BEST PRACTICE FORUM ON GENDER AND ACCESS (2018)

IMPACT OF SUPPLEMENTARY MODELS OF CONNECTIVITY IN ENABLING MEANINGFUL INTERNET ACCESS FOR WOMEN AND GENDER NON-BINARY PERSONS

This is the final resource produced as an output of an intersessional, multistakeholder and community- driven best practice forum of the IGF aimed at investigating challenges and opportunities for promoting meaningful access to the Internet for women and gender non-binary persons.

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Executive Summary

This is the final output resource produced by a community of participants in the United Nations Internet Governance Forum (IGF)'s Best Practice Forum (BPF) on Gender and Access in 2018. This year, the BPF studied the potential impact of initiatives that support or develop supplementary models of connectivity that respond to the needs of underserved populations of women and gender non-binary persons. 'Supplementary models of connectivity' 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. The BPF identifies benefits of such supplementary models of connectivity from gender perspectives and maps existing initiatives around the world that currently focus on women and gender non-binary persons as well as their impact, specifically for Community Networks, TV White Spaces and Public WiFi.

This work builds upon the work of the BPF in the previous four years. In 2015[1], the BPF Gender looked at online abuse and gender-based violence. Identifying this as one of the barriers to access, the BPF in 2016[2] aimed to identify different barriers that women face as regards Internet access. In 2017[3], the BPF noted that some barriers are experienced more keenly by women in certain communities than in others and therefore focused on identifying the needs and challenges of diverse women's groups with respect to Internet access.

This BPF 2018 resource finds that supplementary models of connectivity can help make progress on resolving the pertinent barriers commonly faced by women and gender non-binary persons in gaining meaningful Internet access. However, a key finding of the BPF is that there is a dearth of (known) initiatives currently developing and supporting such connectivity models with a gender focus. Despite this, many respondents in the BPF surveys and the 13th IGF BPF Gender session at UNESCO, Paris noted that initiatives of supplementary models of connectivity have the potential to be better customized to specifically address women and gender non-binary individuals. The BPF hence recommends and urges attention to the following best practices for including gender perspectives while developing supplementary models of connectivity that can aid in making their access and use more equitable with regard to gender and its intersections.

- The BPF recommends acknowledging that assumptions about Internet infrastructure as inherently neutral and democratic are often misaligned with the realities of accessing the Internet; connectivity networks are equally sites of spatial, political, and cultural contestations. It hence urges initiatives to take into account the disparate needs and demands of different genders and implement approaches that are specifically

[1] 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 [Accessed 20 October 2018].
[2] 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].
[3] 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: https://www.intgovforum.org/multilingual/filedepot_download/5004/1319 [Accessed 20 October 2018].

gender-focussed in their vision and in practice.

- The BPF recommends encouraging broader gender classifications of nationally representative and gender-disaggregated data by collecting statistics in a consistent and rigorous manner that go beyond the male-female gender binary and recognize and value gender non-binary experiences and beyond.
- The BPF recommends that rigorous efforts be made towards ensuring that patriarchal, white cis male dominated societal structures are not reproduced in supplementary models of connectivity.
- The BPF highlights the importance of agency and recommends ensuring that agency is not tokenistic so that women in decision-making roles can exercise authority independently, as opposed to being relegated to acting as "proxies" for their male family members. The BPF also recommends that future research should continue for mapping similar experiences for gender non-binary persons.
- The BPF urges valuing women's (often invisible) labor, collectivist practices, and contributions within communities as an integral and inherent part of the social glue of initiatives supporting supplementary models of connectivity. The BPF also recommends that future research should continue for understanding similar engagement of gender non-binary persons with such models of connectivity.
- The BPF encourages a bottom-up approach where the community is an active stakeholder in supplementary models of connectivity by finding effective methods of communicating with diverse communities.
- The BPF recommends that further research be done in identifying methodologies and potential indicators that can be used to understand the role and variances of culture and norms as barriers to access, and paying attention to the intersections between gender and other relevant socio- economic and political identities or factors.
- The BPF recommends that gender analysis be made an integral part of planning efforts every step of the way while implementing initiatives of supplementary models of connectivity (from budgeting to implementation processes), rather than an "add-on" task in the end. It urges such an analysis to adopt an intersectional approach as gender always overlaps with sex, race, class, caste, religion, ability, and other relevant identities.
- The BPF recommends that future regulations include mandating service providers to remain sensitive to gendered notions of meaningful access and practicing inclusivity in the spaces where they deploy Internet services.

How was this resource produced?

This outcome resource was produced as a reflection of an open, iterative, bottom-up, multi-stakeholder, and community-driven process in which people from diverse regions and stakeholder groups participated by completing online surveys, attending regular virtual meetings, submitting input on the mailing list, dedicated email address, and mobile messaging, sharing reports of relevant/linked events, and contributing background research. This resource also contains references to discussions facilitated at the BPF's session at IGF 2018 at UNESCO, Paris, France on 13 November, 2018. For a more detailed explanation of the BPF's methodology in 2018, see Part B of this resource. For additional background and information on how to participate in the IGFs intersessional activities, please visit the IGF website[4].

[4] https://www.intgovforum.org/multilingual/content/bpf-gender-and-access

Interpretation Notes

The Secretariat has the honour to transmit the output resource prepared by BPF Gender. The content of the resource and views expressed therein are those of the authors and do not imply any expression of opinion on the part of the United Nations.

Moreover, 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. Non-binary 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.[5]
- '**Mainstream Models of Connectivity'** denote those networks that *may* share some or all of these characteristics[6]:
    - 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 or all of the following characteristics as proposed in existing literature[7], however it should be noted that these may not be 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

[5] J. Saldana, A. Arcia-Moret, B. Braem, E. Pietrosemoli, A. Sathiaseelan, 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]

[6] Ibid.

[7] 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
DEF	Digital Empowerment Foundation
IGF	Internet Governance Forum
ICT	Information and Communication Technologies
ISOC	Internet Society
ITU	International Telecommunication Union (UN)
LDC	Least Developed Country
LGBTQIA+	Lesbian, Gay, Bisexual, Trans, Queer/Questioning, Intersex, Asexual +
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 Google[8]. 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 internet[9]. A 2018 study by the GSMA[10] 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. 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. Relatively lesser data is available for Internet access for and experiences of gender non-binary persons[11].

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 Sterling[12] 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

[8] 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].
[9] https://www.itu.int/en/Pages/default.aspx
[10] https://docs.wixstatic.com/ugd/04bfff_6ff1b0c772f64f33a3c7ebba3b270f2c.pdf
[11] https://www.accessnow.org/in-2018-honoring-women-transgender-and-non-binary-persons-will-make-the-internet-safer-for-everyone/ [Accessed 10 January 2019].
[12] 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].

2017[13] noted that some barriers are experienced more keenly by some women in certain 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 LGBTQIA+ 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. This report primarily explores Community Networks (section 2), Public WiFi (section 3) and TV White Spaces (section 4).

1.2 Relevance of Supplementary Models of Connectivity in Resolving Barriers 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 meaningful Internet access. This resource looks at how supplementary models of connectivity can help make progress on these challenges. The key findings are summarised here, but the following sections 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; women's participation in decision-making roles pertaining to the Internet and/or in the technology sector; and the lack of relevant capacities and digital literacy skills. Relatively lesser data is available for analyzing Internet access barriers for gender non-binary persons, and the BPF urges further research to rigorously explore the same in greater detail.

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 bodies[14]. They are premised on the idea that community ownership can help empower local neighbourhoods to access the Internet content that they want for their community.

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

[14] Internet Society, Digital Empowerment Foundation (2017) *Community Networks. Regulatory Issues and Gaps: An Experience from India* https://www.internetsociety.org/wp-content/uploads/2017/10/W4C-Policy-Paper_Dec2017.pdf [Accessed 31 October 2018].

An example of such an initiative is the Wireless Women for Entrepreneurship & Empowerment (W2E2), which is a 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.

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 on 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 neutral[15].

Zero-rating also allows mobile subscribers to access certain online content for "free" by subsidising consumers so they do not incur data usage charges or have their usage counted against data usage limits[16].

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 is evidenced by the plethora of cases in which women are prohibited to access the Internet for fear that they will bring dishonor upon themselves and their communities by engaging in online conversations that are antithetical to being a "good" woman in many cultures. Boys are prioritised for technology use at home, and women and gender non-binary persons not only face online gender-based violence[17] but also have restrictions to their movement[18].

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[15] ibid.

[16] Research ICT Africa (2016) *Much Ado About Nothing? Zero-Rating in the African Context* https://www.researchictafrica.net/publications/Other_publications/2016_RIA_Zero-Rating_Policy_Paper_-_Much_ado_about_nothing.pdf [Accessed 31 October 2018].

[17] 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

[18] Koutsky, Thomas M. and Sterling, Revi, *Understanding the Gender Digital Divide: Social Norms and the USAID WomenConnect Challenge* (2018). TPRC 46: The 46th Research Conference on Communication, Information and Internet Policy 2018. Available at SSRN: https://ssrn.com/abstract=3142049 [Accessed 31 October 2018].

Revi Sterling, deputy chief of NetHope noted[19]:

> *"The real reason we can't get [the] last several hundreds of millions of women online — 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 analyzed above. The variances of culture between different regions of the world lead their study to be a complex, expensive process, and have the effects of development practitioners to be reluctant tackle them meaningfully as well as donors being reluctant to come on board[20]. This underscores the importance of carrying out such studies, though one of the key findings of this report is that there are few such studies with a specific gender focus, which also makes this resource's findings novel and 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 includes literacy gap in reading, lack of 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 can help provide 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 being[21].

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 websites[22].

While acknowledging the diversity among various models, one of the defining characteristics of many community networks is the development and promotion of local content in local

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

20 ibid

21 Romanosky, Julianne and Chetty, Marshini (2018) *Understanding the Use and Impact of the Zero-Rated Free Basics Platform in South Africa* https://hci.princeton.edu/wp-content/uploads/sites/459/2018/01/ZeroRatedCHI-25.pdf [Accessed 31 October 2018].

22 Layton, Roslyn and Elaluf-Calderwood, Silvia, *Free Basics Research Paper: Zero Rating, Free Data, and Use Cases in mhealth, Local Content and Service Development, and ICT4D Policymaking* (2016). TPRC 44: The 44th Research Conference on Communication, Information and Internet Policy 2016. Available at SSRN: https://ssrn.com/abstract=2757384 or http://dx.doi.org/10.2139/ssrn.2757384 [Accessed 31 October 2018].

languages, which can stimulate community interactions, and also allow for customization to the needs of diverse communities[23].

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 as seen above, it is to be carefully noted that mere access to information does not necessarily translate into decision-making power. From local governance bodies to Community Networks, it has been historically observed that women in positions of decision-making power don't always get to exercise that power, and are often relegated to acting as "proxies" for their male family members to exercise authority[24]. This highlights the importance of agency, and the need to ensure that agency is not tokenistic. This can also be evidenced through the following example cited at the IGF 2018 session (see Appendix 5 for full session report) by one of the panelists, Nic Bidwell (Gender and Social Impact Facilitator for the Association for Progressive Communications Local Access Project):

> *"It's interesting to note that the Community Networks in which there was the most gender inequality was also the one where for political reasons, a woman had been put at the front of it, and I think that that suggests to us that this cannot be a kind of superficial just put somebody in charge and hope that it'll work. That's more of a political act than actually an act that helps people have agency."*

However, in some cases, it is noticed that the potential for empowering decision-making does exist. As an example, AFCHIX[25] (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.

1.2.6 Need for Relevant Capacities and Digital Literacy Skills

The BPF Gender and Access 2016 report highlighted the lack of relevant of capacity and skills for accessing the Internet as a barrier for women to meaningfully gain from the Internet's potential. The need to build and develop capacities and skills and provide opportunities to

[23] https://www.comconnectivity.org/article/dc3-working-definitions-and-principles/ [Accessed 31 October 2018].
[24] Haritas, K. (2008). *Poverty and Marginalisation: Challenges to Poor Women's Leadership in Urban India. Gender and Development*, 16(3), 457-469. Retrieved from https://www.jstor.org/stable/20461295?seq=1#page_scan_tab_contents
[25] https://www.usaid.gov/wcc [Accessed 31 October 2018]

improve digital literacy skills was also analyzed to be closely linked to the previously mentioned barrier of women's ability to participate in decision-making roles in the ICT sector.

Some supplementary models of connectivity, such as Community Networks, aid with resolving this barrier by having capacity building programmes integrated into their structure. An example of this is the TunapandaNET[26] (a low cost community wireless network championed by Tunapanda Institute) which not only provides affordable connectivity for youth and women in Kibera, Nairobi, but also provides capacity building and training for teachers, youth and women to equip them with digital literacy skills as well as the ability to participate in the digital economy.

1.3 Benefits of Supplementary Models of Connectivity for Women and Gender Non-Binary Persons

To better understand the benefits that supplementary models of connectivity provide to diverse communities of women and gender non-binary persons, the BPF Gender 2018 online survey asked, *"How has connecting to the Internet through this alternative[27] model of connectivity potentially impacted the lives of underserved communities?"* (See Appendix 2 for survey details). 23 responses were gathered for this question.

A majority of the respondents (65.2%) felt that connecting to the Internet through supplementary models of connectivity made it "easier to stay in touch with family and/or friends" and provided them with "better access to education services/learning opportunities." 56.5% of the respondents said that it helped them "save money" and provided them "better access to information on agriculture." 52.2% noted that it provided them with "more business and/or employment opportunities" and helped them "save time." 47.8% said it gave them "better access to health information and services." 43.5% noted an "increased feeling of safety" and an "improved ability to stay aware of the latest news." 34.8% felt it provided them with "better access to entertainment" and "more autonomy/ independence." 30.4% said it gave them an "improved ability to do small / routine jobs more conveniently and/or cheaply" and "better access to governmental services." 26.1% said it provided them with "better access to shopping and goods for business / homes". 13% noted an "improved social status." 8.7% noted an "improved ability to manage money better through mobile financial services."

Note that this sample is by no means, nor does it purport to be, representative of any population. As the aim of the survey was rather to gather a broad and diverse sample of input, this aspect about the sample was not considered as important.

A graphical depiction of the survey results to this question can be found in Figure 1 below:

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26 https://www.internetsociety.org/blog/2018/06/tunapandanet-paves-the-way-for-kenya-to-connect-the-underserved/ [Accessed 13 December 2018]

27 The term "alternative model of connectivity" was initially used by the BPF Gender during outreach processes, and the term "supplementary model of connectivity" was later adopted to more accurately capture the concerned connectivity models.

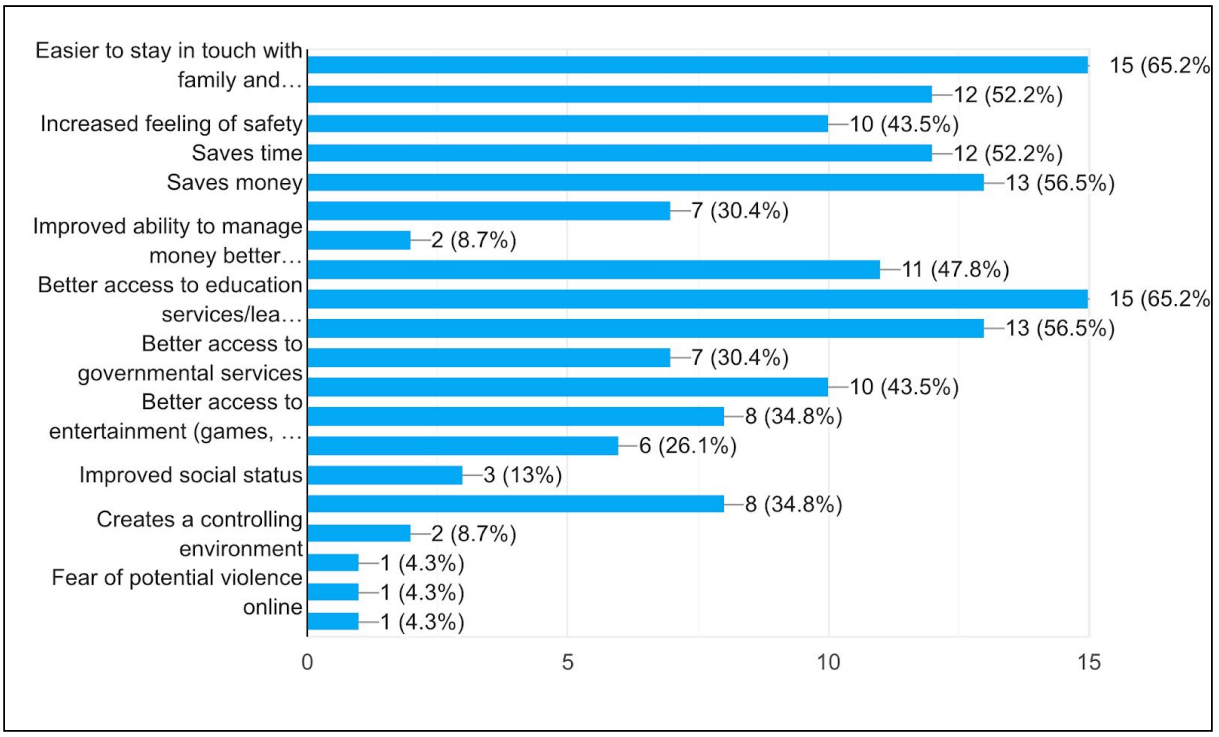

Figure 1: Responses to *"How has connecting to the Internet through this alternative model of connectivity potentially impacted the lives of underserved communities?"* on BPF Gender 2018 survey

1.4 Why Do We Need a Gender Focus for Supplementary Models of Connectivity?

Technology does not have a neutral impact and can and often does reproduce social, economic and cultural inequalities in the context it is deployed in. This is in part due to the fact that technology inevitably reflects the prejudices and choices of its creators, whether consciously or unconsciously. The predominantly male and fairly culturally homogeneous composition of the technology industry lends to this lack of diversity being reflected in the products it produces. This is also reflected in the supplementary models of connectivity explored in this resource.

Thus, to have any meaningful impact on the ability of women and gender non-binary persons to benefit from the Internet, initiatives must take into account the disparate needs and demands of different genders and implement approaches that are specifically gender-focussed in their vision. This is why gender analysis must be an integral part of planning efforts, rather than an "add-on" task.

Furthermore, for such gender analysis to become a reality, the processes and structures of data collection must also undergo critical changes, as was pointed out by one of the panelists at IGF 2018, Anri van der Spuy (representing Research ICT Africa's Digital Policy Project):

> *"There is a challenge in the sense that we only look at male and female in most of the statistics. And the statistics we have at the moment by itself, just the male-female binary is so limited that encouraging broader classification is difficult."*

While such changes are the need of the hour, one of the key findings of this resource is that there is currently a severe lack of a gender focus in initiatives that support and develop supplementary models of connectivity. Limited data was found to be available on such initiatives focusing uniquely on challenges that women face in accessing the Internet, and negligible data on the same for gender non-binary persons. This means that the unique challenges that women and gender non-binary persons face (as highlighted in previous BPF reports) are not necessarily solved for in these models.

However, merely having a gender focus is also not enough as gender always overlaps with sex, race, class, caste, religion, ability, and other relevant identities and factors. Thus, an intersectional approach is required. This was discussed at the IGF 2018 session, where Anri van der Spuy noted:

> *"A lot of the people who are unconnected are already people who are in rural areas or have very low levels of income. Often gender isn't such a big factor, it's where you are located - whether you're in a rural area, whether you have a certain level of education and income. So, the bigger question is, if gender is a determining factor for whether you will be online or not, but the fact is that most women are located at those bottom layers."*

Moreover, 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 north [28]. 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-binary persons, *"this advocacy and movement building is situated in the white men dominated discourse of telecommunications technology, policy and lobbies around regulation*[29]." This has an impact on the knowledge that is produced in studying the gender impacts 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. Gender perspectives on community networks are further explored in more detail in section 2 of this resource.

The challenge extends to other supplementary models of connectivity such as Public WiFi. If a gender-blind approach is implemented, then it is assumed that merely having Public WiFi access points can enable women and gender non-conforming persons to access the Internet. However many public spaces are inaccessible to women (and also gender non-binary persons) due to cultural restrictions on their movements[30]. Thus, a gender-focused approach in such a context would involve ensuring that Public WiFi access points are placed such that they can be used meaningfully by women and gender non-conforming persons. This is further explored in section 3.

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[28] https://www.genderit.org/feminist-talk/gender-and-community-networks-researching-social-and-gender-impact

[29] *ibid.*

[30] Ranade, S. (2007). *The way she moves: Mapping the everyday production of gender-space*. Economic and Political Weekly, 1519-1526. Accessed via https://www.jstor.org/stable/4419518 [10 January 2019]

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 available[31]. This underscores the need for a gender analysis of existing models of connectivity.

Moreover, the goal of models of telecenters and Public WiFi 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 serve[32]. 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 meaningful 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 argument[33]. 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 best practices recommended for the implementation of the same.

1.5 Gender Parity of Initiatives Supporting Supplementary Models of Connectivity

The BPF Gender 2018 online survey gathered information about existing initiatives supporting supplementary models of connectivity and the gender parity of the composition of these initiatives (See Appendix 2 for survey details). Among 28 responses that this survey received, it was found that half the respondents (50%) said that the composition of such initiatives had only a "partial gender dimension", indicating some, though not main, focus on gender. 14.3% of the respondents recorded the space to be "gender-blind" with no mention of gender and 35.7% noted it to be "gender-focused" with the main focus on gender.

Note that this sample is by no means, nor does it purport to be, representative of any

[31] https://www.apc.org/en/news/telecentres-uganda-do-not-appeal-rural-women
[32] N. Jorge, Sonia (2000) *Gender Perspectives on Telecenters.* Accessed via http://www.bridge.ids.ac.uk/sites/bridge.ids.ac.uk/files/Docs/jorge_telecenters.pdf [10 January 2019]
[33] IT for Change (2016) *Free Basics: A wrong turn on the road to women's empowerment?* Accessed via http://www.itforchange.net/sites/default/files/Women%27s%20Rights%20Online%20Study%20-%20India%20Country%20Report.pdf (p. 11-12) [10 January 2019]

population. As the aim of the survey was rather to gather a broad and diverse sample of input, this aspect about the sample was not considered as important.

Many noted that while women were largely involved in the initiatives, they were primarily consumers and end users, and not involved in key positions of decision-making in the initiatives.

> *"It is women centered team holding key positions. However they have no saying in the policy making or decision making."*
>
> - Survey respondent from India

> *"We organized working groups... made up of both men and women in equal proportion however we kept some of the roles independently since the women in the community preferred the intimacy of a women only circle and felt the participation of men in their working groups could limit their leadership roles inside them."*
>
> - Survey respondent from Honduras

Others noted that while some of the initiatives themselves had high involvement of women in all capacities, the larger space of such connectivity models was predominantly male:

> *"70% are male in this space as support comes from Government Agencies where the decision makers are majorly male"*
>
> - Survey respondent from Nigeria

An interesting finding from the survey was that even though many initiatives do not currently have a main gender focus (63.4% did not record gender to be a main focus), many felt that these initiatives had the potential to be better customized to specifically address women and gender non-binary individuals.

The barriers to customizing initiatives to specifically cater to women and gender non-binary individuals were found to be largely in-line with the barriers discussed in Section 1.1 of this resource, thus highlighting the importance of gender analysis of supplementary models of connectivity. Among others, these included cultural norms, lack of skills and capacity, and access to relevant information, as the following survey responses indicate.

> *"Women can have special access points in the village where they can visit without any fear after darkness. Women also need to have privacy of their own in visiting websites and acquiring information. Currently this is not possible as women do not own a phone and use the phone of their husband/father or son."*
>
> - Survey respondent from India

> *"It has a lot of potential, especially because indigenous women are getting the opportunity of strengthening their own capacities to lead processes that were previously unknown to them. As they get more access to information and learn how to improve their own economic dynamics within the community, they will expand their opportunities for growth. This initiative could be customized to have a gender focus by teaching women specifically on how to use the Internet as a tool for education on women's rights and how to address*

local problems affecting women and children."

- Survey respondent from Honduras

2. Community Networks

2.1 What are Community Networks?

Community networks (CNs) have a range of different definitions in academia, technical, government and regulatory spheres[34]. Some prominent definitions include; Baig, Roca, Freitag, and Navarro[35] define CNs as "crowdsourced networks" that are free, open, neutral, built by the community and managed as a common resource; Elkin Koren[36] defines CNs as distributed architectures in which users implement a physically decentralized network through the decentralization of hardware. The European Commission (EC) 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 have been identified as[37] -
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.

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[34] Internet Society, Digital Empowerment Foundation (2017) *Community Networks. Regulatory Issues and Gaps: An Experience from India* https://www.internetsociety.org/wp-content/uploads/2017/10/W4C-Policy-Paper_Dec2017.pdf [Accessed 31 October 2018].

[35] Baig, R., Roca, R., Freitag, F., & Navarro, L. (2015). *"Guifi.net: A crowdsourced network infrastructure held in common."* Computer Networks, 90, 150-165. Retrieved from: http:// www.sciencedirect.com/science/article/pii/S1389128615002327

[36] Elkin-Koren, N. (2006). "*Making technology visible: Liability of Internet service providers for peer-to-peer traffic."* New York University Journal of Legislation and Public Policy, 9, 15-76. Retrieved from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=924316

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

2.2 Gender Perspectives on Community Networks

As mentioned earlier, like all technology, communication technology does not have a neutral impact and can exacerbate unequal power relations in the community, and so Community Networks (CNs) should strive to implement inclusive and just structures.

One of the responses received on the BPF Gender survey (see Appendix 2 for further details) highlights the many ways in which Community Networks can benefit diverse communities of women and gender non-binary persons:

> *"Amongst many other things, CNs can provide: (1) affordable internet access and electricity to unserved populations; (2) contexts for creating more appropriate, innovative solutions to local problems; (3) community empowerment through local ownership; (4) epistemic sovereignty and knowledge diversity, e.g. support for local languages and literacies, that otherwise face extinction; (5) contexts for local enterprise that stimulate the local economy; (6) environmentally sensitive electricity solutions; (7) alternative spaces for technology production in the face of colonisation by technology giants and imposition of so-called 'universal paradigms'."*
>
> - Survey respondent from Namibia

The BPF Gender session at IGF 2018 (see Appendix 5 for the full session report) witnessed a rich discussion on Community Networks, with diverse perspectives being shared by the panelists. Some key points are forwarded here.

One of the panelists, Nic Bidwell (Gender and Social Impact Facilitator for the Association for Progressive Communications Local Access Project), expressed that during her past year's work on Community Networks in Africa, Latin America, and Asia, she encountered many welcoming people working with local Community Networks who were supportive of gender perspectives. However, she noted:

> *"All the men that I met were supportive. Supportive doesn't necessarily mean they knew what to do."*

This indicates that while many Community Networks are trying to incorporate some of the gender perspectives (see Section 1 of this report) by being at least partially receptive to considerations of gender, not all are having success in carrying this out. Bidwell noted that one way in which gender perspectives can be more successfully incorporated into Community Networks would be to ensure that a bottom-up approach is in place:

> *"A Community Network is a part of your everyday life. You don't leave it behind when you come home from work. It's embedded in your community. It's part of your families. It's part of your laughs and frustrations. So the answer to gender perspective can't be top-down, it has to come within the living system of a Community Network, which is very complicated to achieve."*

One of the reasons for why this is not straightforward to implement is that women are often relegated to acting as "proxies" for their male family members to exercise authority, as discussed previously in Section 1.2.5. Bidwell noted:

> *"Community Networks in which there was the most gender inequality was also the one where for political reasons, a woman had been put at the front of it, and I think that that suggests to us that this cannot be a kind of superficial just put somebody in charge and hope that it'll work. That's more of a political act than actually an act that helps people have agency."*

This highlights the importance of agency, and the need to ensure that agency is not tokenistic for ensuring meaningful Internet access to women and gender non-binary persons.

Another complexity is the reproduction of patriarchal, male-dominated structures that are reflected in society at large in Community Networks as noted by Bidwell:

> *"There are many kinds of Community Networks, but most of them were based on some kind of local governance structure, like a tribal authority, an indigenous assembly, a gram panchayat, etc. And those themselves are inherently patriarchal, male-dominated structures. So men constituted 70% of the initiators or champions that I interviewed, 70% of the operators or members, people who are hands-on in the Community Networks. 50% of the users of Community Networks are people who don't tend to be in technical decision-making roles, and only 35% of the non-users. So, you can see that there is a fair amount of reproducing the same structure."*

Bidwell observed that this has had the effect of younger women who are able to use the Internet to start their own entrepreneurial activities instead of having to go up against the predominantly male dominated local governance structures in the Community Networks.

However, even though the centerstage of the space is dominated by men, Bidwell further noted that women do make important contributions that are often invisibilized. She observed an emerging trend of women who had gained influence in the space *"in a quiet way building through the backdoors."* One of the plethora of unacknowledged ways through which women keep Community Networks going is by contributing work to collectivist practices within the community, such as community work in Latin America, community cooking in Indonesia, etc. This work is central to the sustenance of the Community Network.

To create a space where these contributions by women can begin to be included, it is critical to acknowledge, value, and bring to the forefront women's invisible labour in the development of Community Networks as Bidwell noted:

> *"... to start paying more attention to and putting more value on the type of activities that women are already doing. In all Community Networks, the women were involved in craft, cooking, etc. and that is often what they used to access the Internet too. But this is also part of the social glue of their communities. And there is a tendency when we talk about Community Networks to treat those types of uses of the Internet - to find out how to create*

a broach for your hijab and sell it online, to make a new recipe, there's a tendency that these should be fitted into the corners. But actually they are an inherent part of the social glue of the community, and they shouldn't be treated as frivolous, as things that you shouldn't waste valuable Internet resources on. Because actually they're the things that are bringing many of the women together and they're contributing to the Community Networks by doing that."

Further in the IGF 2018 session, one of the panelists, Ritu Srivastava (General Manager of Research & Advocacy at the Digital Empowerment Foundation) emphasized the importance of thinking beyond technological innovations to sustainability and engagement with the community. She observed:

"... that's where the vacuum is there - that Community Networks are isolated (and) not part of the community. So to make the Community Networks safe and in the space for the community, it is important that women come and play an important role."

Srivastava provided the example of her team's work in India with "*barefoot women engineers*" who don't have any formal engineering background:

"All of them are coming from the local communities and they just understand how they can engage with us orally, not even written language. They manage the client relationships orally, they manage how much money is being spent on one client, and how much data they are occupying managing the bandwidth. That's what makes Community Networks sustainable, and that is where women are playing a role."

Srivastava also noted the influence of culture and norms (as analyzed in Section 1.2.3 of this resource) in impacting the involvement of women in sustaining Community Networks, and the need to break away from cultural stereotypes limiting women's contributions:

"When we think about technology, we always think that women can't climb the tower, women will be fragile and they will fall. It's not like that. They can climb the tower, and some of our case studies show that women climb the towers of 140 metres and drink tea there as well."

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

This section maps various Community Networks 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 which knowledge 'travels', the work of the BPF is sustained through these 'living' resources, and efforts will be made to update this resource with more initiatives as and when they are highlighted.

2.3.1. Colnodo, rural Colombia

With the aid of APC's subgranting programme, Colnodo[38] runs a wireless Community Network for providing mobile telephony in rural regions of Buenos Aires in the department of Cauca through a participatory process. The project's primary objective 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."* Through this, Colnodo plans to identify opportunities and challenges for the population of Buenos Aires that can be addressed through the use of ICTs. A training programme with a special focus on gender has been designed, and community members will be provided capacity building on implementation and use of the network.

Impact:
Colnodo has thus far trained 56 people as part of this project, of whom more than 30 are women. Through skill-building initiatives, the project has been training entrepreneurs, young people and teachers in the use of ICTs so they can strategically use and enhance the network, and pass on their learnings to the rest of the community.

2.3.2. Comunidades Inteligentes (Smart Communities) initiative, Honduras

In 2018, the "Comunidades Inteligentes" project was started, led by Red De Desarrollo Sostenible (RDS) in partnership with the Internet Society Honduras Chapter and supported by Beyond the Net Funding Programme[39]. The objective of the project is to establish a Community Network with free Wifi and to connect 300 families in the Intibuca region in Honduras with the rest of world.

This initiative was born out of a community radio 'La Voz de las Mujeres' ('The Voice of the Women') led by María Santos, a leader of the community. The community felt that the Internet was key for strengthening their messages as María Santos noted[40]:

> *"We want our rights as women to be recognized and achieve gender equality."*

The network of Azacualpa was thus made by the community and will be managed by the community as noted by Raquel Isaula, director of RDS-HN[41]:

> *"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."*

Impact:
Since the initiative was kicked off, more than 1200 people living in Azacualpa now have Internet access, a telecentre with five computers connected to the network, and over 70 smartphones. This is in contrast to the two smartphones that the community had before the initiative was implemented. In 2017, work was started with local women as a part of Red de Desarrollo

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

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

40 ibid

41 ibid

Sostenible to create the first radio station in the country to be fully operated by women. 300 families are expected to be connected to the Internet, which will decrease the existing digital gap in comparison to the nearest city, La Esperanza, by at least 70% within 12 months. The establishment of a telecentre and hotspots in different points of the community has enabled this progress. One of the intended impacts of such access is to create spaces where Indigenous culture and traditions can be shared and documented. The Lenca people can thus digitize their oral culture and identify complementary knowledge from global resources online.

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

Vanuatu Inter-Island Telemedicine and Learning (VITAL) Network Project[42] has harnessed the efforts made by the local communities of Maewo Island, Vanuatu, to provide Internet connectivity to their villages. Free technical assistance and support has been provided by the Vanuatu Office of the Government Chief Information Officer (OGCIO) and the office of the Telecommunications and Radiocommunications Regulator (TRR), and satellite Internet connectivity has been provided by Kacific Broadband Satellites 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 footpath, over a mountain, carrying the equipment on their backs.

Sustainable Development Goal (SDG) 5 aims to "achieve gender equality and empower all women and girls.[43]" Through the course of VITAL Network Project, 56 per cent of the patients served were female. Due to the gendered economic disparity in Vanuatu, it is more difficult for women to access financial resources or to convince men in decision making roles to spend money on healthcare. This is especially challenging as transportation costs for expert care at nearby urban centers can be prohibitive. Through the VITAL network, specialists can now provide localised care that lowers financial burdens and helps to close the gender gap accessing 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 may have been permanently disabled without effective and timely 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, are significant wins that the project has achieved in a short duration of six months.

2.3.4. Wireless for Communities (W4C), India

Wireless for Communities[44] (W4C) is an initiative by the Digital Empowerment Foundation (DEF) that aims to connect rural and remote locations of India, through frugal technology and unlicensed spectrum bands. In many rural and semi-urban areas mainstream Internet Service Providers (ISPs) do not provide connectivity as they think their operations will not be commercially viable. To overcome this problem, DEF in partnership with first Ford Foundation and later Internet Society, has used free and unlicensed spectrum provided by the government,

[42] Submission by *1 World Connected* to the BPF on Gender and Access, 2018
[43] https://sustainabledevelopment.un.org/sdg5
[44] http://www.wforc.in/

and inexpensive WiFi equipment, to connect 38 districts and 18 states, and is planning on expanding. DEF has also trained people from local communities to operate and maintain the wireless facilities. Over the last four years, 170 "barefoot engineers" have been trained.

Impact:[45]
Through this initiative, 30,000 households in 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 WiFi-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.

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

THe Wireless Women for Entrepreneurship & Empowerment[46] (W2E2) programme was initiated by the Digital Empowerment Foundation (DEF) to create women driven ICT micro social enterprise and entrepreneurs supported by wireless Internet in socially backward locations of India. The programme aims to *"contribute to an enabling Internet environment for gender inclusion and women empowerment"*. 10 women are selected from across various domains of Self Help Groups (SHGs), agriculture, teaching, etc. from Chanderi, Baran, Shivpuri and Tura and are trained in a manner that they may share their knowledge to the rest of the community.

Impact:[47]
Since the project started, over 4,00,000 women have become digitally literate, 700 Non-Governmental Organizations (NGOs) have been connected, 25,000 have availed information services, 1,00,000 NGOs have availed digital services, 1,80,000 women have been connected to the Internet, and 700 panchayats and 3 public libraries have been digitized.

2.3.6. Zenzeleni Networks, South Africa

The aim of Zenzeleni Networks (previously known as Mankosi Community Networks) is to "*produce a model for the sustainable implementation of bottom-up village telcos in rural communities"*[48]. The project is born out of a partnership between University of the Western Cape and the 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). On the basis of according to social and technical criteria, charging stations and phones are installed inside the private homes of 10 families selected by the Tribal Authority and endorsed by the community. Phones are connected to a Wifi router, which creates a network with the other routers in Mankosi. Representatives from

[45] http://wforc.in/impact/
[46] http://circindia.org/w2e2-programme/
[47] http://circindia.org/impact/
[48] 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.

these registered households are also part of the the board of Zenzeleni Networks where they manage the income generated by the co-operative.

Impact:
By reducing costs of communication and of charging phones, Zenzeleni Networks has benefited the community because money otherwise spent on communication can now be used to support other daily expenses, thus improving local living conditions. By pioneering a way for the community to pay for services cheaply, Zenzeleni Networks has also facilitated incremental income-generating mechanisms that enable a strategy for economic sustainability.

2.3.7. CITEL - Rural Women's Alliance

On December 17, 2018, the Member States of the Inter-American Telecommunication Commission (CITEL) of the Organization of American States (OAS), Associate Members of a Permanent Consultative Committee of CITEL and other ICTs organizations and companies, launched the "Rural Women's Alliance: Empowering Rural Women through ICTs" promoted by the Argentine government. The common goal of this Alliance is to promote actions designed to make the Internet a safe space for women and girls, and to enhance connectivity and access to technology in rural areas. The members of this Alliance will join forces to empower women and girls in rural areas through diverse projects, including the development of community networks run by women and the creation of training programmes and repositories of information with local content. The declaration mentions, "*establishing sustainable community network projects that are run by women, wherever possible and whenever relevant in coordination with operators.*"

2.4 Common Themes

Several common themes emerge from the above initiatives supporting Community Networks.

First, all of the listed initiative programmes are focused in rural or semi-urban areas with observed gendered economic, social, and cultural disparities where Internet Service Providers (ISPs) do not provide connectivity as they think their operations will not be commercially viable in these demographics.

Second, the implementation of these Community Networks provides low-cost and customized Internet access to these underserved communities to access information and crucial services.

Third, all of them provide training and capacity building for community members in the implementation and use of the Community Networks. Since these networks are hence managed by local communities, they are more likely to be sustainable and self-sufficient.

3. Public WiFi

A public WiFi network is a type of wireless network that the general public can access and through it can connect to other networks or the Internet. This is in contrast to a private network, where restrictions and access rules are established in order to relegate access to a select few.

3.1 Gender Perspectives on Public WiFi

Gender perspectives on public WiFi center around two major concerns - constraints on mobility for women and gender non-binary persons, and constant surveillance through the male gaze in public spaces.

For instance, the Government of India provides free public WiFi as a last mile Internet connectivity solution to rural areas as part of an initiative called 'Digital Village' which aims to cover 1,050 gram panchayats as an alternative to broadband. Various other public WiFi initiatives launched by different stakeholders[49,50] are also gaining popularity in the Indian landscape. Through observations and interviews, Preeti Mudliar, an Indian scholar, draws attention to the experiences of women who actively use mobile Internet, but are unable to access such public WiFi initiatives in villages, owing to gendered politics of space and mobility[51].

One of the reasons for this is that women are culturally restricted to domestic spheres in many communities around the world, as discussed in Section 1.2.3. Hence, they are unable to access WiFi in public spaces such as offices and open grounds, as one of the research participants in Mudliar's study notes:

> *"It is considered disreputable for women to be seen around these places and I will have to deal with a lot of people talking and asking me about my presence there. Who wants to deal with that?"*

Another reason for women being unable to benefit from public WiFi in rural areas is that women reported feeling surveilled and vulnerable to harassment, which did not allow them to use the public WiFi hotspots, as another research participant in Mudliar's study notes:

> *"When the kendra was first opened, it offered free Internet service to the village. I went there once to try it out and a man there was very rude to me. He passed snide remarks saying, "look they have all come here for Internet only because it does not cost them." He also did not allow us to interact with the machine freely. You can only learn if you fiddle around with stuff, but he was constantly watching over us. I never went back."*

Mudliar further observes that these experiences of women differ from the experiences of men who report freedom and mobility in accessing WiFi networks. Thus, women reported only having heard about the public WiFi in the village in contrast to men who actually used the service. Consequently, women rely on slow mobile Internet and have to ration their available

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[49] Chris Baraniuk. (August 8, 2016.) *Facebook tests Express WiFi service in India*. Retrieved December 25, 2018 http://www.bbc.com/news/technology-37011806

[50] Jagmeet Singh. (January 6, 2018). *Google station Wi-Fi goes paid at select rail stations with free high-speed access restricted to 30 minutes*. NDTV. Retrieved December 25, 2018 from https://gadgets.ndtv.com/internet/news/google-station-public-wi-fi-railway-stations-india-paid-option-1796679

[51] Preeti Mudliar. 2018. *Public WiFi is for Men and Mobile Internet is for Women: Interrogating Politics of Space and Gender around WiFi Hotspots*. In Proceedings of the ACM on Human-Computer Interaction, Vol. 2, CSCW, Article 126 (November 2018). ACM, New York, NY.

data to instrumental uses, which limits their ability to use the Internet for leisure and entertainment purposes.

This highlights the need to account for the gendered sociality of seemingly "neutral" networks and spaces while staking claims of bridging digital divides through public WiFi networks.

3.2. Mapping Public WiFi Initiatives for Women and Gender Non-Binary Persons and their Impact

As with the findings for Community Networks, this resource finds that while there are many public WiFi initiatives around the world, there is a dearth of initiatives that focus on women. Furthermore, for the purpose of this report, there were found to be no such initiatives that focused on gender non-binary persons. However, acknowledging the power relations that impact the manner in which knowledge 'travels', the work of the BPF is sustained through these 'living' resources, and efforts will be made to update this resource with more initiatives as and when they are highlighted.

3.2.1 Mexican Government

The Mexican Ministry of Communications and Transportation (SCT in Spanish), in partnership with the U.S.-Mexico Foundation (USMF), is implementing a programme titled "Women in STEM: Future Leaders." The objective of this programme is to *"train and support young women from public high schools with the purpose of encouraging them to pursue a career in science and ICT."* In Mexico, only 35.5% of tertiary graduates in ICT are women, and the initiative aims to improve these numbers. Launched in 2018, the programme has so far reached over 180 girls across the country. It is working with 32 Mexican "Connected Points" (Puntos Mexico Conectados) which are centers that provide public wifi access to the Internet and training to students. Therefore, girls that are part of the programme have the possibility to use public wifi to complete the program.

At the BPF Gender session at IGF 2018 (see Appendix 5 for the full session report), panelist Agustina Callegari (Global Engagement Manager at the Internet Society) elucidated the details of this programme:

> *"They are offering young women from different communities to go to these places where they have public WiFi to take a course on digital skills to support young women from public high schools and encourage them to participate in S.T.E.M."*

4. TV White Spaces (TVWS)

White Space[52] 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 can be used to deliver widespread broadband Internet in the form of TV White Spaces (TVWS).

[52] https://www.techrepublic.com/article/white-space-the-next-internet-disruption-10-things-to-know/

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

As with the previous findings in this resource, the BPF finds that while there are many TVWS initiatives around the world, there is a dearth of initiatives that focus on women. Furthermore, for the purpose of this report, there were found to be no such initiatives that focused on gender non-binary persons. However, acknowledging the power relations that impact the manner in which knowledge 'travels', the work of the BPF is sustained through these 'living' resources, and efforts will be made to update this resource with more initiatives as and when they are highlighted.

4.1.1 Project Kgolagano, Botswana

Project Kgolagano[53] (which means 'to be connected or networked') uses TVWS to bring Internet connectivity and telemedicine services to distant facilities in outlying areas of Botswana, allowing medical workers to send high-resolution patient images to specialized medical facilities globally. The objective is to have more accurate diagnoses and better patient care. The project has a specific focus on providing access to specialised maternal medicine, which will improve the livelihoods of women located in small towns and rural areas.

Impact:[54]

The initial phase of Project Kgolagano unveiled in 2015 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 connects 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 were envisioned to be connected. High-speed connectivity at these anchor institutions could enable the wider community to gain access to online content and applications.

5. Best Practices for Including Gender Perspectives in Supplementary Models of Connectivity

This BPF resource finds that supplementary models of connectivity can help make progress on resolving the pertinent barriers commonly faced by women and gender non-binary persons in gaining meaningful Internet access. However, the BPF also highlights the dearth of (known) initiatives currently developing and supporting such connectivity models with a gender-focus. Despite this, many respondents in the BPF surveys and the IGF 2018 BPF Gender session noted that initiatives of supplementary models of connectivity had the potential to be better customized to specifically address women and gender non-binary individuals. The BPF hence recommends and urges attention to the following best practices for including gender perspectives while developing supplementary models of connectivity that can aid in making their access and use more equitable with regard to gender and its intersections.

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

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

Technology does not have a neutral impact and can and often does reproduce social, economic and cultural inequalities in the context it is deployed in. The BPF finds that this is also reflected in the supplementary models of connectivity explored in this year's work. Assumptions about communication technologies being neutral can have the effect of service providers neglecting concerns about gender and its intersections. For example, this is noticed in case studies of public WiFi wherein given the absence of women from visible public life, women may appear to be invisible in their access and use of the Internet to Internet service providers, who tend to be male, and thus not always well versed with the nuances of women's technology needs and habits. *The BPF recommends acknowledging that assumptions about Internet infrastructure as inherently neutral and democratic are often misaligned with the realities of accessing the Internet; connectivity networks are equally sites of spatial, political, and cultural contestations. It hence urges initiatives to take into account the disparate needs and demands of different genders and implement approaches that are specifically gender-focussed in their vision and in practice.*

This resource finds that while more stakeholders are starting to pay attention to the need for addressing the gender digital divide, there is still relatively little consistent and in-depth research into the barriers that gender non-binary persons face in different contexts when accessing the Internet. Initiatives supporting supplementary models of connectivity currently do not take into account the unique barriers faced by gender non-binary persons, who are hence unable to benefit from meaningful Internet access to its potential. *The BPF recommends encouraging broader gender classification of nationally representative and gender-disaggregated data by collecting statistics in a consistent and rigorous manner that go beyond the male-female gender binary and recognize and value gender non-binary experiences and beyond.*

The work of the BPF has shown that the framing of the 'field' of many supplementary models of connectivity is predominantly constructed in the global north, thus situating its advocacy and movement building within a white male dominated discourse. However, gender, sex, caste, class, religion and other relations in the global south do not exist in the same form as those in the global north. For example, most Community Networks are based on local governance structures which are observed to be predominantly patriarchal and cis-male-dominated. The governance and usage patterns of Community Networks indicate a similar pattern. *The BPF recommends that rigorous efforts be made towards ensuring that patriarchal, white cis male dominated societal structures are not reproduced in supplementary models of connectivity.*

One of the ways to achieve this is to encourage the meaningful participation of women and gender non-binary persons in supplementary models of connectivity. As noted in this resource, models such as Community Networks have been observed to include women in their spaces for political reasons rather than for considerations of gender justice. *The BPF highlights the importance of agency and recommends ensuring that agency is not tokenistic so that women in decision-making roles can exercise authority independently, as opposed to being relegated to acting as "proxies" for their male family members. The BPF also recommends that future research should continue for mapping similar experiences for gender non-binary persons.*

This resource finds that in Community Networks, women are often involved in collectivist activities (such as community cooking, cleaning, etc.) that are also partially what they connect to the Internet for accessing information about. This work is part of the social glue of their

communities, though there is a tendency to treat these types of uses of the Internet as frivolous. *The BPF recommends valuing women's (often invisible) labor, collectivist practices, and contributions within communities as an integral and inherent part of the social glue of initiatives supporting supplementary models of connectivity. The BPF also recommends that future research should continue for understanding similar engagement of gender non-binary persons with such models of connectivity.*

The BPF further finds that many of the studied supplementary models of connectivity are embedded in the communities they are implemented in and form a part of the everyday lives of their users. Hence, the incorporation of gender perspectives cannot be top-down solutions, but must come from within the community for which it is necessary to find ways to establish communications with communities through relevant modes. *The BPF encourages a bottom-up approach where the community is an active stakeholder in supplementary models of connectivity by finding effective methods of communicating with diverse communities.*

The BPF discussions surfaced both the criticality of understanding the role of culture and norms as significant unsolved barriers in gaining meaningful access, as well as the challenges in undertaking research in this area given its contextual specificity. Nonetheless, given its relevance, more attention needs to be paid in understanding this barrier in efforts to address meaningful access to the Internet for women and gender non-binary persons. *The BPF recommends that further research be done in identifying methodologies and potential indicators that can be used to understand the role and variances of culture and norms as barriers to access, and paying attention to the intersection between gender and other relevant socio-economic and political identities or factors.*

The BPF recommends that gender analysis be made an integral part of planning efforts every step of the way while implementing initiatives of supplementary models of connectivity (from budgeting to implementation processes), rather than an "add-on" task in the end. Such an analysis must adopt an intersectional approach as gender always overlaps with sex, race, class, caste, religion, ability, and other relevant identities..

The BPF recognizes the critical role that governments and regulators play in framing and guiding digital divide initiatives. However, this does not always extend to these stakeholders paying attention to social inclusivity. For instance, while the Telecom Regulatory Authority of India (TRAI) lays out very specific instructions for public WiFi infrastructure, it provides no guidelines or recognition of the social dynamics that can influence technology use. *The BPF recommends that future regulations include mandating service providers to remain sensitive to gendered notions of meaningful access and practicing inclusivity in the spaces where they deploy Internet services.*

Lastly, the BPF Gender recommends that gender be a cross-cutting theme across all fora within IGF (and beyond), that discussions on gender not be relegated to only specific forums that have a main focus on gender, and that future research should continue to map supplementary models of connectivity and their impact. Where possible, the BPF recommends collaboration with other stakeholders to ensure resources can be combined in order to better map and learn from initiatives. In this manner, the BPF Gender recommends that its work continues in 2019 and

that renewed efforts be dedicated towards enabling the participation of all stakeholders in its work.

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) under the auspices of the United Nations Department of Economic and Social Affairs (UNDESA). The 13th annual IGF meeting took place at UNESCO 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[55], the work of the BPF Gender looked at online abuse and gender-based violence, and in 2016[56] aimed to identify the different barriers that women face as

[55] IGF (2015) *Online Abuse and Gender-Based Violence Against Women*. Available at: https://www.intgovforum.org/multilingual/filedepot_download/5004/1317 [Accessed 20 October 2018].
[56] 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].

regards Internet access. Last year[57], 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 Connecting and Enabling the Next Billions (CENB).

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 in 2017. 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 and Phase IV of the Connecting and Enabling the Next Billions (CENB). Engagement with national and regional Internet governance policy processes and initiatives, such as NRIs

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

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 content). 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-binary persons
- 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 Forum and broader community).

Participants were able to make anonymous submissions as well as submissions using pseudonyms. This option was made available to respect the confidentiality of underserved communities that are both stigmatised as well as criminalised in many regions of the world (for example, persons identifying as LGBTQIA+ and refugees). All participants were also notified that no personal information would be shared with third parties without their explicit consent as per the GDPR guidelines.

The surveys can be viewed at http://goo.gl/forms/Gm40dTZiLaBKNofV2 (Google Forms) and http://limesurvey.apc.org/index.php/278463?lang=en (Limesurvey).

2.2.2 Survey Analysis

The survey analysis was conducted with the goal of gathering stakeholder perceptions, comments and information on existing literature regarding the BPF's topic. The analysis was done to highlight existing work and to consolidate and identify common concerns and issues pertaining to the theme for further study and for incorporation into this main outcome resource where relevant.

Due to the number of substantive responses for open-ended questions, many interesting

comments and/or quotations were also highlighted for inclusion in this main outcome resource. Note that these responses are generally verbatim in the main resource, although minor editing was sometimes done to fix minor spelling and grammar errors.

A total number of 31 responses were collected via both the online survey platforms, with 27 responses being recorded through Google Forms, and the remaining 4 responses through the Limesurvey platform, which also recorded 4 incomplete responses. Across both the platforms, the largest proportion of responses submitted were for Community Networks (80.7%), followed by Public Wifi (16.1%). There was only one response for Zero Rating and none for TV White Spaces.

It should be noted, however, that the identified models of connectivity were not necessarily mutually exclusive. Many of the responses broadly dealt with increasing meaningful Internet access for women and gender non-binary persons, and were not focused on supplementary models of connectivity in particular.

2.2.3 Diversity of Respondents

In terms of gender diversity, 74.2% of the respondents identified as female, 22.6% identified as male, and one survey respondent identified as transgender female.

The survey also attracted responses from a diversity of regions, particularly from developing countries. A significant proportion of respondents were from Africa (35.5%), 29% from Asia Pacific, 29% from Latin and North America, and 6.5% from Europe.

Within these regions, a substantial number of countries were also represented. From the Asia Pacific region, for instance, survey responses were received from India, Indonesia, Iran, Sri Lanka, Pakistan, and Papua New Guinea. From the Africa region, responses were received from Burundi, Cameroon, Ghana, Mauritius, Namibia, Nigeria, Gambia and Sudan. From the Latin and North America region, responses were received from Argentina, Barbados, Bolivia, Brazil, Colombia, Honduras, Mexico, and Uruguay. From the Europe region, responses were received from Ukraine, and United Kingdom.

Among stakeholders, the largest proportion of respondents were from civil society (38.7%), followed by academia (22.6%), followed by technical community (19.4%), followed by 6.5% respondents each from private sector, government, and other stakeholders.

Note that this sample is by no means, nor does it purport to be, representative of any population. As the aim of the survey was rather to gather a broad and diverse sample of input, this aspect about the sample was not considered as important.

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[58]). 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. Two theme calls were organized by the BPF in 2018 with the themes - Internet access for women, and Internet access for gender non-binary persons. 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 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[59] was continued 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 BPF Gender Session at IGF 2018

At the 13th IGF, held at UNESCO in Paris, France, from 12 to 14 November 2018, the BPF held a dedicated 90-minute session that was focused on the outputs produced by the BPF over the past year, and the ways forward.

The session was moderated by Radhika Radhakrishnan (IGF Secretariat, APAC), who also presented the opening remarks, methodology, and highlights from the key outputs from the BPF's 2018 work. Panelists included Agustina Callegari (Internet Society, LAC), Alejandra Erramuspe (Government of Uruguay, LAC), Anri van der Spuy (Research ICT Africa, Africa),

[58] https://www.intgovforum.org/multilingual/content/bpf-gender-and-access [Accessed 10 January 2019]
[59] BPF Gender mailing list can be subscribed to via http://intgovforum.org/mailman/listinfo/bp_gender_intgovforum.org [Accessed 10 January 2019]

Bruna Santos (Coding Rights, LAC), Nic Bidwell (APC, Africa), Raashi Saxena (The Bachchao Project, APAC), and Ritu Srivastava (Digital Empowerment Foundation, APAC).

The session was divided into two main segments, with the first segment focusing on the importance of including gender perspectives when developing initiatives that promote Internet access. It also also focused on building recommendations that can be used by different organisations of policy-makers to develop initiatives that focus on women and gender non-binary persons. The second segment had an open discussion to evaluate the work of the BPF and discuss possible topics of work for next year as well as to come up with ideas to improve collaborations and promote its work.

A video recording of the session can be found here: https://youtu.be/8nXB9if23Oo

For the session structure, see Appendix 3. For the session pre-report, see Appendix 4. For a full session report, see Appendix 5.

3. Limitations

While this primary output of the BPF Gender reflects a rigorous community-driven and multi-stakeholder effort, there do exist some limitations to the work.

As mentioned in Part B of the report, the BPF Gender survey was hosted on two online platforms (Google Forms and Limesurvey). Due to this, it was not fully able to bring in the views of women and gender non-binary persons from various communities that do not have Internet access.

Since the survey was published in English only, language can be seen as one of the limiting factors to gathering responses. However, responses were welcome in any of the official UN languages (as stated in the survey; see Appendix 2), and some responses were in deed received in languages other than English.

It was also observed that only 19.4% of the respondents identified as members of the community they provided information about. 35.4% of the respondents had done research on Internet access issues with the underserved communities, and 25.8% of the respondents had directly worked with the underserved communities. This indicates that most of the survey data was not collected directly from the underserved communities of women and gender non-binary persons, but rather from 'intermediaries' or people working with the said communities. Acknowledging the potential for misrepresentation or bias that this may bring about, this is a limitation of the output.

Moreover, as mentioned in Part A, the survey sample is by no means, nor does it purport to be, representative of any population. No particular sampling was carried out for the survey as the aim of the survey was rather to gather a broad and diverse sample of input.

Much of the evidence and data gathered through the BPF work is anecdotal. This was largely due to the lack of gender disaggregated data available for these initiatives, and the invisibilization of gender non-binary persons in most current datasets.

Part C: Appendices

APPENDIX 1: CONTRIBUTORS

As mentioned in Part B of this resource, one of the BPFs primary objectives was to encourage the engagement of stakeholders from a variety of stakeholder groups and regions. The lists of participants below include survey participants and panelists at the BPF's session at IGF 2018 (audience members are not cited). Note that some contributors preferred to remain anonymous, and others used pseudonyms.

Due to the large number of people who participate at different times of the BPF's work, the lists remain subject to change and may be updated as and when reasonably required. Where possible, participants' country of origin is also listed.

Coordinators:
Renata Aquino Ribeiro (MAG member)
Raquel Gatto (MAG member)
Agustina Callegari (Non-MAG member)
Paula Real (Non-MAG member)

Consultant:
Radhika Radhakrishnan (IGF Secretariat)

Survey participants (31 unique participants):

Name	*Country*
Mahendranath Busgopaul	Mauritius
Mohammed Yousif Alhaj	Sudan
Dr. N. Sudha Bhuvaneswari	India
Concepción González Lozano	Mexico
Svitlana	Ukraine
[anonymous]	India
Sidra Jalil	Pakistan
Emma	Iran
Sharada Srinivasan	India
[anonymous]	Uruguay
Gabriela Melendrez Alaro	Bolivia
Liliane Kom	Cameroon
Alida Kirezi	Burundi
Avis Momeni	Cameroon

Amina kaidal	Nigeria
Alice Walker-Mitchell	United Kingdom
Sarbani Banerjee Belur	India
Nic Bidwell	Namibia
Fernanda Monteiro	Brazil
Lydienne Nathalie Ntogue	Cameroon
Eduardo Tome	Honduras
Fabiana	Honduras
[anonymous]	The Gambia
Juliana Harsianti	Indonesia
Mohamed Sajath	Sri Lanka
[anonymous]	Papua New Guinea
Claudia Garcia	Colombia
Sofia Hammoe	Argentina
Timothy K. Asiedu	Ghana
Uzunma	Nigeria
June Parris	Barbados

Panelists at the BPF's IGF session in Paris, France (13 November 2018):
Agustina Callegari (Internet Society, LAC)
Alejandra Erramuspe (Government of Uruguay, LAC)
Anri van der Spuy (Research ICT Africa, Africa)
Bruna Santos (Coding Rights, LAC)
Nic Bidwell (APC, Africa)
Radhika Radhakrishnan (Internet Governance Forum Secretariat, APAC)
Raashi Saxena (The Bachchao Project, APAC)
Ritu Srivastava (Digital Empowerment Foundation, APAC)

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).

The questions in the survey are in English, but we welcome responses in any of the official UN languages.

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 prefered 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 STRUCTURE AT IGF 2018

Date and Time
Tuesday, 13 November 2018 at 15.00-16.30 p.m. (90 minutes)

Venue
UNESCO, Salle XI

Organizers
Radhika Radhakrishnan
Agustina Callegari
Renata Aquino Ribeiro
Paula Real
Raquel Gatto

Description
In the last four 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. In 2017, the BPF Gender amplified this work by focusing on gather information about specific communities.

This year, building up in previous years work, the BPF Gender community decided to continue looking to communities of women but also focusing on the impact that specific initiatives that support/develop alternative models of connectivity have on populations of women and gender non-conforming individuals.

As gender-disaggregated data on the impact of these type of initiatives on women is still limited, the BPF's survey aimed to gather information about them. The survey inputs received mostly for women from different communities and regions indicated that the importance of targeting women when developing new initiatives. It also detailed various initiatives at regional and national levels that include best practices that can contribute to generating more initiatives that include women's needs.

At this working session, we will discuss the BPF's preliminary findings and we will build recommendations for developing initiatives for Internet access and use that target women, and we will explore the ways in which we can improve the BPF work for 2019 as well as the topics we will like to analyze more in detail.

The session will also draw from and invite participation from key stakeholders working on gender issues as an opportunity to find ways of collaboration to improve women Internet access.

Join us!

Desired outcomes

- Collecting more inputs that will feed the output document 2018.
- Building recommendations and ways forward to encourage initiatives that target women inclusion and Internet access.
- Identifying emerging issues and challenges that should be prioritized in the work of the BPF for 2019.

Participants
Moderator
Radhika Radhakrishnan - Academia - APAC

Remote Moderator
Paula Real

Speakers
Segment 1
Agustina Callegari - Internet Society - Technical Community - LAC
Anri van der Spuy -ICT Africa - Civil society - Africa
Nic Bidwell - APC - Civil society - Africa
Ritu Srivastava- DEF - Civil Society - APAC

Segment 2
Bruna Santos - Coding Rights - LAC
Alejandra Erramuspe - Government of Uruguay - LAC

Rapporteurs
Radhika Radhakrishnan
Agustina Callegari

Session structure

Roundtable.

The session will be divided into two segments.

Based on the findings of the work done in 2018 on the impact that supplementary models of connectivity have on Internet access and use for women and gender non-conforming persons, the first segment will discuss the importance of including gender perspectives when developing initiatives that promote Internet access. It will also focus on building recommendations that can be used by different organisations of policy-makers to develop initiatives that focus on women and gender non-conforming persons.

Trigger questions:

- *Why is using gender lens important when we talk about meaningful Internet access and use? All people need to gain meaningful Internet access. So why are we singling out women and gender non-conforming persons?*
- *What are the key recommendations for incorporating gender perspectives in the implementation of supplementary models of connectivity?*
- *What might initiatives of supplementary models of connectivity that include gender perspectives look like?*
- *What lessons have we learned from specific models of connectivity?*
- *How can we integrate gender components in ICT development - Internet access initiatives? (from planning to budgeting and implementation processes)*

The second segment will be an open discussion to evaluate the work of the BPF and discuss possible topics of work for next year as well as to come up with ideas to improve collaborations and promote its work.

Trigger questions:

- *What topics do you think the BPF Gender and Access should work on next year?*
- *How do we improve collaborations across diverse stakeholders?*
- *How can we better communicate the work of the BPF to the public?*
- *What can we do to improve collaborations with others IGF groups in order to make gender a cross-cutting theme of analysis?*

During both segments, all participants in the room will be invited to comment, ask questions and contribute to the overall discussion.

Agenda

<table>
<tr><td colspan="3">Opening Segment
Introduction to BPF Gender & Access work</td></tr>
<tr><td>15:00 to 15:10</td><td>Introduction</td><td><u>Speakers</u>
Radhika Radhakrishnan, Consultant, Secretariat - Internet Governance Forum, UN-DESA
- Previous work of the BPF Gender
- Multi-stakeholder, bottom-up, community-driven process that was followed in compiling the outputs for 2018
- Summarize thematic findings for the BPF Gender work and their relevance</td></tr>
<tr><td colspan="3">Segment One
Building recommendations for initiatives focusing on women and gender non-conforming persons</td></tr>
</table>

Moderator for this segment: **Radhika Radhakrishnan**		
15:10 to 15:40	Speakers interventions (5 minutes each - each speaker will address a specific question and give a recommendation)	**Agustina Callegari** - Internet Society - Technical Community - What might initiatives of supplementary models of connectivity that include gender perspectives look like? - Honduras (CN), Mexico (Public Wifi), Tanznia (TVWS), EQUALS **Anri van der Spuy** - ICT Africa - Civil society - Africa - All people need to gain meaningful Internet access. So why are we singling out women? - What are the key recommendations for incorporating gender perspectives in the implementation of supplementary models of connectivity? **Nic Bidwell** - APC - Civil society - Africa - What have been the difficulties in researching about gender impacts in community networks? - What do community network initiatives need to do to start including gender perspectives? **Ritu Srivastava-** DEF - Civil Society - APAC - What might initiatives of supplementary models of connectivity that include gender perspectives look like? - What are the key recommendations for incorporating gender perspectives in the implementation of supplementary models of connectivity? **Raashi Saxena** - The Bachchao Project - APAC - What are the key recommendations for incorporating gender perspectives in the implementation of supplementary models of connectivity? - How can we integrate gender components in ICT development - Internet access initiatives? (from planning to budgeting and implementation processes)

15:40 to 15:55	Open discussion	All speakers and participants
Segment Two ***Looking ahead to 2019*** Moderator for this segment: **Radhika Radhakrishnan**		
15:55 to 16:05	Speakers interventions (5 minutes each)	**Bruna Santos** - Coding Rights-Civil Society - How can we better communicate the work of the BPF to the public? - What can we do to improve collaborations with others IGF groups in order to make gender a cross-cutting theme of analysis? **Alejandra Erramuspe** - Government of Uruguay - LAC - What topics do you think the BPF Gender and Access should work on next year? - How do we improve collaborations across diverse stakeholders?
16:05 to 16:20	Open discussion	All speakers and participants
Closing Segment ***Wrap-up and Next Steps***		
16:20 - 16:30	**Closing remarks**	Moderator to sum up the session and outline roadmap for the future.

- Opening segment (10 minutes)
- Segment 1: building recommendations(30 minutes)
- Open discussion (15 minutes)
- Segment 2: open discussion: looking ahead 2019 (10 minutes)
- Open discussion (15 minutes)
- Closing segment (10)

Total time: 90 minutes

APPENDIX 4: BPF SESSION PRE-REPORT AT IGF 2018

- **Session Type** (Workshop, Open Forum, etc.): BPF

- **Title**: BPF Gender & Internet Governance

- **Date & Time**: Tuesday, 13 November, 2018 - 15:00 to 16:30

- **Organizer**(s): Radhika Radhakrishnan, Agustina Callegari , Renata Aquino Ribeiro, Paula Real, Raquel Gatto

- **Chair/Moderator**: Radhika Radhakrishnan

- **Rapporteur/Notetaker**: Paula Real

- **List of speakers and their institutional affiliations** (Indicate male/female/ transgender male/ transgender female/gender variant/prefer not to answer):

Speakers for segment 1

- Anri van der Spuy -ICT Africa - Civil society - Africa
- Nic Bidwell - APC - Civil society - Africa
- Agustina Callegari - Internet Society - Technical Community - LAC
- Ritu Srivastava- DEF - Civil Society - APAC
- Raashi Saxena - The Bachchao Project - Civil Society - APAC

Speakers for segment 2

- Bruna Santos - Coding Rights - LAC
- Alejandra Erramuspe - Government of Uruguay - LAC

- **Theme**: Human Rights, Gender & Youth

- **Subtheme**: Gender Equality - Access and Connectivity

- **Please state no more than three (3) key messages of the discussion**. [150 words or less]

- *Gender analysis must be an integral part of planning efforts of initiatives, rather than an "add-on" task.*
  In 2018, the BPF focuses on the impact of supplementary models of connectivity on Internet access and use for women and gender non-binary persons. However, a key finding is that there is a lack of a gender focus on initiatives supporting and developing such initiatives.
- *Recommendations to develop Internet access initiatives that focus on women and gender non-binary persons*

The BPF session aims to produce a set of recommendations for incorporating gender perspectives in the implementation of supplementary models of connectivity.

- *Multi-stakeholder cooperation for addressing gender issues*
  The BPF functions in a bottom-up, multi-stakeholder, community-driven manner. Enabling diverse stakeholders to collaborate to better address barriers faced by women and gender non-binary persons in accessing the Internet has produced valuable evidence. Nevertheless, continuing to discuss ways to improve collaborations is key for the session.

APPENDIX 5: BPF SESSION REPORT AT IGF 2018

- **Session Type** (Workshop, Open Forum, etc.): Best Practice Forum

- **Title**: BPF Gender & Internet Governance

- **Date & Time**: Tuesday, 13 November, 2018 - 15:00 to 16:30

- **Organizer(s):** Radhika Radhakrishnan, Agustina Callegari , Renata Aquino Ribeiro, Paula Real, Raquel Gatto

- **Chair/Moderator**: Radhika Radhakrishnan

- **Rapporteur/Notetaker**: Paula Real

- **List of speakers and their institutional affiliations** (Indicate male/female/ transgender male/ transgender female/gender variant/prefer not to answer):

Segment 1
Agustina Callegari - Internet Society - Technical Community - LAC
Anri van der Spuy -ICT Africa - Civil society - Africa
Nic Bidwell - APC - Civil society - Africa
Ritu Srivastava- DEF - Civil Society - APAC

Segment 2
Bruna Santos - Coding Rights - LAC
Alejandra Erramuspe - Government of Uruguay - LAC

- **Theme**: Human Rights, Gender & Youth

- **Subtheme**: Gender Equality - Access and Connectivity

- **Please state no more than three (3) key messages of the discussion**. [300-500 words]

- *Gender analysis must be an integral part of planning efforts of initiatives, rather than an "add-on" task.*
  In 2018, the BPF focuses on the impact of supplementary models of connectivity on Internet access and use for women and gender non-binary persons. However, a key finding is that there is a lack of a gender focus on initiatives supporting and developing such initiatives.
- *Recommendations to develop Internet access initiatives that focus on women and gender non-binary persons*
  The BPF session aims to produce a set of recommendations for incorporating gender perspectives in the implementation of supplementary models of connectivity.
- *Multi-stakeholder cooperation for addressing gender issues*
  The BPF functions in a bottom-up, multi-stakeholder, community-driven manner.

Enabling diverse stakeholders to collaborate to better address barriers faced by women and gender non-binary persons in accessing the Internet has produced valuable evidence. Nevertheless, continuing to discuss ways to improve collaborations is key for the session.

- Please elaborate on the discussion held, specifically on areas of agreement and divergence. [300 words]

The session was opened with an introduction by the moderator, Ms Radhika Radhakrishnan. She mentioned the report: 'Impact of Supplementary Models of Connectivity in Enabling Meaningful Internet Access for Women and Gender Non-Binary Persons' that is going to be presented after the BPF as an outcome of the BPF work in 2018.

Radhakrishnan presented some of the reported challenges, such as the availability of relevant content, affordability of technology, and questions of access. She added that technology does not have a neutral impact and that we should not homogenise women as being of one community. Challenges are different, so are solutions.

Among the speakers, there was agreement that there are a lot of barriers which prevent women from gaining access to the Internet, and those barriers are significantly bigger for women than for men. In addition, the lack of accessible and relevant data to study these issues (especially for gender non-binary persons) was highlighted and broadly supported.

In order to collect more data, one of the speakers talked about research on community networks that included interviews with over 600 women involved in community networks as a way to better understand the impact that this supplementary model of connectivity has on women. One of the findings is that gender perspectives cannot be applied through a top-down approach.

While it was highlighted that there are not many known initiatives of supplementary models of connectivity that include gender perspectives, some examples were also mentioned during the session. One of the speakers presented a couple of projects that directly or indirectly included gender components. However, it was stressed that there may be a risk on generalising.

Another topic covered during the discussion was gender perspectives on Internet shutdowns, particularly in India.

In all topics, there was agreement that education is key for women's online access and that it should be a fundamental part of discussions.

- Please describe any policy recommendations or suggestions regarding the way forward/potential next steps. [200 words]

One of the recommendations that was forwarded multiple times during the session is the importance of encouraging the collection of gender-disaggregated data when developing initiatives for Internet access by collecting statistics in a consistent and rigorous manner that go beyond the male-female gender binary and recognize and value of gender non-binary

experiences.

- What ideas surfaced in the discussion with respect to how the IGF ecosystem might make progress on this issue? [150 words]

The session had a second segment to open the discussion about the future of the BPF Gender. There was consensus on the importance of continuing addressing gender issues at IGF at the global, regional and local level. Ms Bruna Martins dos Santos talked about many initiatives which are tackling gender issues in Internet governance discussions. She said that while many people could say there are already many gender issues addressed at IGF forums, it is important to continue the work of the BPF. If not, it can turn into a never ending masculine conversation about technology.
In addition, Alejandra Errasmuspe highlighted the need for better understanding not only the use of technology by young women but also by women of different ages. From the audience, a participant suggested focussing on women in the digital economy as a way of advancing the BPF work in its fifth year. The support of the MAG for the future work of the BPF was also mentioned.

- Please estimate the total number of participants: 35

- Please estimate the total number of women and gender-variant individuals present: Gender is a self-identified social characteristic and this cannot be estimated without participants identifying themselves as women or gender-variant.

- To what extent did the session discuss gender issues, and if to any extent, what was the discussion? [100 words]
The whole session was dedicated to gender issues as it was part of the Best Practice Forum on Gender and Access.