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Plenary 3: Policy and Regulatory Support
(rough transcript)

>> MODERATOR: So for our short plenary, I would like to call on Professor and executive Chair in the institute of management. And then I would like to call on Mr. Veari Iru, manager of projects at the National Informational and Communication Authority in Papua New Guinea. And then Ms. Renuka Rajaratnam, public policy manager at Access Partnership, and lastly, Dr. Carlos Rey-Moreno, policy and regulation coordinator at the Association for Progressive Communication. So this third plenary the topic is policy and regulatory support.

For community networks to succeed as alternative means for connecting the unconnected, policy and regulatory support must be in place. This session will discuss community network policies and regulatory support licensing, infrastructure, spectrum allocation, the use of universal service fund and enabling regulatory environment. So the nod rater for the plenary will be Mr. Parvez Iftikhar, an ICT consultant. Thank you.

>> PARVEZ IFTIKHAR: Good afternoon, everyone. I know that post lunch session is not the easiest. I see some people taking a siesta somewhere. I have a distinguished panel of experts sitting here and I'm sure we will end up learning a few things from them. So in order to, not to fall asleep let me start with a story.

I was in USF, I see somebody yawning. When you yawn, you have to ask a question. It's you. Just kidding. Please don't mind. Anyway, when I was in USFM, it was the third or fourth, it was always the last mile. It turned out that there was more bread. For me it was shocking that here we are giving you the money to go somewhere and launch services, services that you launch in any case, and you are not, you are refusing that money. So we held a lot of detailed discussions with the operators and asking them why aren't you coming, why aren't you bidding, and it turned out the main problem was not the last money but the back haul. They said it's because of the back haul. Last money is no problem, but we have to go 300-kilometers, we have to make a string of micro grid towers and that is something which we do not want to do.

It's too costly to maintain, to take care. Anyway, so that is when we started in Pakistan, we started laying optic fiber cables in the back haul. That was 2008. So as long as, as far back as 2008, the back haul and cyber cables was realized. That

is why today in the morning sessions, I was listening and wondering how the community networks survive and how do they operate when the most expensive part is the back haul.

There are several answers to that. We come to that in a short while. We will in the meanwhile start with our panelists, I will start with, okay, let me start from the other end, Ms. Rekha Jain. She is working with, as I understand, with the large telecom companies, and not only those, but also those who are involved in the rural networks, not necessarily community networks, and they are also the players who provide community networks.

So it's not just only the communities who do it, but also other peers. So I would like to, please, would you like to share your experiences and your knowledge about that?

>> REKHA JAIN: Sure, definitely, thank you.

We don't just work with telecom operators, I know there's a bit of them in this room, we work with communication providers and big technology firms providing connectivity solutions to countries and developing markets and throughout the world, and a lot of their focus is now on getting the unconnected connected also because this is a key market for them, and this is the last billion users they are targeting. So for them, a lot of the issues that community networks are facing, the last mile solutions are facing the same things, they want to get access to build networks they want to be able to partner, enter the market easily and in a cost effective manner.

We are looking for smaller players, community networks, pretty much for anyone wanting to provide last mile solutions.

>> PARVEZ IFTIKHAR: So the problems are the same, the challenges are the same whether it is a community or a large operator. Professor, you have been involved in the community network and you have evaluated one network years ago. Things have changed but not so much that your experiences don't count anymore. Please share your views on this.

>> To connect community networks even though when we talk of community networks we talk of community enabled community networks. What our evaluation showed us was that the community network could not get access to Internet, but through the intranet, communities were connected and we saw children talking, what did you learn in geography class, this is what we learned, things like.

That doesn't mean that is good enough because without Internet I don't think any of the citizens of the country can progress in today's time. I would like to focus on the last mile Secretariat customer because that was a few years back and the environment has changed. In India there is a lot of push for the 43,000 which are not yet covered by a tower as identified by the

department of telecom.

So the Prime Minister has just said do whatever it takes to the DOT and get these regions covered even if we have to get them funding and through competitive viability gap funding those regions are expected to be covered. I'm saying expected because the Government functioning in its own way is going to take some time.

So my concern and the point Parvez made, only 50% are connected by fiber. Forget last mile, it is also expensive for those in urban areas. There are communities, slum communities, et cetera, who find it expensive then to get connected.

>> Not only expensive but the capacity to carry data is limited.

>> REKHA JAIN: So our prime minister said he was not doing the connectivity fast enough. This is what the newspaper said, they might be dramatizing U.S. administrative fired or something, and it had nothing to do with any person or individual. I think our structures and processes within the Government do not reflect members in a management orientation. The U.S. Advisory Board should have community networks, rural departments, the national health, the national rural health mission on its board, but it doesn't, and it only looks at the infrastructure from the DOTs, the department of telecom's perspective.

I think that the customer orientation for the rural connectivity, that they at the time drive the deployment of the U.S. funds. There are many other problems as well, but your choice of technology could help and one of their prime targets and that's what could make it sustainable rather than a bureaucrat saying this is the way we have though cover villages. Thank you.

>> PARVEZ IFTIKHAR: What you are saying is it there should be more stakeholders on the board?

>> REKHA JAIN: We have in India one more example of how we implemented the unique identities in India, UAIDI, and who was heading it was not a Government person because I think somebody recognized that it's the private sector's mindset and efficiency that needs to come here. So that was implemented in a PPP mode, and the person who headed it was a very eminent ICT person. So I think such kind of models which have shown results on the ground for managing these funds need also to be looked at. Thank you.

>> PARVEZ IFTIKHAR: I'm glad to know that because we have similar experience. And USF in Pakistan is nod headed by bureaucrat. I came from private sector. I was head of telecom Siemens in Pakistan.

We don't talk to each other a lot, Pakistan and India. Everybody knows that, but we do similar things. So they have similarities, but a lot of USFs, incidentally, reside in the

regulator's office. According to one survey in telecom, Ron is saying no, about 60% of USFs in the world are somehow under the regulator. But regulator does not enjoy good reputation as far as small networks are concerned because they want their regulations to be complied with, and they don't want people operating telecommunication networks even within communities without getting a license from them.

So we have a regulator sitting here from PNG. What is your take on this?

>> VEARI IRU: I'm from the ICT regulating company in Papua New Guinea. I would agree with you.

>> PARVEZ IFTIKHAR: Thank you.

>> VEARI IRU: In the long past we have had regulations that are not conducive, not supportive to what communities and folks that want to do things differently. So for us, even though we have had interests from individuals, communities, NGOs who would want to do, you know, community network type, you know, initiatives, it was pretty hard.

And so for us, we would like to see a change in this trend. So going forward we were talking to ISOC with a view to establishing a pilot project in the country. The promising thing is for us our legislation even though we have no licenses per se to per se a community to stop a community network, the legislation allows the regulator to make what we call mandatory instruments.

Mandatory instruments can be things like new licenses, new guidelines, so for us with this pilot project, we are looking to see what sort of things that we could do that would be, that would support and encourage the growth of community networks.

>> PARVEZ IFTIKHAR: So this is not a USO project, it's not a purely community owned project.

>> VEARI IRU: It will be started with someone from the community. What we did was how we identified this person or individual is that he has been doing work in his own village. He is, you know, providing technical services. He is developing his own apps in the village. And a local ISP went into his village, established the, put a VSAT there and they asked him to set up his own Internet cafe.

So that's how we got to know him. So through that we are trying to pilot this concept with this particular individual.

>> PARVEZ IFTIKHAR: But just to clarify, it is funded by US. So somehow the discussion comes back to US. So Carlos and myself were having a discussion over dinner, and I don't know whether it was a result of the red wine or what, but we had quite an animated discussion. He was not exactly in favor of USFs, and I, for one, as Ron calls me USF evangelist. So look at this, everybody talking about community networks comes back to USF.

Please.

>> CARLOS REY-MORENO: Thank you very much. I think we need to think about it not as a universal access problem, I think it's a rural development problem. I think Osama put it very clearly. It's opportunities, of income, in lack of reliability in the rural areas. The way it is design the in many countries can only be used who contribute to the fund. Those who contribute to the fund, thank you for putting it that way, don't have any interest whatsoever on going to rural areas.

There are evidence all around the world that they don't want to go. There is evidence that they, people that are in unconnected areas won't be connected by the current players. There is evidence that the thing that many of these operators want to do is invest in 5G. That is going to be only used in urban, dense, rich areas. So is the universal service and access fund that is designed to be used by those who don't want to serve rural access the way of doing this, but not in the way that it's designed.

And there is something that is about recommending it that members within communities, local entrepreneurs, small operators, whatever, could do for the communities in terms of generating an economy, generating socioeconomic impact inside the communities, not having what many people refer to as the skin in the game.

How many of these funds have been used to provide the optics that operators that don't want to go there, they are forced to go through universal service obligations. They go there, they take the box, one, two, three years down the line, that connectivity is gone. You are not building any resilience. You are not building any capacities in the community.

The only thing is that you are getting funds from the Government, and extracting revenue and extracting skills that could be built into the community to make it more resilient, to create economic opportunities to create skills. I know the question before about the SOC. How do you make a community be more receiving as to SOCs, building capacity? This network is not only here in the region, in other places of the world what we are building is agency, empowerment over things that go beyond connectivity and go beyond the lessons learned by letting communities doing it by themselves create effects in many other activities and social activities in the communities.

So I think, again, it's not the universal service fund, many of the universal service access funds are designed because they are not meeting the purpose for which they are designed and they are a waste of resources in many cases.

>> PARVEZ IFTIKHAR: I am holding myself back, of course, I would like to respond to that, but there is a question. Okay.

>> ROHAN SAMARAJIVA: I'm sorry, we must disagree on this.

The policies were based on obligations and compelling people to go to areas they didn't want to go. India until is the 89 they will obligations. Many country, South Africa had. Universe pal service funds don't compel people to go anywhere. That's the confusion. That's the second generation. In the second generation, Universal Service Funds you don't compete, as Parvez said, you auction, you ask people whether they want to go and you give them the money. So it's a different -- I would critique of Universal Service Funds. That is because funds don't know how to get money out. They have seen the problems in getting money out. You can have different issues.

India and the USO fund, they had conditions that basically said only the Government or incumbent can get the money, nobody else can. I can explain what that was. It was a very nice, but the end result only they could get.

Then in around 2008, 2007, it was broadened out, and Universal Service Fund options, more people bid and the amount that they bid was -- and now people are talking about opening the old, making universal funds available for others. I think Parvez led through the debate of should it be given for broadband. We can criticize it on basis of what is actually going on rather than the argument that somebody is compelling somebody to go into a remote area. They weren't being compelled under USF. That's 20 years ago.

>> CARLOS REY-MORENO: I don't think we are disagreeing. I think we are saying the same. What you just said is that they need to continue evolving and some of the actor that's could get access to the funds so actors that have interest in getting those unconnected, and I don't think that's the case in many countries, not only because of the way that the fund is designed. It's also because of the licensing framework and other issues within the enabling environment that I would like to talk about in this session is not only about the fund. There are other issues that are impeding other actors with access to the fund and what I am asking is I'm not against, I'm saying it's pay design.

>> PARVEZ IFTIKHAR: You want to say something.

>> RENUKA RAJARATNAM: Are USF useful and are USF funds useful? I'm not going to talk about funds because that's opening Pandora's box. You see a form of this in more developed markets like Singapore where you have planned for service obligations for operators, and this just means that an operator with the license to operate with the right spectrum has to provide connectivity under an X person area. This can work out if the supplementary policies of the telecommunications business act, all of this account or an ecosystem of players to exist within the framework. So you are not disallowing from anyone participating and you are not forcing anyone from participating at the same time.

For instance, that's a new kind of at base teleco that has come up in Singapore and they are focused on providing high data rates and high data bandwidth. They are not focused on doing what traditional telecos do. They lease the networks because they can't fulfill the obligations.These service obligations incentivizes them with the framework of allowing an ecosystem of players to thrive, to partner with people who can fill the gap in the countries.

So I think there is some sort of use in service obligations, and I think that that needs to be more flexible and progressive thinking about how you can leverage it and thinking about the ecosystem of your policy and regulatory frameworks at the end of the day, because that will make or break the success of the single policy.

>> REKHA JAIN: There are three parts, one is the front facing the consumer, the first access part. Then there is the middle mile and then the back haul. And under many of the Developing Countries the middle mile and back haul are problems even if we manage the front end access through USF or funding from agencies to provide connectivity.

So I would like to share that it's not only the act that you are using a particular fund, but also the act that how do you design the disbursement of the fund. We had the USF and we can discuss with Rohan how successful the second phase was. I have strong reservations about that. So now they converted it to into it let's build an optical fiber network which is the middle mile for the connectivity.

The middle mile connectivity, which is what you were talking about, the way it is designed it is given out to their PSUs. And with the issues that any PSU has, Public Sector Unit has in any developing country to work within the Government and framework these targets since 2012. We were supposed to have access to 250,000 such units. We are still lagging behind. Although the website keeps saying 100,000, but we have gone in the field and in Kufarak is the Minister state and which is supposed to be progressive, what we found is not a single site is this USF funded net was working, but the state government's own initiative of providing vintage level of connectivity, they were operational everywhere.

Why was part of it not working? Because the router was missing or the last hundred meters are missing or some such operational issue, you know. So I think how you design it is very important, and that was the point that was made earlier as well and how do you broaden the PPP and how do you structure the PPP. Thank you.

>> PARVEZ IFTIKHAR: It is better to give it to private companies, traditional companies rather than to a PSU, am I

right? Is that what you advocate?

>> REKHA JAIN: Not entirely. I think there is a role for both sides to play definitely, and this goes back to being flexible, looking at different kinds of business models and connectivity models that you can bring to the country and what works best given your country's competitive landscape, given your countries geographical characteristics and even the way the Government works. In India, it's humongous bureaucracy and you have many state level disparities and differences. That's not the same for a country like Singapore. It's very different. So it's easy to have a top down approach. Whereas a country like India, you have to take a different approach to that, so I'm not saying private.

>> PARVEZ IFTIKHAR: Rekha is being very careful. What do you see about this debate of USFs not being spent properly or not being designed properly, and that is the reason why the community networks don't really thrive in many countries?

>> VEARI IRU: We have been in the spotlight heavily criticized for exactly what you have mentioned, and we have been criticized for everyone. I think it should be designed in such a way that it should not be as bureaucratic, but to support, you know, growth in the local market, the local sector.

>> PARVEZ IFTIKHAR: I can see you are squirming in your seat. Please, put your mic on. I don't even have to ask a question.

>> CARLOS REY-MORENO: We are trying to solve the same problem. It's not one or the other, it is what would work best in a given particular circumstance, and actually he was saying in his interaction as well that they were struggling with the current licensing framework to allow other players that would like to do good things do good things because the licensing framework is not in place. What Nepal has been doing, Nepal has a rural ISP license that they pay one dollar for the license.

How much does it cost a license in your country? What are the requirements that people who want to provide Internet services and can deploy Internet infrastructure have to comply with? Are those requirements requirements that can be met by rural communities? Or are we screening them de-facto?

So I think it's an integral person because there is only one type of player that at the moment can play in this playground. What we are advocating for is let's bring other actors to the table. There is enough evidence that there are enough people that want to do things differently that are able to solve a problem that other players are not able to solve and yet we are preventing them to solve the problem.

>> PARVEZ IFTIKHAR: This is what I said in the first question to you. Regulators are sometimes trying to stop small

communities rather than encouraging, as you say. I agree with you, not just one, but also making the compliances if easier to follow all of these things certainly.

Is there any question from the audience in the meanwhile, yes, please, go ahead?

>> AUDIENCE: When it was mentioned about the licensing conditions and when the licensed operators do not like to see other operators coming in in the absence of proper framework. I think the regulators or policy makers also lose the model authority to allow other networks because they are already imposing so many levies, and so many, you know, kinds of duties on them that whether these operators make a case this is eating into our revenue, these kind of new operators so if we could lighten that, because at the end, it's, you know, the growth of the Internet economy is contributing to the larger economy and not just through the taxes that these operators have to pay.

Then the regulator and the policy makers have a model authority over them to allow the rural communities to come in.

>> PARVEZ IFTIKHAR: Please.

>> AUDIENCE: My reaction. Can you shed light on the phase two of universal fund where I heard that beyond 100,000, the other entities, like it was given to the Department of the State Government. Can you throw some light on that also?

>> REKHA JAIN: Why don't I start about it offline because maybe that is not of interest, but I will just give general guidelines. The state Governments feel they particular customized solutions. I am involved with the optical fiber network that they want to put up on their own, and they have a very good cable operators association. And they want to work through them to provide the last mile. As you know, this phase has a way different geography like the rest of the country. So I think the larger lesson is that each state and then each district will want to have a different kind of model for operation, and we can work with distributed networks. Today technology allows you to integrate them seamlessly.

So I don't know if the question would have, you know, interest for the rest of the people. If they do, I'm happy to share my experience about it.

>> PARVEZ IFTIKHAR: Is there any other question from the audience? Yes.

>> AUDIENCE: I think that referring to your comments where you said the problem was back haul, even though you were giving money away for last mile connectivity, the problem was back haul.

So the tragedy of USF effort is that while no fund was intended to solve that problem, but one of the main issues with that, we did a study on that, it's published, I think, yes.

So we went to the pilot areas in I think it was Selinga and

Andhra at the time, one of the northeast states, the three pilots. And in many cases the connectivity was there, but nobody was using it. Technically, the issue was that there were no standard implementation agreements.

They were not at all clear on what the conditions were to connect. So the whole, the whole last bit was completely confused. Now, if somebody else resolves that problem, quite a lot could have been done. Unfortunately, this was a knee jerk response to the piloting of the money and it was to achieve two plain objectives just to get rid of the pilot money and (?) which was almost bankrupt.

>> PARVEZ IFTIKHAR: With the help of this massive backbone that is being built, the communities or the local entrepreneurs can launch their own networks, that's very good.

>> You need something like what you have. He knows the terms and conditions. He actually hauls the traffic to Mumbai, and he hands it over to somebody else once. He knows that situation, but you have a larger network. But a small entrepreneur will have his entire business within the Mumbai VSML, and if the network goes down and they will not repair it, the small guy will be quite vulnerable. So that problem has to be addressed.

>> The optical fiber network, we haven't researched any entity for the last mile part or for service delivery end-to-end. For example, we have met film directors who have said I would love if I could get fiber connectivity to the village because I will be beaming a Bollywood film and I have a good audience in that village. He wants end-to-end solution. He didn't want to be working at different levels at the state and national level. So what this kind of requires a different kind of business orientation, which it doesn't have or wasn't designed to have and should have been.

I think the issue about connectivity, WiFi or who all can use this bandwidth at the end where it is possible to do so. It's not possible to do so in many places it also has to be talked through, formalized so somebody can come and connect as we were pointing out.

>> PARVEZ IFTIKHAR: I will ask Carlos to expound.

>> CARLOS REY-MORENO: So just two points, one going back to USF, one of the issues with having a regulatory framework that disable small operators which is happening in other countries is that there are other funding mechanisms that are being blocked for the same reason. In the previous panel, we had someone defining community networks and social innovations. They found a community network in South Africa who was awarded by the size and technology, and some of the funds to support the community network are coming from the Department of Science and Technology.

There are other mechanisms that are talking about SSNE, SSME funding. Well, that could be another fund. There were other mechanisms, there were options for other players to come into the fund. That's one thing. The other thing is related to WiFi, and I'm glad you pointed it out. Many of the community actors in the world are using WiFi because there are no other options. In some countries, they are using (?) but in the case of India, they are spending a significant amount of money on a pilot that was killed off. And now one technology that is it extremely beneficial in terms of the physical characteristics to breach the back haul issues in many, many areas has not been considered. Why it's not being considered? I don't know. There has been pilots all over. There is a regulation that has been passed. Singapore, one of the best countries in the continent is the only one. Why do we follow and not in others. Tell me why this place is well positioned technology to breech the back haul issues you are mentioning.

In relation to access issues, we were talking about issue, about WiFi in many of those deployments, it requires public hot spots where some of those people that are subject to harassment are even more subject to harassment because that's the only option that they have. In many of these areas where public WiFi is the only option because there is no other type of deployments, 2G, 3G and 4G spectrum is assigned nationally and totally unused.

You can go and join the regulators, go and monitor spectrum usage in rural areas and see how much spectrum is used. The business model in the access side that could be done giving access, secondary access to these communities to set up one basic station and there is evidence in some, in the region there is very interesting pilot in the Philippines using these types of technologies. Why don't we think beyond.

If we collectively what we want is to provide universal access, we have to think beyond the current models and the current thinking that is around large networks and their concerns. I think we need to start considering the concerns of the rye people. Thank you.

>> PARVEZ IFTIKHAR: You had a question.

>> AUDIENCE: Ramana from APC. We heard in the earlier panel that this first hurdle was regulation and policy. I would like this panel to look at what will make this happen, what will make the change. So I would like to ask the panel what do we need, what needs to happen so that this change, so that there could be a change in the policy frameworks and the regulation in the region. So that it can allow the, what, the thriving or the flourishing of other models.

>> PARVEZ IFTIKHAR: Great question. Renuka, please.

>> RENUKA RAJARATNAM: You are basically asking people to

rethink the way they are looking at entire telecommunications experience, that is rethinking regulations and policy frameworks around that. What would it take to make the change, dialogue. I see that across all any digital policy. The issue now is that Governments and regulators don't understand what is happening. They don't understand the new business models. They don't understand the digital technologies. Going to them, talking to them, having open conversations and this goes across any digital policy coming up.

It's for the stakeholders, the people who are deploying to actually bring information to the Government and sit down with them, but that doesn't kind of mean the Government doesn't have any stake in it. They have to have open dialogue with the stakeholders and that doesn't mean just having conversations with telco operators. It means inviting state level Governments and also small holders, local entrepreneurs, cooperatives, people who have skin in the game to talk to them. So I think that will be a key defining factor. The second one is a bit more technical.

You need to be looking at the whole, and I think I keep saying this, what ecosystem of regulations that surround telecommunications today. It's no longer a telco operator providing network. It's several players. Facebook is providing currency now. You have no idea what people are going to be doing ten years from now. So it's about having the flexible mindset and the ability to look at regulations, policies in a holistic manner, taking a look at consumer protection policies and seeing how all of those, whether all of those include carve outs, exceptions and acknowledge the presence of small holders, local entrepreneurs, cooperatives in addition to big communication companies.

So I would look at it from those viewpoints.

>> PARVEZ IFTIKHAR: What needs to change? What needs to happen?

>> I was seeing this film on Netflix. Maybe some of you have seen it, it's called gully boy. It is about a rapper from the slums of Mumbai who makes it in their own way. The whole thing is about him not having the money to pay for the data connectivity, and how he has to coordinate with a lot of people to get his rap music out. And then in one moment of when they are really, you know, these are people, these young boys from the slum and young girls from the slum areas what their aspirations are.

So in one moment they write, what do you call it when they paint the wall, graffiti. He writes in a moment of anguish or desire or anger, he writes what does he want from life? He says, I want clothing, housing, food, plus Internet. Now, I hope all regulators see that film and understand the aspirations of this

young people, so while change can come from the top, you know, when regulators, et cetera, mostly do not like in our countries do not like to work with civil society or private operators because there is a certain kind of ideology associated with them.

They as Government people find it difficult to justify. But I think if you have a person who pushes from the top and says no matter what you do, whatever model as long as it's legal, and you are able to deliver this connectivity and services, not only connectivity. Today we have to talk about of not community networks, but community service networks, the CS has to be inserted, because I have the network, but today my applications, the Government applications don't work.

I mean, I can entertain myself, but -- and, therefore, we need another revolution, which is about devices. See, we are assuming that with WiFi a low cost smart feature phone is really important. And that already it's as commercially feasible has been shown in the case of India. I'm sure others will find is feasible too, although I would not like to make India centric, but a low cost entry device is important for these networks to take off in the Internet space.

>> PARVEZ IFTIKHAR: Veari.

>> VEARI IRU: What I would like to see changed is that, we look at the problem is we have a requirement that only those who contribute to the fund can participate in USO-funded projects. I think that's something that limited the ability of, you know, individuals and others to participate. So I think from our perspective that is something I would like to see changed.

>> CARLOS REY-MORENO: I'll go back to the two points that I have been making through the presentation so far. One is licensing. In most of the countries in the world, the licensing framework only allow national scope licenses, licensees. And there are many requirements associated to it in terms of fees, in terms ever expectations, in terms of compliance, in terms of requirements.

And the previous moderator said that small is beautiful. Maybe connected well connected is about enabling small operators to actually, and think and look at your regulatory framework and look critically how your licensing framework is disabling the small operators. That would be one thing. The other one would be spectrum management. And, again, look at the spectrum management and look at the resource that in many regulatory policies and agencies, one of the first things that it says is that you need to use and manage the spectrum efficiently.

How efficiently that spectrum is being used if it's not utilized in rural areas of the country, and what methodologies do you have at your hand, for instance, secondary use of spectrum, that applies to spaces and talking to the broadcasters or to talk

about INT spectrum and talking to the big operators on how that spectrum then so many people say is scarce and in many, many areas in countries not being utilized could be utilized.

Those would be the two things from a regulatory perspective. From a policy perspective the first thing, and I think from the public dialogue is start recognizing maybe from a policy direction. And in South Africa, in Kenya, Mexico, in Argentina, there are many public policies that are already providing, in the policy directions in the global plans that there are other actors that can contribute to connected and unconnected and from the policy it gets translated. Anyway, that's maybe the three points I wanted to raise. Thank you.

>> PARVEZ IFTIKHAR: So it is policy as well as regulation. You also touched upon spectrum. We didn't talk about that. Spectrum is one of the issues which I think is a lot of times a showstopper because the Government's want to earn money from spectrum, and the criteria of a successful spectrum is how much money Government manage to get from the operators.

Are there any ideas about that if that is the right, if that is the right approach, that the Government should earn maximum amount of money or the right approach go be to spend or to use the spectrum as Carlos pointed out in rural areas in order to have economic benefits? Maybe you could answer this.

>> REKHA JAIN: If you look at who is being given rights it's the big players, so these people are willing to pay as much as the Government wants to take for them to secure the spectrum for them to offer services.

>> PARVEZ IFTIKHAR: That's what excludes the smaller players.

>> Yes, and this goes back to what you are saying that your telecommunications policy and regulators need to work with small players.

When you are forming licensing agreements, when you give someone the rights to operate in the spectrum as a teleco or satellite operator in the country, you need to put into place service obligations or coverage obligations which then forces them to partner with local players. And also create these models within the ecosystem to help them partner with local players and community networks to provide broadband connectivity outside of urban areas. So I don't think there is a way to stop spectrum pricing, and to tell you the truth, even the big players don't like the high prices right now. They are complaining about the high 5G auction prices, they are complaining about the unavailability of spectrum. They are fighting over the same spectrum. The big players are fighting and these costs get trickled down. So there needs to be a rethink about how you price spectrum for big players and there needs to be a rethink of

how you put in place mechanisms in your contracts, in your licenses to help the big players and incentivize them to actually partner with local and smaller players to utilize the spectrum they are not utilizing.

So it's a bit of a behavioral economics policy like, you know, influencing the policy makers that have to do.

>> PARVEZ IFTIKHAR: It's paradoxical that one side you spend money to get the spectrum, and the other side you keep it unused in a lot of areas.

There is a question from Maldives.

>> MALDIVES: Thank you for wonderful discussion. What I would like to add for the discussion is basically this point about thinking about connecting the unconnected. It's not only a problem on its own, but in a more holistic integrative model. Starting from the last panel that was up there, there was a panelist there talking about people having to climb the hills to get connected. And I had a friend who work the in a school, so he would work on his laptop. He would send out his emails, and then after school hours, he would go to the beach, and watch it fly out.

And you would be thinking why is beach so much better connected? Because across the ocean was a resort island. Now, where there is a resort island, there is connectivity. Now, he has a dongle, everyone has a dongle, we are 100% connected in Maldives but the dongles seem to wake up when you are around resort islands.

So imagine if we can actually make business cases for the rural islands, and this is what our Government is doing, taking tourism to the small islands, putting innovative technology on fishing vessels so if you go to a fishing vessel now, they actually work with drums making sure that fishing itself goes from people who are uneducated to people who are actually educated, and making sure that people have a need to connect fishing vessels, so connecting the various elements of development in the need, they actually drive a lot of things.

And then as pointed out earlier it started with entertainment. Every corner of the, you know, island, everyone wants to relax. They want to see what's happening, but then going out to religious, going out to fishing vessel is if. Pat the same time it started with obligation.

Some islands still reserve, and keep those boxes nice because it's nice for their tourists to take a picture with the telephone and they are like remnants of an old time because everyone carries cell phones, but that having been said, during the week, we know there is a lot of talk about this, where is the local content, where are the platforms that are specifically designed for the rural mindset in a platform-based economy?

So I think even when we are talking about one of the best that we are trying to put forward is that although we have about 900-kilometers of tiny little islands connected by submarine cables which make really, really expensive service provisions. The subscription prices are the top, more expensive than United States, and definitely Sri Lanka enables, it makes us feel very, very bad because it's so much affordable just across, is hundred kilometers, but this is because we have the latest fiber cables.

At the same time other economic act can be brought to innovative approaches of development. So that's my two cents.

>> PARVEZ IFTIKHAR: If there are no other questions, we are past our given time. I would request each panelist to please make last words starting with Renuka.

>> RENUKA RAJARATNAM: I think as you try to wrap your minds around how to get community operators to have the access they need, it's important to think about putting yourself in front and holding continuous dialogue with Governments and policy makers, because that is important at the end of the day to keep them abreast of technology developments you have so they are able to make the right decisions. And we have seen this work well in other areas of technology, policy, and also in terms of looking at the regulatory landscape, I mean, my final thoughts are it's an ecosystem now, it's not, you are not regulating a single player. You are not regulating a single type of business. You are regulating an entire even if you are just regulating the telecommunications industry. So it's important to look at the different regulations and different policies that matter when you are trying to take into account small holders. It.

>> I would use the defining theme of diversity. I think the need to have a diverse set of policy makers coming from diverse set of policy domains including from the private sector, community networks, from rural communities to come up with these frameworks. I would like to see that our focus as a community should not only be on the network, but providing network, but also the devices and the services.

And there is a lot of work that needs to go into providing services now. I think in many parts of the world, there is increasing connectivity happening to whatever means, and how do we enable these services to take off? Now, the access part, I suppose it will get taken care of in some way or the other, maybe low level connectivity, but if they can get good service, it will be great, and low cost device, smart feature phones.

>> PARVEZ IFTIKHAR: A lot of USOs or USFs have now started thinking of exactly what she has said. It's no more about connectivity, as Rekha said, it's about the ecosystem. So the USOs need a transformation in that direction. It has been termed as next generation USO or USO 2.0, in which the emphasis is not

just on connectivity, but more than that.

>> VEARI IRU: I see community networks as promising. I think the only thing is we, as other panelists have indicated, we need more dialogue, and a rethink in our policies to especially support rural apart from just the usual telecom operators.

>> I'm going to try to answer your last question and give my comments, why they pay the prices and don't use the spectrum, because in the maps to pay the prices they only consider money in urban areas, the money that can pay where they can recover and get a return on investment, forgetting about the rest. That brings me to the second point, it's a rural development problem. When you put that values into that sector, they take into consideration the integration that we were talking about. What is the pressure on taking into account rural to urban migration, those services or the issue of keeping the rural areas underdeveloped and what solutions from a telecommunications perspective could be taken into consideration. We have seen here that there is enough evidence to see that there are actors that would like to cover that gap, but that those actors are not being enabled by the current policy, and I would encourage you to look at rural framework and look at evidence in other countries that may have resolved these issues. Thank you.

>> PARVEZ IFTIKHAR: I thank the panelists for being so eloquent about what they feel and what they believe, and for all of you to have listened to us. Thank you very much.

(Applause)