos's question as well. I think one of the things that we were observing in practice as well, is that having these early warning structures in place is in itself a form of response, and we are seeing a situation where, especially within the context of hate speech and sociopolitical transitions around elections, we're seeing that the presence of these systems are acting like a deterrence to those people who are politicians who are used to making inflammatory statements, because when you have structures in place that can respond, and the politicians or those individuals who use inflammatory statements to incite the masses, know that they can easily, it's just, one is a message, you say, I was attending this meeting, and this is what was said, and we're now seeing situations where politicians are being held accountable, there's an aspect of naming and shaming, there's a question of credibility to these individuals as well.

So in itself, it's a part of a response architecture, but in addition to that, and I think which touches to what Ozonnia had mentioned earlier as we had begun, the beauty of embedding such processes in existing local structures is that you then have a group of credible individuals of good repute who can be called upon, and I witnessed that in the past three election cycles in Kenya. We've had a series of violence around them, and I've been lucky to be home during that time, but what is very interesting is to see individuals, be it religious leaders or really strong civil society representatives who are able to be called upon on short notice to engage in corridor discussions, midnight meetings with politicians, with conflicting communities, just to be able to quell a possible tension, and so this is something we're seeing over and over, and it's becoming a very interesting piece of response inasmuch as it's not documented, because some of these processes are happening in corridors that just cannot be recorded, but very interesting processes to see.

Hoge: Okay, for the first of the three final questions, Marianne Arnaud.

Marianne Arnaud: Thank you to all the panelists for a very interesting discussion. I'd be really interested to hear about specifically the recent crisis in Cote d'Ivoire and how technology was used, this technology, either in terms of inciting violence or monitoring crimes that were occurring, but very specifically to what you were mentioning in terms of the links, either with civil society, or with the ECOWAS early warning system, or with the UN, so how that translated with the response. And a little separate to the, during the crisis question is post-crisis. Can these technologies also translate to post-conflict accountability, and going backwards and looking at crimes that occur and helping to reconcile? Thank you.

Hoge: And Gay Rosenblum-Kumar?

Gay Rosenblau-Kumar: Thank you. Actually, Ozonnia and William just started to answer my question after I put this up, but perhaps I'll ask the other two panelists. I was very glad to hear the conversation shift from only a crisis lens to a preventive lens, and so my question is perhaps to interrogate the question, as Ozonnia said earlier, how do we move from communication point 2.0 to 3.0 in terms of long term conflict prevention, and in that, I'm thinking of, how do we really empower local actors to communicate with each other, collaborate and plan with each other, maybe without so much of an outside coordinating mechanism. Is it possible to have people in direct communication on these issues for the long term, and as William said, even having a response mechanism or setting up different kinds of situation centers and groups is a response in itself, but can we have something that, over the long term, people can plan and develop for longer term responses? Thank you.

Hoge: And finally, my colleague, Rachel Locke.

Rachel Locke: Thank you. So it's good that I'm speaking third now, because my first point has to do with longer term prevention, and my second has to do with accountability, so it's very convenient. I take very seriously the point about this not sort of driving us towards more reactive, or putting us back in a place where we are reacting rather than taking a more preventative posture. I also take very seriously the discussion about using this in conjunction with other peacebuilding tools that are out there that we have been using for a long time that we know work, and I am interested in hearing whether there would be options for using this together with some of our traditional peacebuilding tools such as conflict assessments where we look at grievances, where we look at sort of structural grievances that exist in society.

For example, grievances over land tenure, which are often triggered somehow, and that brings about an acute incident of violence, but we all know that these exist in society and have for a long time. We know that there are issues around that in Jos, we know that there are issues around cycles of drought in the Karamoja region of Northeast Uganda, so could this technology help to track grievances and move us towards more preventative longer term structural responses rather than acute incident-based kind of early warning? The second question has to do with accountability similar to what was mentioned earlier, but also in terms of immediate accountability on response, so if you're tracking incidents of violence, can you overlay that with tracking where security forces have responded, and can that be a way that citizens can hold their government more to account in sort of trying to always increase the accountability loop between citizens and their state? Thank you.

Hoge: Well, thank you. Since this will be the last we hear from the panel, I think I'll do it this way, just in order. Beth, if you would, any answer you have, go first, and then Nick second, and William, third, and then Ozonnia, who had the first word, shall have the last.

Liebert: So a lot of different questions. One note that I heard about this was, how can we take what we've seen in maybe past crises, learn from it, and apply it to new ones for better long term planning. To me, that sounds like, how can we have better tools to analyze the information that happened and know what to do next? I think that, in terms of maps, which is where my head is always at, I think there's a lot of opportunities to do this better. So for example, imagine you could look at incidences of violence around an election, and you could plot those alongside other pieces of data, such as hate speech or known gathering, and visually, you can see what was a predictive action, you might be able to draw some conclusions about when you could more, get involved sooner. So the analysis piece is something that, from our perspective, is not just useful for peace, but also for enterprises across the world. They all need to do analysis on a map, and that's why it's interesting to us, because, wow, this is really generally applicable tool for everybody.

The other piece I'd like to say is, like the example you saw in mapping in South Sudan, one of the reasons it succeeded was that we trained and found local leaders, not people from the outside, but people who actually had family still there and got them to lead the effort, so how we got involved as outsiders was to get them in the same room and train them, but once they had the training in their hands, it was up to them to own that effort, and I think that's a key piece in making things long term and sustainable.

Martin: So maybe starting with the issue of accountability, I think we're particularly excited at TechChange about the integration of radio and mobile, and we recently looked at an effort in Kandahar, Afghanistan, to bring local police chiefs to radio stations and have people call in questions, complaints, concerns, and I think for these longer arc, long term solutions, power of radio cannot be understated enough, and so many of these countries, radio is still king, so

I think we see the mobile phone as providing that two-way link with radio so that people can have somewhat of a feedback loop.

In terms of traditional peacebuilding, how do we map some traditional peacebuilding practices onto some of these new technologies? We're seeing some really neat things being done with data gathering, mobile phone surveys, and frontline SMS can certainly do surveys for projects, and even neater is that partnerships with telecom companies can oftentimes lead to free airtime for people that complete mobile surveys. So all kinds of interesting public/private partnerships centering around the mobile device, which I think help to really encourage these traditional peacebuilding practices, make them more efficient and effective, and then finally, to the question about, how do we get local people to sort of develop more long term strategies themselves, I think one of the things we're working hard on at TechChange is to really figure out this space of online learning and training. If we can bring people together from around the world or people from the same country together in an online platform, and they can take a course learning how these tools work, combining what they already know about their own context with tools that they may, in many cases, already be using, that there's real power in that, and so, again, even if they could take a course on a mobile phone in a country with low bandwidth, I think there's tremendous potential in using this technology to actually enable new forms of education and training beyond trying to fly people to other countries or fly trainers from countries to other countries, so definitely thinking outside the box, how do we use those technologies innovatively for those purposes.

Tsuma: And just to link onto the question about long term vs. short term engagements, I think what we are seeing over a period of time is a situation where there are conflicts that manifest into violence within a very short period of time, talking about operational prevention, and we see this around elections, issues that are triggered very fast, ethnic tensions, for example. Now you see a movement towards trying to address some of these issues from a preventive perspective, but what is also interesting to see is the long term investments that we're trying to talk about in the sense of having primary prevention as a long term goal such that the investments right now in countries that have got a history of violence is to then be guided by long term prevention investments, as compared to short term operational prevention measures, and this is now where the aspect of linking with traditional peacebuilding efforts, the usefulness of conflict analysis of the traditional conflict assessments comes into it, because if you want to understand the usefulness of engaging on the Kenyan context right now, you need to draw it back, that is 30, 40, 50 years back to understand how these processes have evolved, and conflict analysis, conflict assessments provide the basis upon which you can develop a foundation or a body of knowledge and experience that can provide for primary prevention. So our central argument is that these new modern processes complement already existing and support existing structures, not only to encourage short term intervention, but to invest for long term interventions.

Ojielo: Thank you. I think four quick highlights, as it were, first is that it can use this for anything. It depends on what your strategic imperative is, what Nick and Beth would tell us, they can construct any kinds of methodology subsets to the larger data set. The question you actually ask yourself is who is using it locally, and for what purpose? That, for me, is the real question, whether anything is possible. If you are a peace commission in a particular country, your strategic purpose is to find a space where people engage and interact and prevent violence and build consensus and opportunities for collaboration and joint work. Your space is not to take people to court. But if you're able to collect the information, can you share it with other state agencies? And if you share it, does it have any implication for how people engage with you, the trust and confidence you build, people say they can share information. There are a number of questions you need to ask as you design what can happen, but the simple answer to the question is anything is possible, but then a host of other questions you need to interrogate.

I think in terms of making it long term, my experience is that, local actors, first, don't have this ability, they don't have resources, and so sometimes, part of our value added is not in the knowledge. They know what to do. It's in the resources, it's in the opportunity for visibility, or it's in comparative experience that we share. But they are able to do their own assessments, we call it community scan, in some of the places I've worked, and they do their own community scan. On the basis of their community scan, they develop their own response strategies. So our value added has been to put additional resources on the table to respond, or to show them technology as enablers.

But with or without the technology, they will still respond, so technology becomes an enabler to help them to do this much better. Using this conflict assessment, like I said, anything is

possible. The key question, actually, is what is a data collection template? Is it the technology methodology? What do you want to capture? Because based on what you want to capture, both Beth and Nick will tell you how to design it to give you the kinds of results that you want. Thank you.

Hoge:

I've learned a lot here. I just want to report to you in thirty seconds an experience that occurred just before I came up here. I got a phone call from my son, who is in his 20s, and he is the lead singer and guitarist for a rock group downtown, and he was calling to tell me how overwhelmed he and his mates were by the fact that they got a radio play, and because of that one single radio play, they were so overwhelmed by Facebook messages and Twitter messages today, that they basically had to cut their machine off so they could go back and complete it later on, so as I was listening to all that, I said, well that's funny, I'm here educating myself on something called crowdsourcing, and my son, in his 20s, said, "Dad, what's that?" This is a great gift you gave this parent today!

Anyway, thank you, Beth, Nick, William, and Ozonnia for being a highly educated, articulate, and giving panel. Thank you all for your attendance, and particularly for your wonderful questions.