



**Best Practice Forum
Gender and Access (2018)**

**Impact of Supplementary Models of
Connectivity in Enabling Meaningful
Internet Access for Women and Gender
Non-Binary Persons**

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MAG coordinators: Renata Aquino Ribeiro, Raquel Gatto

Non-MAG coordinators: Agustina Callegari, Paula Real

Editor: Radhika Radhakrishnan

CONTENTS

Executive Summary	4
Interpretation Notes	5
Acronyms and Abbreviations	7
Part A: Findings	8
1. Supplementary Models of Connectivity for Women and Gender Non-Binary Persons	8
1.1 Barriers to Internet Access for Women and Gender Non-Binary Persons	8
1.2 Relevance of Supplementary Models of Connectivity to Internet Access for Women and Gender Non-Binary Persons	9
1.2.1 Availability	9
1.2.2 Affordability	10
1.2.3 Culture and norms	10
1.2.4 Availability of relevant content	11
1.2.5 Women's participation in decision-making roles pertaining to the Internet	11
1.3 Why do we need a gender focus for supplementary models of connectivity?	12
2. Community Networks	13
2.1 What are Community Networks?	13
2.2 Mapping Community Network Initiatives for Women and Gender Non-Binary Persons and their Impact	14
3. TV White Spaces	18
3.1 What is TV White Spaces (TVWS)?	18
3.2 Mapping TV White Spaces Initiatives for Women and Gender Non-Binary Persons and their Impact	19
4. Other Supplementary Models of Connectivity	20
5. Recommendations for incorporating gender perspectives on Supplementary Models of Connectivity	20
Part B: Mandate and Methodology	22
1. Mandate	22
1.1 The IGF	22
1.2 Defining the BPF's mandate	22
2. Methodology	23
2.1 Working Approach	23
2.2 Survey	23
2.2.1 Survey Design	24
2.2.2 Survey Analysis	24
2.2.3 Diversity of Respondents	24
2.3. Virtual Meetings	24
2.4 Mobile Messaging	24
2.5 Mailing List	25
2.6 Email	25
2.7 Main Session at IGF	25

3. Limitations	25
Part C: Appendices	26
APPENDIX 1: CONTRIBUTORS	26
APPENDIX 2: BPF SURVEY	27
APPENDIX 3: BPF SESSION PRE-REPORT AT IGF 2018	33
APPENDIX 4: BPF SESSION REPORT AT IGF 2018	34

Executive Summary

[TO BE INSERTED LATER]

Interpretation Notes

The designations employed and the presentation of the material in this resource do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The term '**country**' as used in the text of this publication also refers, as appropriate, to territories and areas.

The designations '**developed**' and '**developing economies**' are intended for statistical convenience and do not necessarily imply a judgment about the stage reached by a particular country or area in the development process.

Mention of the name of any company, organization, product or website does not imply endorsement on the part of the United Nations.

For the purposes of this resource, unless specifically otherwise defined:

- All references to '**women**' should be construed as including '**girls**' and anyone identifying as women, unless otherwise specifically noted. Women of diverse sexualities and gender identities are also included in relevant sections of the resource.
- '**Girls**' is defined as female individuals from birth to the age of 18.
- '**Gender Non-Binary**' is an umbrella term to describe any gender identity that does not fit into the gender binary of male and female. Nonbinary gender (also sometimes referred to as genderqueer) people may, for example, identify as having no gender, fall on a gender spectrum somewhere between male and female, or identify as totally outside binary gender identities.
- '**Gender**' refers to the social attributes and opportunities associated with being male and female and the relationships between women and men and girls and boys, as well as the relations between women and those between men. These attributes, opportunities and relationships are socially constructed and are learned through socialisation processes. They are context/time-specific and changeable. Gender determines what is expected, allowed and valued in women or men in a given context. Gender is part of broader socio-cultural contexts, intersecting with other factors such as class, race, poverty level, ethnic group and age.
- References to '**access**' should be construed as referring to 'meaningful Internet access' unless otherwise construed.
- '**Meaningful Internet access**' should be construed as pervasive, affordable connection (of sufficient quality and speed) to the Internet in a manner that enables the user to potentially benefit from Internet use including to participate in the public sphere, exercise human rights, access and create relevant content, engage with people and information for development and well-being, etc.; irrespective of the means of such access (i.e. whether via a mobile or other device; whether through private ownership of a device or using a public access facility like a library).

- **'Underserved'** populations refers to communities in which the telecommunication market permanently fails to provide the information and communications services demanded by the population.¹
- **'Mainstream Models of Connectivity'** denote those networks sharing these characteristics²:
 - Regarding scale, they are usually large networks spanning entire regions.
 - Top-down control of the network and centralized approach.
 - They require a substantial investment in infrastructure.
 - Users in mainstream networks do not participate in the network design, deployment, operation, governance, and maintenance.
 - Ownership of the network is never vested in the users themselves.
- The term **'Supplementary Models of Connectivity'** proposed in this document refers to the networks that do not share the characteristics of "mainstream models of connectivity". Therefore, they may share some of the following characteristics as proposed in existing literature³, however it should be noted that not all of these are applicable to all models:
 - Relatively small scale (i.e., not spanning entire regions).
 - Administration *may* not follow a centralized approach.
 - They *may* require a reduced investment in infrastructure, which *may* be shared by the users and commercial and non-commercial entities.
 - Users *may* participate in the network design, deployment, operation, and maintenance.
 - Ownership of the network is often vested in the users.
 - Newer and upcoming models

¹ J. Saldana, A. Arcia-Moret, B. Braem, E. Pietrosemoli, A. Sathiaselalan, M. Zennaro, Contributors: L. Navarro, C. Rey-Moreno, I. Komnios, S. Song, D. Lloyd Johnson, J. Simo-Reigadas. RFC 7962 "Alternative Network Deployments. Taxonomy, characterization, technologies and architectures," Working Group Document in the IRTF GAIA (Global Access to the Internet for All) group. Aug. 2016. Available at: <https://www.rfc-editor.org/info/rfc7962> [Accessed on 20 October 2018]

² Ibid.

³ Ibid.

Acronyms and Abbreviations

A4AI	Alliance for Affordable Internet
APC	Association for Progressive Communications
BPF	Best Practice Forum
CENB	Connecting and Enabling the Next Billions
CSTD	Commission on Science and Technology for Development
CN	Community Network
DC	Dynamic Coalition
IGF	Internet Governance Forum
ICT	Information and Communication Technologies
ISOC	Internet Society
ITU	International Telecommunication Union (UN)
MAG	Multistakeholder Advisory Group
NRI	National and Regional IGF
SDG	Sustainable Development Goal
UN	United Nations
TVWS	TV White Spaces
WSIS	World Summit on the Information Society

Part A: Findings

1. Supplementary Models of Connectivity for Women and Gender Non-Binary Persons

1.1 Barriers to Internet Access for Women and Gender Non-Binary Persons

The BPF on Gender and Access 2016 had established in great detail that there is global recognition of the need to address gender digital divides, as highlighted by multiple stakeholders including United Nations' 2030 Agenda for Sustainable Development, Alliance for Affordable Internet (A4AI), APC, GSMA, World Bank, and private sector stakeholders like Intel, Microsoft, and Google⁴. Since then, research has shown that worldwide, women are less likely to have access to the transformative power of the Internet. The latest estimates from ITU suggests that women globally are 12% less likely than men to use the internet and also highlights that this gap is most pronounced in Least Developed Countries (LDCs), where women are 33% less likely to use the internet⁵. A 2018 study by the GSMA⁶ found that women who live in low- and middle-income countries are on average 10% less likely to own a mobile than men – which translates into 184 million fewer women than men owning mobile phones – and 26% less likely to use mobile internet. Like that for the internet, this gender gap is also wider in some parts of the world. GSMA data suggests that women who live in South Asia are 26% less likely to own a mobile than men, and 70% less likely to use mobile Internet.

The report also underscored the need to move beyond 'access' to 'meaningful access'. It stressed that 'meaningful Internet access' should be construed as pervasive, affordable connection (of sufficient quality and speed) to the Internet in a manner that enables the user to potentially benefit from Internet use including to participate in the public sphere, exercise human rights, access and create relevant content, engage with people and information for development and well-being, etc.; irrespective of the means of such access (i.e. whether via a mobile or other device; whether through private ownership of a device or using a public access facility like a library).

Some pioneers such as Revi Sterling⁷ have noted a tendency among technologists to dismiss the contextual complexities in which technologies are deployed and to “view the poor as a virtuous monolith who will all share in development projects and outcomes and who all want empowerment for each other.” Cognizant of this reality, in 2017, the BPF on Gender and Access 2017⁸ noted that some barriers are experienced more keenly by some women in certain

⁴ IGF (2016) Overcoming Barriers to Enable Women's Meaningful Internet Access. Available at: https://www.intgovforum.org/multilingual/filedepot_download/5004/1318. [Accessed 20 October 2018].

⁵ <https://www.itu.int/en/Pages/default.aspx> This report does not refer to gender non-binary persons.

⁶ https://docs.wixstatic.com/ugd/04bfff_6ff1b0c772f64f33a3c7ebba3b270f2c.pdf

⁷ Edwards, S. (2017). *Cultural barriers need to be challenged to close the gender digital divide*. Available at: <https://www.devex.com/news/cultural-barriers-need-to-be-challenged-to-close-the-gender-digital-divide-90213> [Accessed 20 October 2018].

⁸ IGF (2017) *Unique challenges for unique women: An exploration of the unique needs and challenges women from diverse communities face in gaining meaningful Internet access*. Available at:

communities than in others. The BPF Gender's work in 2017 therefore focused on identifying the needs and challenges of various women's groups, including refugee women, indigenous women, young women, women with disabilities, rural women and lesbian, gay, bisexual, transgender and intersex (LGBTI) women with respect to Internet access.

Taking this a step further, in 2018, the BPF on Gender and Access focuses not just on different demographics of women and gender non-binary persons, but also on supplementary ways of providing (last-mile) connectivity to these communities. Two types of supplementary models of connectivity are primarily explored in this report - Community Networks (section 2), TV white spaces (section 3), along with other models such as Public Wi-Fi and Zero Rating (section 4).

1.2 Relevance of Supplementary Models of Connectivity to Internet Access for Women and Gender Non-Binary Persons

The BPF Gender and Access 2016 report analyzed the most pertinent barriers commonly faced by women in gaining such meaningful Internet access. This report looks at how supplementary models of connectivity can help make progress on these challenges. The key findings are summarised here, but sections 2, 3, and 4 all provide detail and case studies that help support the conclusions. Some of the barriers include availability; affordability ; culture and norms; lack of capacity and skills; and women's participation in decision-making roles pertaining to the Internet and/or in the technology sector.

1.2.1 Availability

The BPF Gender and Access 2016 report analyzed that availability of Internet access is a barrier for women who have no broadband access and when public internet centres are in spaces that women don't usually have access to.

Some supplementary models of connectivity help address this concern by providing greater ownership to users. Usually owned by the community and governed according to democratic principles, in terms of institutional models, community networks may be operationalized wholly or partly through local stakeholders and individuals, local nongovernmental organizations (NGOs), private sector entities, and/or public administrative or governmental bodies⁹.

An example of such an initiative is the Wireless Women for Entrepreneurship & Empowerment (W2E2) is programme by the Digital Empowerment Foundation (DEF) to create women driven ICT micro social enterprise and entrepreneurs supported by wireless internet in socially backward locations or districts of India and contribute to an enabling internet environment and internet for gender inclusion and women empowerment.

https://www.intgovforum.org/multilingual/filedepot_download/5004/1319 [Accessed 20 October 2018].

⁹

https://www.internetsociety.org/wp-content/uploads/2017/10/W4C-Policy-Paper_Dec2017.pdf [Accessed 31 October 2018].

1.2.2 Affordability

The BPF Gender and Access 2016 report analyzed that affordability relates to not only the cost of devices and data, but also whether or not someone has disposable income and financial resources to spend getting connected. Many supplementary models of connectivity help address this concern by offering low-cost and free alternative methods to connecting to the Internet.

For example, community networks are usually operated on a cost-recovery basis and provide public documentation on all technical and non-technical aspects. They are often based on collective digital participation – as crowdsourced networks, they may be structured to be open, free, and neutral¹⁰.

Zero-rating also allows mobile subscribers to access certain online content “for free” by subsidising consumers and letting them download and upload certain online content without incurring data usage charges or having their usage counted against data usage limits¹¹.

1.2.3 Culture and norms

The BPF Gender and Access 2016 report cites culture and norms, which are often underlying or ‘hidden’ in communities, as one of the most significant barriers that affects women in gaining access to and benefiting from connectivity. This can be seen in the million of cases where women are prohibited to access the Internet for fear that they will bring shame on themselves and their families by engaging in conversations and behaviors that are antithetical to being a “good” woman in their culture. Boys are prioritised for technology use at home and women and gender non-binary persons face online gender-based violence¹² and have restrictions to their movement¹³.

Revi Sterling, deputy chief of NetHope noted that “the real reason we can’t get [the] last several hundreds of millions of women online¹⁴ — it comes down to fact there are people in their community who don’t want them online... The issue is not the phone, it is the power around what the phone allows you to do.”

This barrier is not as easily resolved because of the relative difficulty of addressing cultural and social norms compared to other access barriers such as infrastructure, policy and cost. Development practitioners are often reluctant to tackle them because they are complex and expensive to study in a meaningful way due to the huge variances between states, let alone

¹⁰ https://www.internetsociety.org/wp-content/uploads/2017/10/W4C-Policy-Paper_Dec2017.pdf [Accessed 31 October 2018].

¹¹

https://www.researchictafrica.net/publications/Other_publications/2016_RIA_Zero-Rating_Policy_Paper_-_Much_ado_about_nothing.pdf [Accessed 31 October 2018].

¹² IGF (2015). BPF Online Abuse and Gender-Based Violence Final report. Available at: <http://www.intgovforum.org/cms/documents/best-practice-forums/623-bpf-online-abuse-and-gbv-against-women/file>

¹³ https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3142049 [Accessed 31 October 2018].

¹⁴

<https://www.devex.com/news/cultural-barriers-need-to-be-challenged-to-close-the-gender-digital-divide-90213> [Accessed 31 October 2018].

countries¹⁵. As a result, it can be difficult to make the case to donors. However, such studies are necessary, though one of the findings of this report is that there are few studies done around this with a specific gender focus, which also makes this report's findings crucial.

1.2.4 Availability of relevant content

The BPF Gender and Access 2016 report identified the lack of availability of relevant content as a barrier for women to access the Internet. This included literacy gap in reading, lacking in skills and confidence to access the internet or explore technology, etc.

Supplementary models of connectivity have the potential to make some progress regarding this barrier. For example, Zero Rating provides local content to users. A study of Free Basics in South Africa noted that the platform offered not only globally known applications such as Wikipedia and Facebook, but also provided offerings tailored to local communities such as OLX and demographically targeted content such as Girl Effect which provides relevant content to young women about health, fitness, and well being¹⁶.

Another study describes the role of Free Basics in local content and service development and found that entrepreneurs and developers in emerging countries use the platform to adapt their services for first time Internet users and how they onboard those new users to their flagship websites¹⁷.

While acknowledging the diversity among various models, one of the defining characteristics of most community networks is the promotion of the development and circulation of local content in local languages, thus stimulating community interactions community development, and allowing customization to a community's need¹⁸.

1.2.5 Women's participation in decision-making roles pertaining to the Internet

The BPF Gender and Access 2016 report identified barriers to women's participation in decision-making roles pertaining to the Internet and/or in the technology sector as relevant to the restrictions on their Internet access.

While supplementary models of connectivity do make access to information easier, that does not necessarily have to always translate into decision-making power. However, in some cases, it is noticed that such potential does exist.

¹⁵

<https://www.devex.com/news/cultural-barriers-need-to-be-challenged-to-close-the-gender-digital-divide-90213> [Accessed 31 October 2018].

¹⁶ <https://hci.princeton.edu/wp-content/uploads/sites/459/2018/01/ZeroRatedCHI-25.pdf> [Accessed 31 October 2018].

¹⁷

https://www.researchgate.net/publication/315307337_Free_Basics_Research_Paper_Zero_Rating_Free_Data_and_Use_Cases_in_mhealth_Local_Content_and_Service_Development_and_ICT4D_Policymaking [Accessed 31 October 2018].

¹⁸ <https://www.comconnectivity.org/article/dc3-working-definitions-and-principles/> [Accessed 31 October 2018].

As an example, AFCHIX¹⁹ (a Community Network funded by WomenConnect) creates entrepreneurial opportunities for rural women in Senegal, Morocco, Kenya, and Namibia to run local internet service providers and work as network engineers. This initiative contributes to improving connectivity and building the capacity of communities to establish and maintain telecommunications infrastructure. The entrepreneurial and empowerment program helps women establish their own companies, provides important community services, and positions these individuals as role models.

1.3 Why do we need a gender focus for supplementary models of connectivity?

Technology does not have a neutral impact and can reproduce social, economic and cultural inequalities in the context it is deployed in. This is also reflected in the supplementary models of connectivity explored in this report.

Thus, to have any meaningful impact on the ability of women and gender non-conforming persons to benefit from the Internet, initiatives must take into account the disparate needs and demands of different genders and implement approaches that are not gender-blind in their vision. This is why gender analysis must be an integral part of planning efforts, rather than an “add-on” task.

However, one of the key findings of this report is that there is a lack of a gender focus in initiatives that support and develop supplementary models of connectivity. This means that the unique challenges that women and gender non-conforming persons face (as highlighted in previous BPF reports with regards to women) are not solved for in these models.

Merely having a gender focus is also not enough as gender always overlaps with sex, race, class, caste, religion, and ability. Thus, an intersectional approach is required. For example, scholars such as Nic Bidwell have been pointing out that the ‘field’ of Community Networks is constructed by mostly white men and that its framing originates in the global north²⁰. Thus, even with an explicit agenda to improve opportunities for Community Networks in the global south or for specific communities of women and gender non-conforming persons, “this advocacy and movement building is situated in the white men dominated discourse of telecommunications technology, policy and lobbies around regulation²¹.” This has an impact on the knowledge that is produced in studying social and gender impact of such technologies as it assumes that gender, sex, caste, class, religion and other relations in the global south exist in the same form as those in the global north.

The challenge extends to other supplementary models of connectivity such as Public Wi-Fi. If a gender-blind approach is implemented, then it is assumed that merely having Public Wi-Fi access points can enable women and gender non-conforming persons to access the Internet.

¹⁹ <https://www.usaid.gov/wcc> [Accessed 31 October 2018]

²⁰

<https://www.genderit.org/feminist-talk/gender-and-community-networks-researching-social-and-gender-impact>

²¹ *ibid.*

However, as BPF 2016 pointed out, many public spaces are inaccessible to women (and also gender non-conforming persons) due to cultural restrictions on their movements. Thus, a gender-focused approach in such a context would involve ensuring that Public Wi-Fi access points are placed such that they can be used meaningfully by women and gender non-conforming persons.

For example, in rural Uganda, telecentres that have been established to promote rural access to information and foster development are not getting the results they had hoped for. An evaluation of telecentres by the Acacia programme in South Africa revealed that women consistently make up less than one-third of telecentre users, even when female staff and materials that target women are made available²². This underscores the need for a gender analysis of existing models of connectivity.

Moreover, the goal of models of telecenters and Public Wi-Fi is not simply to provide access to information and communication technologies (ICT), but also to inform, train, and provide economic opportunities to the communities they serve²³. From a gender perspective, telecenters should provide services considering the specific context of women's lives and environment. This way, telecenters can benefit women, gender non-conforming persons, their communities and contribute to their lives in numerous ways.

Similarly, one of the claims of Zero Rating models is that it can bring the unconnected online through an expansion of informational capabilities. The Women's Rights Online survey casts the spotlight on the flaws of this core argument²⁴. Their survey data indicates that in and of itself, being online and on social networks, or even following web links from social networks, does not directly bring informational agency. Specific to the Internet.org/Free Basics service of Facebook, the survey notes that only 17 percent of the women in the study seek information online, although nearly all of those in the study use Facebook. This percentage reveals barriers to poor women's informational capabilities at many levels – primarily, the lack of affordable and meaningful information that will make women eager participants of online life.

All of this implies that a gender-specific analysis is crucial in accruing the benefits of meaningful Internet access for women and gender non-binary persons in the context of supplementary models of connectivity. Section 5 presents recommendations for the implementation of the same.

2. Community Networks

2.1 What are Community Networks?

²² <https://www.apc.org/en/news/telecentres-uganda-do-not-appeal-rural-women>

²³ http://www.bridge.ids.ac.uk/sites/bridge.ids.ac.uk/files/Docs/jorge_telecenters.pdf

²⁴

<http://www.itforchange.net/sites/default/files/Women%27s%20Rights%20Online%20Study%20-%20India%20Country%20Report.pdf> (p. 11-12)

Community networks (CNs) have a range of different definitions in academia, technical, government and regulatory spheres²⁵. Baig, Roca, Freitag, & Navarro (2015) defined community networks as “crowdsourced networks,” ones that are structured to be free, open, and neutral, built by community members and managed as a common resource. Elkin Koren (2006) defined CNs as distributed architectures in which users implement a physically decentralized network through the decentralization of hardware. The European Commission (EC) uses the phrase “community broadband model,” and defines it as “a private initiative by the local residents of the community using a so-called bottom-up approach.”

Overall, CNs can be considered as a supplementary approach to the mainstream commercial models of connectivity where instead of selling Internet connectivity to end users, communities effectively come together to establish connectivity amongst themselves, and then could use their collective bargaining power to purchase capacity to the rest of the Internet.

Some defining characteristics of CNs can be identified as²⁶ -

- a) Collective ownership: the network infrastructure is managed as a common resource by the community where it is deployed;
- b) Social management: the network infrastructure is technically operated by the community;
- c) Open design: the network implementation and management details are public and accessible to everyone;
- d) Open participation: anyone is allowed to extend the network, as long as they abide by the principles and design of the network;
- e) Promotion of peering and transit: community networks should, whenever possible, be open to settlement-free peering agreements;
- f) Promotion of the consideration of security and privacy concerns while designing and operating the network;
- g) Promotion of the development and circulation of local content in local languages, thus stimulating community interactions community development.

Like all technology, communication technology does not have a neutral impact and can exacerbate unequal power relations in the community, and so community networks should strive to implement more inclusive and just alternatives²⁷.

2.2 Mapping Community Networks Initiatives for Women and Gender Non-Binary Persons and their Impact

This section maps various Community Network initiatives across the world that have a specific gender focus, and their impact. One of the key findings of this report is that while there exist many CN initiatives, there is a dearth of initiatives that focus on women. Furthermore, for the purpose of this report, there were found to be no CN initiatives that focused on gender non-binary persons. However, acknowledging the power relations that impact the manner in

²⁵ https://www.internetsociety.org/wp-content/uploads/2017/10/W4C-Policy-Paper_Dec2017.pdf [Accessed 31 October 2018]

²⁶ <https://www.comconnectivity.org/article/dc3-working-definitions-and-principles/> [Accessed 31 October 2018]

²⁷ *ibid.*

which knowledge ‘travels’, this is treated as a ‘living’ document, and efforts will be made to update this list with more initiatives as and when they are highlighted.

2.2.1. Colnodo: Gender-focused ICT and community wireless network appropriation in a rural Colombian area

Through to APC's subgranting programme, Colnodo²⁸ has implemented a community wireless network to provide mobile telephony in the rural areas of the municipality of Buenos Aires in the department of Cauca. The network is implemented through a participatory process involving the identification of context and actors, priorities, impact and decision-making mechanisms. The main objective of this project is to implement strategies of appropriation and social sustainability of the wireless network in which women have an active role and are recognised for their contribution. As part of the project, Colnodo will document the socioeconomic, political and cultural characteristics of Buenos Aires, Cauca in order to identify the opportunities, challenges and needs of the population that can be addressed with the use of ICTs. Based on these results, a training programme has been designed with a special focus on gender, and capacity building will be provided on issues such as implementation of community networks, use of social networks, access to free content, online courses, information security and women's rights in digital spaces. The project aims to foster better communication and knowledge building through videos, podcasts and written stories that can be shared with other community wireless network projects.

Impact -

Colnodo has trained 56 people, of whom more than 30 are women. Within the framework of this initiative, they have been strengthening skills in the use of ICTs for entrepreneurs, young people and teachers so that they can make more strategic use of the network, enhance its usage and pass on what they have learned to other people in the community.

2.2.2. Comunidades Inteligentes (Smart Communities) initiative, Honduras

In 2018, the Lenca decided to take a big step forward and started the “Comunidades Inteligentes”, a project led by Red De Desarrollo Sostenible (RDS) in partnership with the Internet Society Honduras Chapter and supported by Beyond the Net Funding Programme²⁹. Comunidades Inteligentes aims to establish a Community Network with free Wifi and to connect 300 families with the rest of world.

Before this initiative, the community had established a radio ‘La Voz de las Mujeres’ (‘The Voice of the Women’) led by María Santos³⁰, a leader of the community, who has said, “we want our rights as women to be recognized and achieve gender equality.” The community felt that the Internet was the key to strengthen their messages.

The brand-new network of Azacualpa was made by the community and will be managed by the community.

²⁸

<https://www.apc.org/en/project-grants-local-implementation-apc%E2%80%99s-strategic-plan-2018#5>

²⁹ <https://www.internetsociety.org/blog/2018/04/lenca-people-restoring-past-build-future/>

³⁰

<https://www.internetsociety.org/blog/2018/08/las-marias-from-azacualpa-internet-for-raising-women-s-voices/>

“If we want to empower them, we must also give them the tools to manage the network and to be sustainable in the long term. We do not want them to depend on others to assert their right to communicate and access the Internet.”

- Raquel Isaula, director of RDS-HN

Impact -

In addition to Internet access, the more than 1200 people who live in Azacualpa now have a telecentre with five computers connected to the network and more than 70 smartphones. Before the initiative was implemented, the community only had two smartphones.

As a part of Red de Desarrollo Sostenible, work was initiated with local women in early 2017 and the first radio station was created in the country to be fully operated by women.

300 families are to be connected to decrease the existing digital gap compared to the nearest city, La Esperanza, by at least 70% within 12 months. Through the establishment of a telecentre and hotspots in different points of the community, the human right to Internet access that was approved by the United Nations in the summer of 2016 was promoted.

The Internet will give the opportunity to create spaces where Indigenous art, language, culture, and traditions can be shared, learned, and distributed. This project will make Lenca people free to digitize their oral culture and identify complementary knowledge from global resources to build a better future.

2.2.3. Vanuatu Inter-Island Telemedicine and Learning (VITAL) Network Project

Vanuatu Inter-Island Telemedicine and Learning (VITAL) Network Project³¹ has harnessed the efforts made by the local communities of Maewo Island, Vanuatu, to provide Internet connectivity to their villages. The Vanuatu Office of the Government Chief Information Officer (OGCIO) and the office of the Telecommunications and Radiocommunications Regulator (TRR) offered free technical assistance and support. Kacific Broadband Satellites provides satellite internet connectivity for the communities in order to facilitate telemedicine and eHealth. The community successfully fundraised and paid for all installation fees as well as carried the equipment to site using the only means of transport available: by foot-path, over a mountain, carrying the equipment on their backs.

SDG 5 aims to “achieve gender equality and empower all women and girls.” Through the course of VITAL Network Project, 56 per cent of the patients served were female. In addition, women in Vanuatu do not have financial autonomy. The gendered economic disparity makes it more difficult for women to access financial resources or convince patriarchs to spend money on healthcare, especially as transportation costs for expert care at a nearby urban center can be cost prohibitive. Through the VITAL network, specialists can provide localised care that lowers financial burdens. This helps to close the gap between men and women in their ability to access care.

Impact -

Leveraging a multi-stakeholder approach, in less than six months, two villages have engaged with doctors over 1,250 times and have helped 32 patients. This includes six life-threatening cases involving mothers and children, and ten patients who would have been permanently

³¹ *1 World Connected*

https://docs.google.com/document/d/1r2AqPvO28rUcQ1NaxSTzdB_O3iFAx3XKM09ktBAvVZ8/edit?usp=sharing

disabled without intervention. Each mother and child saved helps attain Sustainable Development Goal (SDG) Targets 3.1 and 3.2. These numbers, when viewed in the context of the project which covered half the island's total population of 3,569 people (VNSO, 2009), are significant wins that the project has achieved in the last six months.

2.2.4. Wireless for Communities (W4C), India

Wireless for Communities³² (W4C) is an initiative that aims to connect rural and remote locations of India, where mainstream Internet Service Providers are not willing to provide Internet connectivity, through frugal technology and unlicensed spectrum bands.

In many rural and semi-urban areas – whether remote or not-so-remote – mainstream Internet Service Providers (ISPs) do not provide connectivity as they feel their operations would not be commercially viable. To overcome this problem, DEF in partnership with first Ford Foundation (for pilot project to provide proof of concept) and then global non-profit Internet Society (ISOC) has used free and unlicensed spectrum provided by the government in the 2.4GHz and 5.8GHz bands, and inexpensive Wi-Fi equipment, to connect as many as 38 districts and 18 states. It is now planning to connect more CIRC's located in areas where mainstream or Class A ISPs do not provide any service by using wireless technology based on free, unlicensed spectrum bands. In India, DEF has pioneered the use of free, unlicensed wireless technologies which have emerged as one of the least expensive technologies to bridge the connectivity gap in remote areas. These wireless technologies have created much interest within the international-development community.

Interestingly, DEF has trained people from the local community to operate and maintain all the wireless facilities that it has set up. Over the last four years, as many as 170 barefoot engineers have been trained. Of these, a total of 20 engineers were trained in Nepal and Bangladesh – 10 in each country.

Impact³³ -

30,000 households inhabiting information dark rural and semi-urban areas have been provided infrastructure to access the Internet. 146 locations have been provided wireless Internet connectivity. 8 handloom clusters digitally have been enabled through a Wi-Fi-enabled ecosystem. 100 schools have been provided Internet connectivity out of which 17 were connected in the Little Rann of Kutch alone. 50 panchayat and government schools provided were Internet connectivity and 177 Agariya families have been surveyed and mapped to enable them access to government schemes and entitlements.

2.2.5. Wireless Women for Entrepreneurship & Empowerment (W2E2) programme, India

Wireless Women for Entrepreneurship & Empowerment³⁴ (W2E2) programme is to create women driven ICT micro social enterprise and entrepreneurs supported by wireless internet in socially backward locations or districts of India and contribute to an enabling internet environment and internet for gender inclusion and women empowerment.

10 women are selected from across various domains of SHGs, Agriculture, teaching, etc. from Chanderi, Baran, Shivpuri and Tura to empower them for multiplying process under which

³² <http://www.wforc.in/>

³³ <http://wforc.in/impact/>

³⁴ <http://circindia.org/w2e2-programme/>

selected women are trained and after that these trained women spread knowledge to other women and thus the chain continues and will slowly cover every corner of India one day.

These women possess a basic computer education and hereby their training began with an overview of the computer hardware and some basic information on computers. Post the orientation class, batch has undertook classes on alternate day basis where they have been educated on basic excel with assignments on developing attendance register, stock register, and using graphs and charts to study statics of any data.

At the end Internet reaches to marginalised potentially skilled and capable women who would take advantage of Internet and Web to empower themselves and the communities around.

Impact³⁵ -

Since the project started, 4,00,000+ women have become digitally literate, 700 NGOs have been connected, 25,000 have availed info services, 1,00,000 availed digital services, 1,80,000 women got online, 700 panchayats were made digital, and 3 public libraries were made digital.

2.2.6. Zenzeleni Networks, South Africa

The aim of Mankosi Community Networks, recently renamed Zenzeleni Networks, is to produce a model for the sustainable implementation of bottom-up village telcos in rural communities³⁶. The project is a partnership between University of the Western Cape and Mankosi community, one of the most disadvantaged areas of South Africa. Currently, Zenzeleni Networks is a telecommunications co- operative that enables community members to charge phone batteries for a fee and make voice calls either for free (on-net) or at a fraction of the cost offered by the incumbents (off-net). Charging stations and phones are installed inside the private homes of 10 families selected by the Tribal Authority first and endorsed by the community later, according to social and technical criteria. Phones are connected to a Wi-Fi router, which creates a network with the other routers in Mankosi. Representatives from these households registered and sit on the board of Zenzeleni Networks. They manage the income generated by the co-operative in a monthly meeting where other operational and strategic decisions are made.

Impact - Zenzeleni Networks has benefited the community by reducing costs of communication and charging phones. This positively impacts on local living conditions because money otherwise spent on communication can be used to support other daily expenses. By encouraging the community to create a way to pay for services more cheaply, Zenzeleni Networks has also facilitated incremental income-generating mechanisms that enable a strategy for economic sustainability. Additionally, most of the research project's plans with regards to the institutionalization of the initiative have been accomplished and realized.

2.3 Common Themes

[To be inserted later]

³⁵ <http://circindia.org/impact/>

³⁶ Shewarga-Hussen, T., Bidwell, NJ, Rey-Moreno, Tucker, WD (2016) Gender and Participation: Critical Reflection on Zenzeleni Networks. Proceedings of AfriCHI'16 African Conference for Human Computer Interaction. Nairobi, Kenya, Nov. 2016. ACM Press.

3. TV White Spaces

3.1 What is TV White Spaces (TVWS)?

White Space³⁷ refers to the unused broadcasting frequencies in the wireless spectrum. Television networks leave gaps between channels for buffering purposes, and this space in the wireless spectrum is similar to what is used for 4G and so it can be used to deliver widespread broadband internet.

White Space broadband can travel up to 10 kilometers, through vegetation, buildings, and other obstacles. Tablets, phones, and computers can all access this wireless internet using White Space through fixed or portable power stations. The actual amounts of spectrum vary by region, but White Space spectrum ranges from 470 MHz to 790 Mhz.

3.2 Mapping TV White Spaces Initiatives for Women and Gender Non-Binary Persons and their Impact

This section maps various TV White Spaces initiatives across the world that have a specific gender focus, and their impact. One of the key findings of this report is that while there exist many TVWS initiatives, there is a dearth of initiatives that focus on women. Furthermore, for the purpose of this report, there were found to be no TVWS initiatives that focused on gender non-binary persons. However, acknowledging the power relations that impact the manner in which knowledge ‘travels’, this is treated as a ‘living’ document, and efforts will be made to update this list with more initiatives as and when they are highlighted.

1. Colnodo implements TVWS technology with a gender focus in community projects; Colombia

The NGO Colnodo’s Community Networks³⁸ as a Social Programme is the recipient of a 2018 grant from Regional Fund for Digital Innovation in Latin America and the Caribbean and is designing and working on different models for the sustainability and appropriation of the network using a gender focus. Colnodo seeks to deploy community networks, exchange experiences and engage in a dialogue to close the gap in Internet access at the country level through community networks. The use of TVWS technology is free in Colombia; it was licensed in 2017 and it’s possible to use it for community projects. This technology will be tested in rural areas in order to validate its performance and make the best use of it in community network initiatives and the sustainable development of rural and urban areas in Colombia. The project has increased connectivity in rural area in the municipality of Maní, in the Casnare department in eastern Colombia, and raised community issues at the national bureau for Internet governance.

2. Project Kgolagano

³⁷ <https://www.techrepublic.com/article/white-space-the-next-internet-disruption-10-things-to-know/>

³⁸ <https://www.apc.org/en/node/34871/>

Project Kgolagano³⁹ will use TV white spaces – unused frequencies – to bring internet connectivity and telemedicine services to the distant facilities, allowing medical workers to send high-resolution patient images to specialized medical facilities around the world. The goal is more accurate diagnoses and better patient care.

Project Kgolagano, which means ‘to be connected or networked’, will have a specific focus on providing access to specialised maternal medicine, which will improve the livelihoods of women located in small towns and rural areas. Telemedicine experts and doctors providing medical expertise for referred patients are being provided by BUP.

Impact⁴⁰

Project Kgolagano was officially unveiled in March 2015 at a clinic in the town of Lobatse. The initial phase of the project included three healthcare locations and focused on providing access to specialized maternal medicine in order to improve the lives of women and children in small towns and rural areas. A second and third phase of the project will connect another 16 hospitals and clinics and 16 primary and secondary schools around the country to the Internet. By the end of 2016, a total of 35 locations in rural communities around Botswana will be connected. High-speed connectivity at these anchor institutions could enable the wider community to gain access to online content and applications.

3. Rural Tanzania

The Internet Society Tanzania Chapter⁴¹, supported by Beyond the Net Funding Programme in partnership with The University of Dodoma will target the remote areas of Dodoma Region, where conventional deployments are not available. Together, they will build a pilot project using TV White Space equipment as a community network solution.

White Space Internet is not widely adopted so far, but has the potential to transform the way we use wireless Internet. Being a free form of broadband, it is as a good alternative to provide underserved communities with Internet access that is similar to that of 4G mobile. White Space power stations can be charged with solar panels and broadband can travel up to 10 kilometers through vegetation, buildings and other obstacles.

Impact

A population of about 2,287 people will be directly served by this project. Three Educational Institutions are involved. They are located about 160 km from Dodoma with limited access to Internet services. Kondoa Girls High School has a population of 810 students and 46 staff members. Ula Secondary School has 829 students and 26 staff members and Bustani Teacher’s College has 538 students and 38 staff members. The project will finally give students and teachers access to online resources to support their learning. We aim to improve the life of rural communities also to reduce the migration to urban areas.

3.3 Common Themes

[To be inserted later]

39

<https://www.microsoft.com/empowering-countries/en-us/good-health-and-well-being/botswana-innovation-hub-and-microsoft-bring-specialized-medicine-to-remote-areas/>

⁴⁰ <https://www.devex.com/impact/partnerships/tv-white-spaces-tvws-pilot-project-825>

41

<https://www.internetsociety.org/blog/2018/04/piloting-use-tv-white-space-community-networks-rural-tanzania/>

4. Other Supplementary Models of Connectivity

(examples: Public Wi-Fi, Zero Rating)

[To be inserted later]

5. Recommendations for incorporating gender perspectives on Supplementary Models of Connectivity

[To be inserted later after IGF session]

Part B: Mandate and Methodology

1. Mandate

1.1 The IGF

One of the key outcomes of the World Summit for the Information Society (WSIS) was the Internet Governance Forum (IGF). It is a global forum where governments, civil society, the technical community, academia, the private sector, and independent experts discuss Internet governance and policy issues. While there is no negotiated outcome from IGF meetings, the IGF informs and inspires those with policy making power in both public and private sectors. At the IGF's annual meeting delegates discuss, exchange information and share good practices with each other. The IGF therefore helps to facilitate a common understanding of how to maximise Internet opportunities and address risks and challenges that may arise.

The annual IGF meeting is organized by a Multistakeholder Advisory Group (MAG)¹¹⁹ under the auspices of the United Nations Department of Economic and Social Affairs (UNDESA). The 13th annual IGF meeting will take place in Paris, France, on 12-14 November 2018.

To enrich the potential for IGF outputs, the IGF MAG developed an intersessional programme intended to complement other IGF activities, such as regional and national IGF initiatives, dynamic coalitions and BPFs. BPFs bring experts and stakeholders together to exchange and discuss best practices in addressing an Internet policy-related issue in a collaborative, bottom-up process.

1.2 Defining the BPF's mandate

The IGF's annual meetings enable BPF to present the findings of their community-driven work over the year in order to gather broader stakeholder input on each of the BPF topics concerned.

In the last three years, the BPF Gender has addressed the barriers faced by women and girls to access, use and make the most of the Internet, and has also investigated the challenges that women have to participate and get involved in Internet policy development and decision-making processes.

To be more precise, in 2015, the work of the BPF Gender looked at online abuse and gender-based violence, and in 2016 aimed to identify the different barriers that women face as regards Internet access. Last year, the BPF amplified this work by focusing on gathering information about specific communities.

Like other intersessional initiatives, the BPF Gender has functioned in a bottom-up, multi-stakeholder, and community-driven manner to gather stories, experiences, and lessons. But, as gender is a key and broad thematic area not only for its study but also for the other central IG and Internet policy matters, the BPF Gender has also worked hard to integrate gender issues within other IGF's work and within the framework of SDG 5 on gender equality, including the CENB III.

The community formed around the BPF Gender has become genuinely active and strong during the years as it has maintained the commitment to addressing the topic both in a broader angle and in delving into particular emerging issues. In this context, BPF Gender was able to host for the first time a main session in IGF Geneva only about Gender. Therefore, 2018 is being seen as an opportunity for strengthening, even more, the work that the BPF Gender has done and continuing supporting the efforts of our dynamic community.

BPF Gender also sees an opportunity to take the outcomes of previous years outside the usual audiences by sharing the best practices identified by the BPF in news spaces and forums as a way to stimulate and expand collaboration. In 2017, the BPF Gender started this path by engaging and bringing the work of IGF into other spaces, like APriGF and Brazil IGF, and it is essential to strengthen our actions.

The ways in which the BPF's primary mandate was further delineated, as well as the variety of methods used to meet the mandate, are discussed in the next section.

2. Methodology

2.1 Working Approach

An IGF Secretariat appointed consultant (Radhika Radhakrishnan) along with two non-MAG coordinators (Agustina Callegari and Paula Real) and two MAG coordinators (Renata Aquino Ribeiro and Raquel Gatto) assisted the BPF in coordinating, organizing and reporting on the BPF's work.

The BPF team adopted a semi-structured methodology for gathering inputs involving online surveys, virtual calls, engagements with the mailing list, mobile messaging and a dedicated mailbox.

Engagement was continued with relevant DCs and other intersessional activities such as the DC on Gender, DC on Innovative Approaches to Connecting the Unconnected and Phase IV of the Connecting the Next Billion. Engagement with national and regional internet governance policy processes and initiatives, such as NRIs and ISOC Special Interest Group on Women was also strengthened. Outreach through various social media platforms was continued such as Twitter and Facebook.

2.2 Survey

To gather more input on *some* of the substantial questions that the BPF aimed to address, a survey was designed and published on two platforms - Google Forms and LimeSurvey (see Appendix 2 for the survey contents and analysis). LimeSurvey was used through APC's platform to circumvent Google censorship in some regions of the world. Where relevant, survey responses were also integrated directly into Part A of this report.

2.2.1 Survey Design

Survey questions were drafted and refined in consultation with the BPF community after discussions on the BPF mailing list and during virtual meetings dedicated to planning the survey and doing pilot testing.

The aims of the survey (see Appendix 3 for the survey questions) were twofold, namely to:

- map existing initiatives and/or reports of relevance that support/develop alternative models of connectivity directly or indirectly responding to the needs of underserved populations of women and gender non-conforming individuals
- exploring the impact of such initiatives

Responses were elicited over a period of one month by calls on the mailing list, social media (including tweets from the IGF's Twitter account), and emailed invitations to various mailing lists (including mailing lists within the Internet governance and broader community).

Participants were able to make submissions using pseudonyms, and were notified that no personal information would be shared with third parties without their explicit consent as per the GDPR guidelines.

2.2.2 Survey Analysis

[To be inserted later]

2.2.3 Diversity of Respondents

[To be inserted later]

2.3. Virtual Meetings

Fortnightly meetings were scheduled, and after each meeting a meeting summary was distributed on the BPF's mailing lists as well as being published on the BPF's dedicated platform on the IGF's website (all meeting summaries are on the IGF's website). In total, 8 working virtual meetings were held by the BPF in 2018.

Theme calls were also organized to supplement the findings from the surveys. 2 theme calls were organized by the BPF in 2018 with the themes - Internet access for women and Internet access for gender non-binary individuals. For each theme call, speakers from the field were invited to present their work on the calls and to strengthen the collaborations between the BPF and other stakeholders.

2.4 Mobile Messaging

The BPF set up a number for collecting inputs and sharing information via mobile messaging. The number +5585998380136 could be added on Whatsapp, Telegram or Signal. A broadcast-only channel via Whatsapp was also set up for updates. The channel was be

configured in a way that only administrators could view participant numbers, thus protecting their data. Through this number, members were encouraged to send videos, photos or stories around the theme of the BPF.

2.5 Mailing List

The usage of the existing dedicated and open mailing list for the BPF Gender was continued to and details for joining the mailing list were published on the IGF's website. Frequent BPF status updates were also sent to the intersessional and BPF mailing list with calls for input and/ or other relevant information. The BPF mailing list is open to all stakeholders interested in or with expertise on related issues.

2.6 Email

The BPF set up a dedicated mailing address gender@intgovforum.org for members to mail their contributions or questions for 2018.

2.7 Main Session at IGF

[To be inserted later]

3. Limitations

[To be inserted later]

Part C: Appendices

APPENDIX 1: CONTRIBUTORS

[To be inserted later]

Coordinators:

Consultant:

Virtual meeting participants:

Survey participants:

Volunteers:

Participants/panelists at the BPF's IGF session:

APPENDIX 2: BPF SURVEY

Survey Questions

The survey structure and questions was as follows:

Alternative Models of Connectivity: UN-IGF BPF Gender & Access Survey 2018

How do alternative models of connectivity support the needs of underserved populations of women?

The United Nations Internet Governance Forum (IGF) Best Practice Forum (BPF) on Gender and Access is currently studying the potential impact of initiatives that support/develop alternative models of connectivity that directly or indirectly respond to the needs of underserved populations of women and gender non-conforming individuals.

'Alternative models of connectivity' in this survey refers to complementary telecommunication infrastructure models that not only speed up the pace at which unconnected populations can be supported with internet access, but also complement existing models in making communications accessible to all. Examples: Community Networks, Public Wifi, TV White Spaces, Zero Rating.

In 2015, the work of the BPF Gender looked at online abuse and gender-based violence, and in 2016 aimed to identify the different barriers that women face with Internet access. In 2017, the BPF amplified this work by focusing on gathering information about specific communities.

It takes approximately 15-30 minutes to complete this survey (depending on the granularity of information you provide).

Please note that all references to 'women' in this survey also include people who identify as women and girls (unless otherwise specified).

This survey will be closed for input on 15 October 2018.

(* indicates required questions)

I: Tell us about yourself

All contributors, unless they choose to provide pseudonyms, will be credited in the BPF's outcome product(s) and published online. Note that contact details will not be published, and we will not share your contact details with any third parties.

This survey collects personally identifiable information. In compliance with the GDPR, we will take steps to secure the data we collect, and allow access to your data should you wish to access the same. You can email gender@intgovforum.org for further information.

1. What is your name?
If you'd like to protect your confidentiality and remain anonymous, please use a pseudonym and indicate the same.
2. To which gender identity do you most identify?
 - Female
 - Male
 - Transgender female
 - Transgender male
 - Gender variant / non-conforming
 - Prefer not to answer
 - Not listed ____
3. Where are you from? *
Please write only the country name where you are ordinarily resident - i.e. where you spend most of your time and consider your home.
4. How can we get in touch with you?
What is your email address? Note that contact details will not be published, and we will not share your contact details with any third parties.
5. Which stakeholder group do you primarily associate yourself with? *
Select closest option.
 - Government (e.g. you work for your government)
 - Technical community (e.g. you are a member of an organization like ICANN / ISOC)
 - Civil society (e.g. you consider yourself an activist working to ensure human rights apply online)
 - Private sector (e.g. you represent a company that sells mobile plans to customers)
 - Intergovernmental organisation (e.g. you work for an organisation like the UN)
 - Academia (e.g. you're a student or lecturer)
 - Other (please specify)
6. Which one of these communities of women do you identify or work with? *
 - Women with disabilities
 - Indigenous women
 - Refugee women
 - Rural women
 - Young women
 - LGBTQIA Women and Gender Non-Binary Individuals
 - Other (please specify the particular community of women that you work with)
 - I don't work with a particular community of women
7. Which of the below descriptions best applies to you? *
 - I identify as a member of the community

- I work with this community
- I have done research on Internet access issues with this community
- Other (please describe)
- Not Applicable

II: Mapping Initiatives for Alternative Models of Connectivity

This section maps any past, existing or planned initiatives, programmes and/or projects that support/develop alternatives models of connectivity that directly or indirectly respond to the needs of underserved populations of women.

8. Which alternative model of connectivity would you like to provide inputs regarding? *
'Alternative models of connectivity' in this survey refers to complementary telecommunication infrastructure models that not only speed up the pace at which unconnected populations can be supported with internet access, but also complement existing models in making communications accessible to all.
- Community Networks
 - Public Wifi
 - TV White Spaces
 - Zero Rating
 - Other (please specify)

The rest of this section seeks specific details regarding initiatives supporting the chosen model of alternative connectivity.

We provide space for you to enter the details of 1 initiative in this survey. If you know of more, please re-take the survey or email details to gender@intgovforum.org.

9. Does the initiative you'd like to provide information about have a website or are there any studies conducted around this initiative? *
- Yes
 - No

If "Yes" to Q9, proceed to Q10 through Q13.

If "No" to Q9, proceed to Q11 through Q17.

10. Please provide a URL of the website / study with details specific to the work of the initiative.
You can also send us an email with with details specific to the work of the initiative containing text / audio attachments to gender@intgovforum.org. If you prefer to send in video testimonies, please upload them to your preferred video service platform (example: YouTube) and provide the URL above.
11. What is your sense of gender parity in the composition of this initiative and space?
How involved are women in the implementation of the initiative and do women hold key positions in terms of policy-making and decision-making in this space?

12. To what extent does the initiative's work reflect a gender dimension? *
- Gender-blind (no mention of gender)
 - Gender-focused (main focus on gender)
 - Partial gender dimension (some focus on gender)

If "Gender-blind" or "Partial" selected in Q12, proceed to Q13.

If "Gender-focused" selected in Q12, proceed to Section III.

13. What potential do you think this space has to uniquely support access for underserved populations of women, and how can this connectivity approach be better customized to specifically address women?

If "Yes" to Q9, Proceed to Section III

If "No" to Q9, proceed to Q14 through Q16.

14. What is the name of this initiative, when was the initiative launched, who is responsible for the initiative, and what region is it focused on (including if the initiative is national / regional / global in its operation)?*
15. Please provide us with a brief summary/ key highlights of the initiative, including the work being done by the initiative.*
16. What are / were the challenges involved in setting up and maintaining this initiative?

Proceed to Section III

III: Potential Impact of Alternative Models of Connectivity on Underserved Communities

Thank you for providing us with the details of the initiative of your interest. This section now maps the potential impact of the selected initiative on underserved communities of women.

17. What are some of the success stories of this initiative?

If you know stories that highlight women's leadership in these initiatives and stories of women that have changed their lives through access, please share them here. You can also mail us voice notes to gender@intgovforum.org. If you prefer to send in video testimonies, please upload them to your preferred video service platform (example: YouTube) and send us a web link for the same.

18. What unique benefits do underserved communities accrue through access to this alternative model of connectivity that other mainstream models may not offer? Please include analytical and statistical evidence where applicable in your response.
Example: Community networks can empower local communities through digital literacy and cost-oriented approaches.

19. How has connecting to the Internet through this alternative model of connectivity potentially impacted the lives of underserved communities?

Select all that apply.

- Easier to stay in touch with family and/or friends
- More business and/or employment opportunities
- Increased feeling of safety
- Saves time
- Saves money
- Improved ability to do small / routine jobs more conveniently and/or cheaply
- Improved ability to manage money better through mobile financial services
- Better access to health information and services
- Better access to education services/learning opportunities
- Better access to information on agriculture
- Better access to governmental services
- Improved ability to stay aware of the latest news
- Better access to entertainment (games, music, radio, etc.)
- Better access to shopping and goods for business / homes
- Improved social status
- More autonomy/ independence
- Creates a controlling environment
- Causes more stress
- Fear of potential violence online
- Other

20. What government policies to promote alternative models of connectivity exist (if any) in your region and what influence has these policies had on the ability of underserved communities to access the internet?

Examples: Policies for pricing, licensing, and spectrum management

21. What are the technical and policy challenges involved in setting up this alternative model of connectivity and how can they be addressed meaningfully so as to benefit underserved communities?

Examples: high costs of spectrum rights, exclusive licensing, challenges associated with spectrum allocation and assignment

22. Please provide details of existing literature that address, in whole or part, the impact of this model of connectivity for underserved communities of women.

Title, Author, Publication Date, Citation, URL (if any)

Thank you. We appreciate the time you spent in completing this survey, look forward to learning from your valued responses, and hopefully to welcoming you to our BPF in the future.

Are you interested in helping us learn more about gender and alternative models of connectivity? We welcome all participants:

Join our mailing list for updates on meetings and other developments:

http://intgovforum.org/mailman/listinfo/bp_gender_intgovforum.org

To learn more about this work and how to participate, visit:

<https://www.intgovforum.org/multilingual/content/bpf-gender-and-access-0>

For more information, contact Radhika Radhakrishnan (gender@intgovforum.org).

---END OF SURVEY---

APPENDIX 3: BPF SESSION PRE-REPORT AT IGF 2018

[To be inserted later]

APPENDIX 4: BPF SESSION REPORT AT IGF 2018

[To be inserted later]