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Shana ([00:08](#)):

Hey, I'm Shana.

Paige ([00:09](#)):

And I'm Paige.

Shana ([00:10](#)):

And this is BCC.

Paige ([00:11](#)):

Where we copy you in.

Shana ([00:13](#)):

On internet stories

Paige ([00:14](#)):

From around the world.

Remy Hellstern ([00:23](#)):

Hello everyone, it's Remi Helston with this episode of BCC. Some of you may have heard alarming statistics about the frequency of natural disasters or even experienced them yourselves. Experts estimate that globally the number of environmental disasters has increased by a factor of fivefold over the past 50 years. When natural disasters happen, having access to internet phone lines and other means of communication becomes vital. No one knows this better than our guests. Today we're joined by NetHope and the Ghana ISOC Chapter to discuss their innovative solution to tackle these challenges. NetHope is a global consortium of nearly 60 nonprofit organizations that specializes in improving IT connectivity among humanitarian organizations in countries and areas affected by disaster. Recently, they've partnered with the Ghana ISOC Chapter to implement a disaster preparedness training program for participants from the private and public sector. That's enough of me. Let's pass it on to our guests who are going to share a little bit more about themselves and their projects. Alison, would you mind getting us started and introducing yourself?

Alison Krupnick ([01:31](#)):

Sure. My name is Alison Krupnick and I am the Director of Communications at NetHope. I'm pretty new to the organization, so I'm really here to listen and learn about this collaboration. Thank you.

Stephanie Siy ([01:42](#)):

Hi everyone. This is Stephanie Siy, Deputy Director of Field and Impact Program at NetHope. Been with the organization I think going on five years now. Just really excited to talk about our experience and our collaboration with ISOC Ghana Chapter since this is such an important topic for NetHope and in a big program area at NetHope. Over to you Dag.

Dagbjartur Brynjarsson ([02:09](#)):

Yeah, thank you so much. My name is Dagbjartur Brynjarsson, it's a tongue break, but please call me Dag. I am a Senior Manager for Emergency Preparedness and Response here at NetHope. I've been with NetHope now for about seven years and I talked to you from Reykjavik Iceland. Yeah, emergency preparedness or disaster preparedness has been, as Stephanie mentioned, big, big part of what NetHope does through the years and we are very proud of what we've done throughout the years. It's very a hot topic and very welcoming to [inaudible 00:02:44]. Thank you.

Maud Ashili Ashong Elliot ([02:45](#)):

Hi everyone. My name is Maud Ashili Ashong Elliot. Currently I'm the Vice President of ISO Ghana Chapter and was the coordinator for the project which we had in Ghana. I'm speaking from Ghana and was for us, it was a great opportunity to bring this home and trying to represent Africa in general to form a formidable team that will be in charge of emergency telecommunication disaster group. Thank you very much. Over to you Francis.

Francis Acquah Amaning ([03:22](#)):

Thank you Maud. Hi everyone. My name is Francis Acquah Amaning and I'm currently the President for [inaudible 00:03:30] Chapter. I was a team lead for the ISOC Chapter Network Disaster Emergency COVID training and it was a wonderful program and I loved it. Every bit of it. Thank you.

Remy Hellstern ([03:45](#)):

Wonderful. Thank you so much. Why don't we get started? We could do maybe Dag, you can go first and then pass it over to Francis who did some coordination on their side. Do you mind discussing what goes into this disaster preparedness training program and what you do when you go on the ground and connect with some of these groups?

Dagbjartur Brynjarsson ([04:04](#)):

Yeah, certainly. First of all, doing a program like this takes a lot of preparation, goes a lot of work in making everything ready beforehand so that everything goes as smooth as possible when you were there. Definitely. This program was, is basically... first of all, this program is run now in four countries. Ghana being the pilot country, the first country that we run this to. The program itself goes into basically fourfold, it's pre positioning of equipment with emergency telecommunications equipment that we reposition in each country. We do a emergency telecommunications training for up to a hundred people in every country. Part of that is training up trainers, local trainers that can continue to do this training afterwards so that this becomes more sustainable than just a two year program provided at one time. The third one is a workshop. We held a workshop on emergency telecommunications as well where we had people from private sector, public sector and the humanitarian sector come together.

([05:21](#)):

Everybody came together and discussed their view on emergency telecommunications, how we could do better, how we do things today and the way forward to collaborate more and work more together. And the last part of that was then the emergency telecommunications working group within Ghana and that's where we open up a platform for people to reach out to one another in the case of they're either preparing for an emergency or responding to one.

Remy Hellstern ([05:57](#)):

Francis, do you want to talk a little bit about how this collaboration has worked within Ghana and how you started getting in touch with NetHope?

Maud Ashili Ashong Elliot ([06:07](#)):

Okay, if I could come in, I think it started through, I spoke foundation and they linked us up with NetHope and we took it upon ourselves to make it happen. And we had as Dag mentioned, we had several meetings, weekly updates on what everyone is doing both from NetHope side and that of ISOC Ghana Chapter in terms of preparedness toward the projects. All these were done and knowing that we are the first country going to be piloted, we had to make sure it works so that the founders of the project would also appreciate that whatever thing they are putting into it is not going to waste, but it's going to be a real life experience for those of us here in Africa. And also to make sure that it also continues for other people. It wasn't really about us. Wanted to make sure that the first people, whenever that works, it would be easier for the rest to also continue. Thank you.

Remy Hellstern ([07:29](#)):

Yeah, absolutely. And so maybe we can break down a little bit what exactly these training looks like on the ground when you go in. Can you walk us through maybe the average day or the length of the training and what exactly you are getting into?

Dagbjartur Brynjarsson ([07:46](#)):

Yeah, certainly. First of all, we held four training sessions. Four packages so to speak, of the trainings. The first training was a little bit more focused on training trainers as well. Each training session is a three day training where we start first about first four hours of the day or actually five hours of the day. We start in a classroom setting everybody together. We start to get to know one another and then we start to talk about the humanitarian sector, what happens in a disaster, who are the main players, who's responsible for what and things like that. And we'll be talking about how to get connectivity because many times after an emergency or disaster, there's nothing, there's no infrastructure working, the fiber is down, the 4G or LT networks are down. You don't have any terrestrial networks so to speak.

([08:51](#)):

We need to figure out how to get connected, how to get the word out that something has happened and that what kind of help or support you need. And we start basically from the sat phone, then we go on and through the evolution of the disaster as it evolves more and more we'll get stronger and better connectivity. We start with handheld devices, then we go to VSAT and so on. We talk about that. Then we go and have an introduction to VSAT or basically connectivity through a satellite, which VSAT is, it's similar to the VSAT television radio that you get, but here's only data going back and forth. And in this case we start with the introduction on that, what that means and how that works. And then we break the whole group into five smaller groups and we start the more hands-on practical training.

([09:59](#)):

A lot of what we do and a lot of emergency telecommunications is actually has to do with technical equipment and it's not the best way of learning on that is not on a slideshow is basically having the equipment in your hands fiddling with it and see how it works and configuring it and working on it. That's the best way. We break everybody up in these five groups and these five groups go to five modules, start with module one and then go to module two and so on so basically do a round robin. The five modules that we're doing is the first one is what we call mobile set communications and tabling. We

are talking about Sat phones, how to use a Sat phone. Everybody gets to do a call in a Sat phone to test it to see how it works. And we talk about Beacon, which is a personal connectivity device basically.

[\(10:57\)](#):

Something that you can put in your backpack and still get connectivity, still limited in bandwidth but you were able to get emails out and things like that. And then we talk about, actually we blend into that as well, LT and 3G, 4G connectivity and then what we have to think about when you're providing connectivity through 3G connections so to speak. And we also talk about cabling, the importance of due proper cabling. What we've seen our experience throughout the years is one of the two most biggest reasons for networks failing is that cabling isn't done correctly. If you're putting up a cable in the shelter and people can reach the cable, either hang on it, basically pull it or use it as a cloth hangar for drying their clothes and things like that. You need to do proper cabling and do it correctly. And so we talk a little bit about that.

[\(12:02\)](#):

Then the next module will be the VSAT module and we've started to get some introduction to it. Now people get a satellite dish and they have to put it together. And they have to align the satellite dish towards the satellite so that they'll get a good connection and then they'll have to connect that through cables to a modem so that they can plug in their computer and actually get some data. They go through all of that and they pick us up under of course with trainers there helping them out with that. The next module would be what we call the 0.2 point module, which is unlicensed microwave radios, basically sending data from one point to another through air and still unlicensed on the unlicensed and basically on Wi-Fi bank, but we're in a very narrow pulse so that it hits and is able to stretch much further.

[\(13:08\)](#):

The fourth one is then networking. Where we talk about the networking equipment itself. When you've got the connectivity, how do you provide a secure network? It's not just enough to provide Wi-Fi today. Today the Wi-Fi has to be secure both for those that are responding but also for the public that are using the Wi-Fi. This has to be secure and this is a very, very big part of this and as well, how do you distribute the Wi-Fi within a site, within a shelter or wherever you're putting up your network. And the fifth and last module will be the sustainable power module. As I mentioned earlier, there are two main things for networks failing, it's cabling and the second one is power. And after a disaster, all power distribution networks will have problems. The key of keeping the network up and running is to do it by having sustainable power. And that's one of our learning points. We teach basically how to put together a solar system. We also talk about dangers and safety aspects of electricity because electricity is dangerous.

[\(14:27\)](#):

And we also talk about, a little bit about generators. We mainly focusing on how to build a solar power system so that you can provide the network. These are the five modules and at the end of the day one, they'll start that. On day two will go through these modules and the first three hours of the last day, the third day will be module, the last module. After that people come together, we talk about the importance of documenting what we're doing. We talk a little bit about working with media and things like that. We talk about personal preparedness, how can you prepare yourself so that you can deploy into a disaster affected area. And then we end the day with a tabletop exercise where we put together five different scenarios of disasters within Ghana or possible disasters within Ghana. And we gave them a scenario and this is what's happening, these are the locations where you need to provide connectivity and how would you design that, how would you do that?

[\(15:32\)](#):

And afterwards these five groups had to present for the rest of the team how they actually did it, how they got the back log connection and how they distribute the network and so on. That's basically the three day training as such. As I mentioned earlier, the first one was a little bit more into training of trainers and then the next ones were basically for public so to speak. And we were very, very surprised to see interest, how huge the interest was for this training. To begin with, we had planned to do three training sessions. For up to 75 people at early, at an early stage we saw that we had to add another training, the fourth training just due to demand. And to be honest, for the hundred seats that were available, we got over 200 applications. It was very, very positive surprise to see how much interest there really, really was for this. Yeah, and of course Maud and Francis would be better to say the outcome of it, but from our side we are very, very satisfied. We think it went very, very well.

Remy Hellstern ([16:58](#)):

That's an amazing turnout. Maud, Francis, do you want to touch a little bit on your experience working with and why you think that there is such a high interest within this that there were 200 applications for the 100 seats and how your chapter situates itself within this training?

Francis Acquah Amaning ([17:17](#)):

Okay. Yeah, thank you. Let me come in here. I think as Dag rightly mentioned it was such a great surprise to work because when we started optimization, from what Maud said, it started off with a meeting with ISOC foundation and we took it from there from a week meeting, which became days of meeting. It became hours of conversation, it got closer to the day and [inaudible 00:17:45] made some of the key stakeholders like the regulator of the country, they got very interested in the project and they even sent even probably, they even the less, even after we have even received numbers above 100 or 200. We got even more that hopes and some key, our national disaster management organization also had much interest in the training. It's like all the key stakeholders in the country, the VFP, UN were very interested in the program, support the important stakeholders in the country, positive the idea.

([18:19](#)):

It became even a challenge on how to select who best fit for the program because everyone wants to come in being it's technical community, academia, the private public government all in front of a training. And we had limited budget and seats so it was quite difficult. And one idea that I'd like to match was the training trainer, but the first course they trained the first 25 members who were willing to train this and thankfully they were able to [inaudible 00:18:55]. Because the first, the second, third and fourth week was more, that's when the two team had left the country. The ISOC Ghana Chapter had to take over. Those had been trained during the first week and they did wonderful. They did so wonderful. They were able to teach so well and it was more evolving and at times because it is us, they understand much of our language, we're able to read more of the local talent, they're able to absorb it isolated very well. It was a wonderful program, a perfect timing and very good.

Remy Hellstern ([19:21](#)):

I think we're having...

Maud Ashili Ashong Elliot ([19:21](#)):

I'm sure [inaudible 00:19:30], yes.

Remy Hellstern ([19:31](#)):

Maud would you like to maybe pick up, is there anything you want to build off of while we wait for him to come back?

Maud Ashili Ashong Elliot ([19:38](#)):

I think he has said it and one thing we also did was to really go around and talk about the project. You see, when you want anyone to be interested in what you are doing, you need to really explain it properly and not just, this wasn't about social media. This is about going to their offices and personally talking to the heads of these stakeholders and let's explain to them and let them buy into it. Imagine we haven't done it before yet we had faith that whatever training that was we are going to get would be something that would support or help our country and our sub region in general. I think that was a major thing we had to do cope, I mean beyond, go beyond our offices and our tables and go find these people and explain to them what the project was about. That's what we did. Thank you.

Remy Hellstern ([20:42](#)):

Thank you. That's great. Francis, I think we have you back and is there anything else you wanted to add? I was really appreciating hearing a bit more about your perspective.

Francis Acquah Amaning ([20:53](#)):

Sorry about my tele connectivity.

Remy Hellstern ([20:56](#)):

Oh it's okay.

Francis Acquah Amaning ([20:57](#)):

Yeah, that was okay. Probably as I'm saying here, I was saying what else? And then with is we wanted to be at another event so that we can keep up the pace. Because now the entrance is already there so now and the working group has been established. Now we need more aligned collaboration between ISOC and the real stakeholders. The trainings begins now we already have a hundred people have been trained to step in for any second disaster. We are hoping to train more by each year. Once we have more we can actually spread across the country and step in in case there's any form of disaster.

Remy Hellstern ([21:40](#)):

Absolutely. And Stephanie, I'm a bit curious to hear from your perspective, because I imagine as a director of a lot of these operations you get a bit of a wider, larger picture. Are some of these ideas that we've been talking about specifically with the collaboration with the Ghana ISOC Chapter ringing true for some of the other collaborations that NetHope has when looking at these trainings?

Stephanie Siy ([22:03](#)):

I think that we've been very fortunate with our collaboration with the ISOC Ghana Chapter. Just thinking about NetHope as a member organization connecting with another well network organization in Ghana. While through Dag's work and the team's work, we've developed our training curriculum, training modules. It was so helpful to have the perspective of ISOC Ghana on the ground to make sure that some of the examples, the work, the training that we're doing is fit for purpose and actually is meeting the needs on the ground. But also just wanted to add to what Francis or maybe pick up from what Francis was mentioning earlier, is that for us it's such a good, yes it's great to have an overwhelming response

and interest from individuals, but as you look at where these individuals are coming from, what sectors, I think from a perspective of NetHope and from a perspective of emergency response coordination, that for us is a big success criteria to have various stakeholders participating.

(23:20):

And not just that, but when you look at this seniority, for lack of a better term, seniority of the people who signed up, we saw everybody from a CEO, like a C-suite level to a Director, to a Coordinator to students. I think it's just wonderful to see and what we hope through the working group, through future trainings in Ghana, that it maybe solidifies or build, begin to build trust among these individuals that really helps speed up response time when a disaster occurs. If there's a way that this community, through this community that that's been launched or kicked off, maybe they're by virtue of everybody knowing everybody, it's quicker. You develop a shorthand, you develop friendships that when a disaster happens, it's quicker to coordinate among various stakeholders. Also, great to hear that there is a regulator or a government level support. Because more often than not they really are the coordinating body if you will nationally for any emergencies so it's just great to see their participation and hoping that the momentum continues in future years.

Remy Hellstern (24:45):

Yeah, absolutely. Oh Francis, would you like to go ahead.

Francis Acquah Amaning (24:50):

I just wondered what has made more interesting for Chapter is this year, just a few weeks ago, we inducted new executive for the Chapter. And interestingly we've created a new committee for disaster emergency so now we have a committee chair who in charge of disaster. That means it has come to stay so for ages from now every year we're going to have somebody who is so in charge of disaster. That means it's going to be sustainable. The person be in charge of the training, will be in charge of make sure the collaboration with the government and other stakeholders to make sure it is sustainable, the country. That's one step as going to ahead to make it more sustainable in the country.

Remy Hellstern (25:28):

That's really wonderful to hear. And I think as we're starting to wrap up, one of the things that I wanted to touch on is maybe a moment that makes you proud from this collaboration. When we look to the future of this work, areas that you think can be improved and areas that you're hopeful with, I always like to wrap these conversations up on a positive note as we think of the future because so much of this is community building when we think about resiliency. Which is a lot of what each of you have touched on already. We can, if you want to go in the same order as the introductions, it can be a moment you were most proud of or something you look forward to in the future as we talk about resiliency of the ICT sector as well as internet generally as a response to disaster preparedness. Allison, would you mind starting us off?

Alison Krupnick (26:21):

Sure. Again, as somebody who's new to this work, I'm excited to hear this. I have to say on a personal note that Ghana has come to the forefront for me in the last two weeks. I have had connections with several different people who are either from Ghana or have just come back from Ghana and I feel something is brewing for me. I'm very excited to participate in this conversation and then to learn more from my colleagues about what's next.

Stephanie Siy ([26:46](#)):

I think for me, again, thinking about the momentum that we've built, we've built early this year, but also hoping maybe extending the learnings into other IT communities outside of Accra or in other parts of Ghana. Just a vision or a dream that we spread the knowledge and build the capacity of others and also seeing this community grow or be more tightly connected in the future. And then, yeah, I mean I think as far as resilience, I think that's it, really extending the knowledge, extending building the capacity outside of the capital would be great to see in the future.

Dagbjartur Brynjarsson ([27:38](#)):

Yeah, thank you so much. First of all, one of the probably best surprises of all from this program is what Francis just said, that they've actually set up a disaster chair within the ISOC Ghana Chapter. Fantastic. This is definitely a way to make the sustainable. One thing that we always say is yes, we do provide and we run disaster preparedness programs, but disaster preparedness cannot in its sense be a program because a program has a defined end. Yes, we are funded to do so and so much, but disaster preparedness is continuous. It has to continue every time, yeah, all the time. You cannot just stop prepare. This was a fantastic news and one of the biggest positive surprises that I've seen in this program.

([28:42](#)):

Another thing also being how the interest for these kind of programs, the interest for emergency telecommunications is huge. And not only within the humanitarian sector, but also within the tech companies, the local tech companies, within the government. And to see all of that interest, I know that there's been an interest for this for many, many, many years and we've been doing this for many years and I'm always just as surprised to see how much interest there is. And that tells us that there's a need for this and we need to continue to do this. And that's a very, very positive thing.

Maud Ashili Ashong Elliot ([29:24](#)):

Okay. For me when we talk about disaster management, we realize that any time a disaster occurs, most people would want to make sure those who are affected have water, food, shelter. But this drew our attention to the fact that having internet access, having the opportunity to communicate with your family outside where you are, has become a lifelong asset. For us or for me, the joy of looking at this gap and this gap being met is a great thing for me and for our leaders who also have bought into it. And are also ready to make sure that that is also sustained. Thank you.

Francis Acquah Amaning ([30:19](#)):

Okay, thank you. One thing that make me proud is now to establish a working group, which is a dream come true. And we have hundred certified engineers who are trained prepared to step in. In the past as my colleague Maud mentioned when there is a disaster, we normally [inaudible 00:30:39] shelter, probably healthcare. Recently there was a flood that was flooded in Ghana by a dam overflow. Again, we had to cut down electricity because the cables were in the water. That is when sustainable energy comes in so that means the training came in handy. That means we have engineers who have been trained to step in when there's a disaster. If there not a traditional electricity can go, sustainable energy can come in handy so we are very happy.

([31:10](#)):

And to add to Stephanie, Stephanie also spoke about taking it to different part of the country. And it is interesting to note again that the first time in the history of Chapters in social society, Ghana now has



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leaders across the country. Ghana, we have history regions and then we have regional reps, [inaudible 00:31:31] the regions. It is easy to take any project because you already have leaders who are related the Chapters in every region across the country. It is done to make it much easier to take any little training or any advocacy day. We are happy that it came together and others are open for more collaborations and opportunity. Thank you.

Remy Hellstern ([31:53](#)):

Wonderful. Thank you so much for joining us everyone. This was such an insightful conversation.

Speaker 9 ([31:59](#)):

BCC is supported by the Internet Society Foundation.