28 October 2020

Assessment of and Recommendations for Partnership strategies with potential Digital service in Bangladesh under the project "Aquaculture: increasing income, diversifying diets, and empowering women in Bangladesh and Nigeria"

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About WorldFish
WorldFish is an international, not-for-profit research organization that works to reduce hunger and poverty by improving aquatic food systems, including fisheries and aquaculture. It collaborates with numerous international, regional and national partners to deliver transformational impacts to millions of people who depend on fish for food, nutrition and income in the developing world. Headquartered in Penang, Malaysia and with regional offices across Africa, Asia and the Pacific. WorldFish is a member of the CGIAR, the world's largest research partnership for a food secure future dedicated to reducing poverty, enhancing food and nutrition security, and improving natural resources.
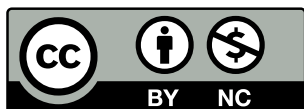
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The opinions expressed herein are those of the author and do not necessarily reflect the views of the Bill and Melinda Gates Foundation and World Fish.

Some parts of the study which highlighted the activities and projects of relevant stakeholders are excerpts from the website or communications materials of those respective companies. It was not possible to verify all information the companies claim to have done or can do.

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List of acronyms

ACI   Advanced Chemical Industries
AIN   Aquaculture for Income and Nutrition
AVC   Agriculture value chain
BANA   Bangladesh Aquaculture and Nutrition Activity
BASIS   Bangladesh Association of Software and Information Services
BFP-B   Business Finance for Poor in Bangladesh
BIID   Bangladesh Institute of ICT in Development
BTRC   Bangladesh Telecommunication Regulatory Commission
CSR   Corporate social responsibility
DSS   Decision support service
FMCG   Fast moving consumer goods
GAIN   Global Alliance for Improved Nutrition
ICT   Information communication and technology
INGENAES   Integrating Gender and Nutrition within Agricultural Extension Service
IOT   Internet of things
IFC   International Finance Corporation
KII   Key informant interview
MAMA   Mobile Alliance for maternal Actions
MFS   Mobile financial services
MSTAR   Mobile Solutions Technical Assistance and Research Project
OTC   Over-the-counter
RDC   Rice and Diversified Crops Activity
SBCC   Social and behavior change communications
SHIFT   Shaping Inclusive Finance Transformation
SOFTEXPO   Software Exposition
SMS   Short message service
UNCDF   United Nations Capital Development Fund
UNDP   United Nations Development Program
UNICEF   United Nations Children's Fund
USAID   United States Agency for International Development
UDC   Union digital centers

1. Objective

The objective of the study is to map the existing digital service providers and projects in Bangladesh in the areas of agriculture, aquaculture, nutrition and women's empowerment. This information will be key to selecting a digital project partner who will collaborate with the Aquaculture: increasing income, diversifying diets, and empowering women in Bangladesh and Nigeria, funded by the Bill and Melinda Gates Foundation, to design project interventions and digital materials and applications for the fish farmers in Rajshahi and Rangpur divisions in Bangladesh.

2. Methodology

The assignment, intended as a qualitative and exploratory study, primarily involved doing a desk review and conducting key informant interviews (KIIs) in person, and over the phone and social media. The KIIs were conducted with more than 20 people from the corporate sector, development partners, government-supported platforms and tech-based companies to gain a better understanding of the market and market actors. Based on the response, a rapid online search was conducted on most of those companies that were mentioned by the respondents to comprehend their activities. Some companies were contacted directly to get an overview of their services and gather additional information. As per the guidance of the client, the identification of digital service providers was segmented by three themes: e-commerce, e-finance and e-services.

For the recommendations, the consultant relied on his personal experiences, perceptions and feedback from the industry stakeholders. The consultant has been active in the private sector development space for more than a decade, a period which has seen a number of new initiatives around digital technology. He was actively involved in designing interventions that used digital technology such as mobile applications, call centers and interactive voice response for agricultural market actors, mainly farmers and input retailers.

3. Limitations

The study was intended to be a short and qualitative one that would explore the existing digital service providers and services available in Bangladesh. Due to the limited time, not all digital service or service providers could be covered. It was also not possible to get users' feedback on those digital services. However, the consultant formulated the recommendations based on word-of-mouth feedback from industry peers interviewed for this study and his own experience of coming across digital services that were mentioned by development partners.

The study also lacks a deep assessment into hundreds of software and IT companies in Bangladesh who primarily serve the private industry, both in the local and international market. The largest software exposition in Bangladesh—the 15th BASIS SOFTEXPO by the Bangladesh Association of Software and Information Services (BASIS)—took place on 19–21 March 2019, which made it difficult to schedule interviews with the software firms and their owners to gauge their interest, experience or challenges of working with development partners.

4. Executive Summery

The BMGF Aquaculture project's Bangladesh component based in the north-west of the country targets to reach out to two million households using digital platform and mass media as one of the communication channel.

The project has identified three possible cohorts where there can be partnership with existing stakeholders. One can be with other development projects working in the same area with similar mandate of dietary diversity, women empowerment and income of smallholder families. There are quite a good number of projects already working Rangpur and Rajshahi division, but it is difficult to find like-for-like match as World Fish is primarily focused around aquaculture and wants to achieve the mandate through better aquaculture practices and information. This is where the other projects are significantly different as aquaculture is not too present in their component. But even if it is, it is a side component of a larger mandate. A quick assessment with three development projects suggest that there can be some collaboration around interventions, especially community mobilization, but branding is an area where it could be difficult to work with projects funded by other donors such as UKAid or European Union. While there seems to be an openness among the project management team to collaborate, it is subject to receiving approval from the funding authority. USAID has multiple projects that work on nutrition, dietary diversity, income generation and women empowerment. But most of their projects are in the Feed the Future zone, which does not include the north-west of Bangladesh. This is where the project might struggle to partner with other development partners. But on the flip side, the Advancing Universal Health Care project, funded by USAID, supports a good number of clinics and is open to partnership, especially around having clinics as a space for reaching customers with digital content. They also run satellite clinics which can be another vehicle for the BMGF to reach beneficiaries.

In addition to field-level activation, to have a better chance at reaching the large number of target audience, digital platform is the way forward. And the telecom companies can also be possible partners to reach a wider community with their internet and other digital services. Both Grameenphone and Robi showed their willingness to share their unused bandwidth depending on the location. They do not have the same speed in every upazilla or union. They try to provide 4G wherever there is a demand for data. Besides bandwidth, Robi is open to sharing their 10 minute School platform and studio for creating digital content which can include video tutorial, and interactive tutorial where the user needs to click or respond to the questions to go the next level or chapter. This allows a learning platform that the project can benefit from. On the other hand, Grameenphone seemed very much willing to test out both cellular bandwidth as well as a device – WTTX router that provides wifi-hotspot to a particular area. They are interested to see the result and would be a great advocate if the project wants to pursue in a broader scale. But both the company representatives stressed on having enough content as well as guiding the target population to the right content of nutrition, aquaculture, women empowerment and other issues. Otherwise, the target population may use internet, but not for the purpose the project intends to. Although the internet package could be a barrier for large number of rural population, but both the telecom partners are hopeful that the price of 3G and 4G would lessen a significant amount in the next one or two years. Telenor Health, which used to be part of Grameenphone, but now has a separate identity as a private entity, could be a right platform to house nutrition-related content beyond the life of project. Content can include videos, animations, quizzes, toll-free IVR and even a fishing game so it is engaging for the users. But digital content or application must be promoted through field activation for months. The initial acquisition of customers and retention are two parts a development project usually misses out. Most of the resources are spent on development of content and application. But equal importance need to be given on the roll out and uptake of the content.

Besides the telecom partners, this study also looked into the possibility of having internet connectivity in a certain area through wifi-connection. The idea is to provide coverage of faster internet at a cheaper rate to a certain location which is frequented by project beneficiaries. Community clinics, union parishad office, a specific marketplace or *bazaar* or a local NGO office which runs microfinance program can be targeted as possible locations. The process involves engaging with either BTRC or Summit or Fibre@Home who have Nationwide Telecommunication Transmission Network (NTTN) license. The NTTN operators provide fiber optics to internet service providers (ISPs) who can provide localized internet service. Discussions with a few ISPs such as AAMRA Networks Limited, BDCOM Limited suggest that they can provide one-stop service where the liaison with the NTTNs will be their responsibility. For a quick intervention, partnership with a private company CARNIVAL could be explored. Carnival Internet, a local internet service provider has partnered with traditional shopkeepers and tea stall owners for the WiFi Haat, where they have installed their systems. One has to pay Tk 7 for internet access for two hours, Tk 15 for the whole day and Tk 25 for two days.

Moving forward, the project can test out the pilots in multiple ways. A 3-6 months' guided internet connectivity in four-five locations will be useful in understanding the behavior/usage pattern of the project beneficiaries. There could be separate arrangement with Grameenphone, Robi, Aamra Networks Limited, Carnival for service, and with community clinics, an MFI such as BRAC or TMSS, a bazaar committee or a Union *Parishad* for the ideal location. The project also needs to focus on digital content. Right

now, most content are text-heavy and are sent via text messages. An interactive and engaging digital platform and content are missing in this sector. Depending on the result, the project can later disseminate the outcomes to policy makers and other stakeholders, especially development partners. This is especially important for development partners as almost all projects have come up with a mobile application or a similar type of digital service which phased out after the project. If the rural people are not comfortable using internet in a way that suits their needs, any digital service will fail. The development partners, as well as the government bodies need to be sensitized not only on the digital service, but also on their promotion and sustainability techniques. Bangladesh Open Source Network and Aamra Networks Limited have shown interest to jointly organize a roundtable to take the discussion forward.

5. Introduction

Almost all development projects in the last couple of years has had a strong focus on digital services, which mostly looked like content in the digital space or outreach through digital platform. Common digital services include mobile SMS, IVR (interactive voice response), mobile application, and web-based information or video or interactive engagement. While SMS and IVRs have been mostly used to reach out to rural people, it had its limitations. Content had space/character or time ceiling, as well as lacked any visual representation, and thus limited the scope of support. A thorough step-by-step learning can be facilitated through digital social and behavior change communication, which in most cases, in centered around internet connectivity. Internet plays a vital role in making communications faster and easier and is changing the way we work, spend our leisure and communicate with each other. The usage of internet has skyrocketed in Bangladesh, with almost reach to near about 95 million people at the end of April, 2019.[1]

But in our observation, there are four major barriers for rural people to access information or engage in the digital space. **First**, in most cases, it requires a smartphone, which is still short in terms of usage compared to feature phones among the rural people. **Second**, rural people are still not optimizing the use of smartphone, and mostly use it for taking photos and recording videos. The consultant himself struggled to make a group of 30 agricultural actors download a mobile application from Google store. Although all of them had smartphone, none of them could figure out the icon for Google Store. And once identified with help, it was not possible to access it because none of them had a Gmail account, nor used one. This suggests a large number of rural people are not using smartphone smartly. **Thirdly**, the speed in rural areas is quite poor, especially in upazillas and unions. In a conversation with telecom representatives, it came out that they provide 3G and 4G infrastructural support where there is a demand. If the target group of population in a specific union does not have demand for data, the telecom operators do not prioritize those areas simply because it does not make business sense for them. It is a catch 22 situation, and affects everyone in the union including the 10-15% population who may have need for data. **Fourthl**y, the rural people are very price sensitive. Their use is very limited, and mostly for entertainment purpose.

While all the problems can not be solved by the project, through this study, and subsequent pilot, the project would explore if the second, third and fourth challenge can be addressed through better interconnectivity at a cheaper rate. The study would explore various ways for project to achieve its target.

6. Potential Partners under Internet Service Expansion and Infrastructure

The use of internet has more than doubled over the last 4 years [2], thanks to the initiatives that are being actively taken to transform the country into "Digital Bangladesh". The ISPs, regulated by Bangladesh Telecommunication Regulatory Commission (BTRC), procure internet from either the public sector or the private sector to provide the last-mile internet service to the end users. The state-owned Bangladesh Telecommunications Company Limited, which is the largest telecommunications company in Bangladesh, have copper, optical fibre and microwave networks almost all over the country. Although it has spread out its data network across the country with a major objective to serve several government initiatives, but ISPs are generally reluctant to use its middle mile for internet transmission because of poor customer service. BTRC had issued licenses to private sector for building, operating and maintaining nationwide optical fiber network all over the country known as Nationwide Telecommunication Transmission Network (NTTN). Fibre @ Home and Summit Communications Limited have been awarded as licensee to implement countrywide optical fiber network.

6.1 Private Sector

6.1.1 Nationwide Telecommunication Transmission Network (NTTN) operator

a) Fibre @ Home

Brief Introduction
Fiber@Home Limited has been the first ever Nationwide Telecommunication Transmission Network (NTTN) operator granted by Bangladesh Telecommunication Regulatory Commission (BTRC) in the aim of creating a telecommunication infrastructure company to build, operate and maintain nationwide Fiber Optic Transmission network to be shared by all ANS operators including Mobile operators, ISPs, PSTN operators, Gateway operators, Cable TV operators, Government entities etc.

Meeting Inputs
Fibre @ Home (FAH) has footprint all over Bangladesh, meaning they can provide nationally everywhere. FAH which is implementing the Info Sarkar 3 (the project aims to connect 2,600 unions in 488 upazilas with optical fibre cable) is almost at its end. However, FAH will only provide to ISPs (as long as ISPs have license of Bangladesh Telecommunication Regulatory Commission) and the financial terms and agreements will be finalized with the ISPs. The advice of the senior management of FAH was to partner with ISPs that have nationwide coverage, who will work with their backbone partner, which can be Summit Communications (SCL) or Fibre @ Home (FAH).

b) Summit Communication Limited

Brief Introduction

As noted above, Summit Communication Limited (SCL) is one of the two authorized Nationwide Telecommunication. As per license obligation, SCL will build up, operate and maintain an optical fiber cable network and lease out to ANS operators, ISPs, other licensed telecom operators and cable TV operators. SCL will be building backbone network both in metro cities & in long haul and can provide network service through 1) Dark Fiber Leasing, 2) Bandwidth Leasing. Another service the company offers is BTS and Hub site connectivity.

Meeting Inputs

Similar to FAH, SCL provided the same suggestion about partnering with a potential ISP as the NTTN operators will provide connectivity to ISPs. ISPs negotiate with NTTN operators (namely, Fiber @ home and summit communications), and finally select the NTTN operator which provides more feasibility in terms of both distance and cost. Precisely, they would go for the NTTN operator which has the most nearby Point of Presence. SCL has nationwide coverage - they have provided connection by going deep into village level in some parts of the country (where business is relatively high), while in some other parts SCL provided connection only in the district level, where the revenue stream was not very high. SCL said they can provide ISP internet from two POPs, if required based on budget, feasibility and client requirements.

> "Even when a few days of transmission is required, the internet service providers have to sign at least a 13-month contract with the NTTN operators. All these increase the operational cost of ISPs, as there is a network usage charge apart from that for transferring every megabit, they said." – Star Business Report, The Daily Star, 2018

Representative from Peerex Networks, which is now addressing the growing need for reliable International Internet Gateway (IIG) and provide IP Transit services to the large number of Internet Service Providers (ISPs), BWAs and other ANS operators in Bangladesh, was consulted. Peerex Network has a POP location in Bogra and can possibly provide internet to ISPs in Bogra region.

As per the recommendation of the NTTN operator, consultation with potential ISPs were conducted. Meetings were held with ISPs having nationwide coverage and all of them were highly optimistic about potential collaboration. Local Level ISPs were also consulted.

6.1.2 Internet Service Providers (ISPs)

a) Bangladesh Online (BOL)

Services of Bangladesh Online (BOL) are available all over Bangladesh through NTTN Transmission Network. BOL provides point to point data connectivity using dedicated link as well as using our robust MPLS Backbone. Although they don't have support offices in the target location of WorldFish (support offices are in Dhaka, Chittagong and Sylhet) but they can ideally provide solution for any network or technical issue through Video Conferencing Solution.
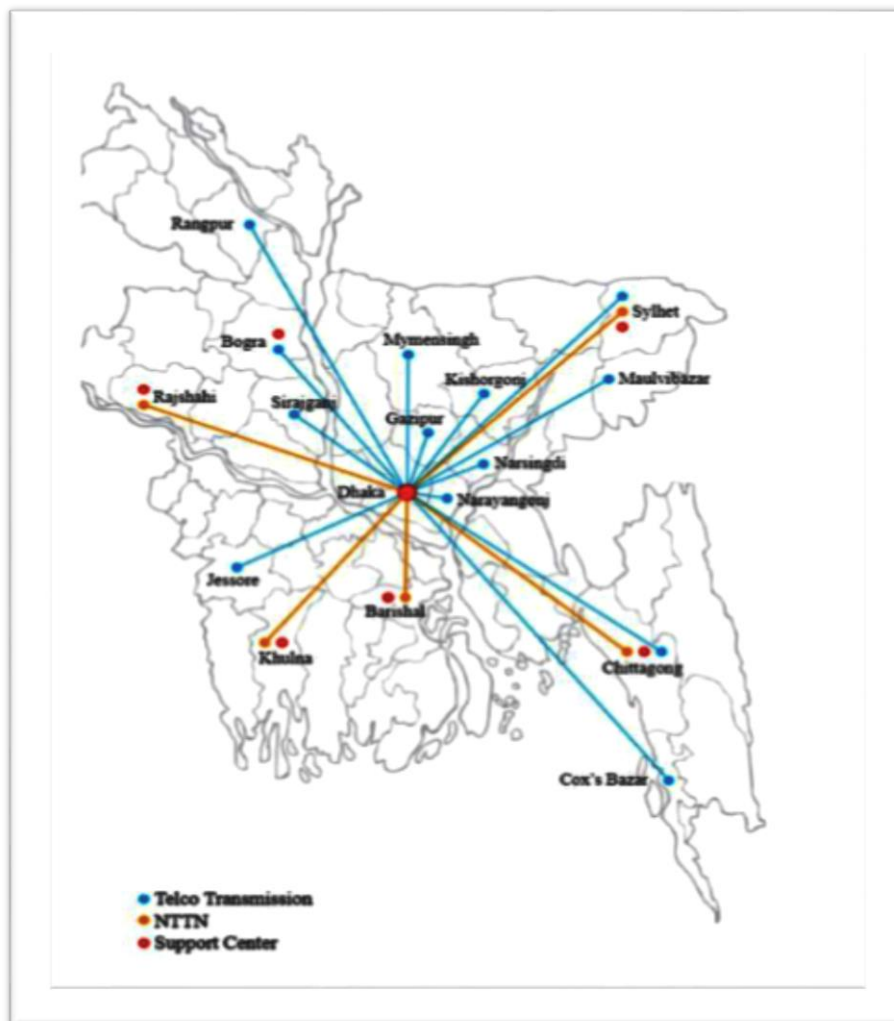
b) BDCOM

BDCOM is a trusted name for Nationwide Internet Service, Secured Data Connectivity, (IP Telephony Service), System Integration & Managed Service. With the approval of BTRC for providing Domestic Data Communication, **BDCOM has built its network on 493 Thanas out of 509 of the country and has an expansion plan to cover rest of the districts of the country within a year.**

c) Aamra

Aamra networks limited (formerly Global Online Services Limited) over the last decade has consistently provided its customers with state of the art IT communication solutions. One of the services Aamra provides is **The WAN through which they provide communication solutions for organizations those need to exchange digital information between/among the offices within and/or between the cities**. Aamra works closely with telecommunication companies. Aamra's potential business model would be to provide metro wifi hotspot (where they have already gained success; currently they have 800+hotspots in 10 districts). Although Aamra does not have the permission to transfer internet under the ground, they will be able to provide last mile internet service.

- *Aamra can provide metro wifi hotspot; currently they have 800+hotspots in 10 districts.*
- *Although Aamra does not have the permission to transfer internet under the ground, they will be able to provide last mile internet service.*
- *Maintaining and building hotspot in public may cost about BDT 10,000 to 30,000 a month on average.*

c) Carnival Internet

From powerful and reliable connectivity to secure network solutions, Carnival internet is a digital service provider. Carnival Internet has End to end fiber optic connectivity for stable and super fast internet service, as well as promises to ensure that there is no data cap or barring, and also provides a real IP to its customer base. Carnival Internet is currently undertaking a "digital connectivity" solution, with a vision to bridge the Bangladeshi rural communities with the entire globe[3]. Although according to the website, they are currently covering only Dhaka, Comilla, Chittagong, Mymensingh and Sylhet Division, but Carnival Internet has developed a model which can be scaled up or replicated in Rangpur and Rajshahi Division. However, upon consultation with the CEO of Carnival Internet, it was found that they have started their operation.

WiFi Haat is a solution that is intended to provide affordable internet to rural community hubs like local bazars and tea stalls. The internet cost ranges from BDT 7 to BDT 50 which amounts to less than a $1.One has to pay Tk 7 for internet access for two hours, Tk 15 for the whole day and Tk 25 for two days.[4] Carnival internet has a plan to setup 50,000 WiFi Haat, reaching 10,000 villages and can be a potential partner in the long run. The CEO also mentioned that they can customize the bandwidth and provide router in a way to ensure highest maximum user connectivity at a speedy rate. The initial investment towards this is relatively small (according to the CEO) and this can be furthered explored in future

meetings.

c) Circle Network

Circle Network is another of the Nationwide ISPs in Bangladesh, which has a coverage of 34 Districts and 250 Upazilas.

- The abovementioned ISPs were provided with the project objective and the technical requirement. The information about the target area and other guidelines were shared. The updates from the ISPs are:
- BOL and BDCOM provided a very draft updates (Annex 1 and Annex 2) which includes a budgetary price and may vary based on actual service delivery location and bandwidth requirement. Circle Network BD also provided their quotation (Annex 3) to provide the service.
- Aamra Network: maintaining and building hotspot in public may cost about BDT 10,000 to 30,000 a month on average.
- WiFi Haat – an inspired solution that is helping thousand of locals in rural community hubs like local bazars and tea stalls can also be a potential solution by collaborating with Aamra networks. Initial cost isn't much (although
- Among the local level ISPs, Master Internet Service and Gangachara Online were consulted. Master Internet Service which serves in Mohanpur, Rajshahi doesn't have any nearby plan of extending it's network elsewhere, although it's currently serving in the upazila level. Master internet Service of Rajshahi (operate as Circle Network in Dhaka) also recommended to assess the capacity of Grameenphone or other
- Telecommunication company. Gangachara Online has a coverage area in Gangachara, and they are currently serving Kolkanda Union (Gangachara upazila, Rangpur) as well.

6.1.2 Others

Several other stakeholders were confabulated, and their advice were also noted down which may be handy in order to take this initiative forward. Munir Hasan, currently the Head of Youth Program of Prothom Alo and has previously worked at Bangladesh Open Source Network, talked about the vast importance of an availability of existing infrastructure to ensure that such interventions are successfully piloted. Mr. Hasan is currently undertaking a similar initiative where he's providing internet to a girls school where some desktop computers are already in place. The idea is to check whether the usage of internet increases and the beneficiaries (female students, in this case) uses the internet service for knowledge/educational attainment.

6.2 Government Sector

a) Info Sarker Phase – 3, Development of ICT Infra-Network for Bangladesh Government & Joint Secretary, Government of the People's Republic of Bangladesh

Brief Introduction
Phase III is aimed to expand existing backbone network through 20,000 km optical fiber cable to 2600 rural administrative units (Union) and 1600 police offices. At least 60% of the population will be directly benefited from this project. The project is expected to increase the fixed broadband connectivity from existing 5% of household to more than 15% of household and is expected to contribute 1% increase of GDP.

Meeting Inputs
The project provided it's update regarding the connectivity that has already been established in union level. The union which has been connected as per NMS Status will be able to provide the connection to ISP in that particular union, however, that may involve time as it is dependent upon the pilot project which is currently underway. The union which has been connected as per NMS Status will be able to provide the connection to ISP in that particular union, however, that may involve time as it is dependent upon the pilot project which is currently underway.

b) Access to Information (A2I)

Brief Introduction
The primary goal is to ensure easy, affordable and reliable access to quality public services for all citizens of Bangladesh. Access to Information and A4AI has been working closely to provide affordable internet throughout the country. In this regard, A4AI and Access to Information has advanced the policy needed to unlock access to open and

affordable internet for all Bangladeshi citizens[5].

Way Forward:
> It will not be possible to collaborate with NTTN operators, as they provide connectivity via ISPs, so ISPs can be a potential digital partner. Since NTTN operators are the backbone of the ISPs, establishing and maintaining liaison with them will make the partnership more effective. At the same time, government stakeholders can also provide advisory support, along with NTTN operators.
> Existing infrastructure is going to be crucial where not only computer service or a designated space is available, but a constant flow of people, to ensure both the supply-side as well as demand-side.

The Right Kind Solution:
The Right Kind recommends trying three models to go forward with the pilot.
1) Connectivity via ISPs (broad band connection)
2) Wifi-Hotspots by Aamra Networks
3) WiFi-Haat by Carnival Internet
After the pilot phase, the most successful model can be replicated or scaled up.

6.3 Potential Collaboration with Development Partners

6.3.1 ICCO Cooperation

Brief Introduction
ICCO Cooperation is a global organization with roots in Netherlands, working towards a world without poverty, injustice and exclusion. In Bangladesh, ICCO focuses on mobilizing rural communities and engaging them in developing inclusive sustainable and profitable income generating opportunities. This is supported by lobby and policy work to demand a more effective enabling environment of the government.[6]

a) Songo Project

Meeting Updates
Sustaining Opportunities for Nutrition Governance

The main idea was to learn more about the SONGO (Sustaining Opportunities for Nutrition Governance) project (which aims to address child undernutrition among 95,000 rural households by employing nutrition- specific and nutrition-sensitive interventions through a

lifecycle approach to deliver the right services and messages to the right person at the right time). SONGO works in Rangpur Division (Gaibandha and Kurigram) and also almost have the same focus from nutrition standpoint. The Country Representative and Head of Programs of ICCO Cooperation are very much primarily interested in a potential collaboration (subject to donor approval and other approval of procedures). Although they have also mentioned that there may not be much scope for working in aquaculture, but they are definitely keen to penetrate digital technology to send messages relevant to nutrition. As per the meeting outputs, this can be embarked during the community awareness programs, knowledge fairs or training. The way forward can be chalked down and finalized in the future meetings.

6.3.2 CARE Bangladesh

CARE has been active in Bangladesh since 1949 with Bangladesh being one of the largest country offices of CARE. Prior to Bangladesh's independence in 1971- CARE Bangladesh's efforts mainly focused on disaster relief, school and pre-school feeding.[7]

b) Imagine Project

Meeting Updates
Inspiring Married Adolescent Girls to Imagine New Empowered Futures
The idea behind meeting this project Team Leader was to discuss potential collaboration within the same donor as IMAGINE is also funded by Bill & Melinda Gates Foundation. However, they work in different location (Kurigram district of Rangpur Division) and at the same time their focus is to support married adolescent girls im delaying first birth and envision. These may act as an obstacle, but The Right Kind believes that there can be cross-sharing and learning between each other.

There are some important take-aways from the meeting. The intervention package cost of Girls Collectives, Transformative Vocational Opportunities, Couples Counselling paired with a Newlywed Kit and Public Couples' Activities and Health Worker Training & Transformation. The interested take away is the women are empowered in the form of learning new technical skills, for example, through Robi (the second largest mobile operator), the women undergo training on mobile using as well as mobile servicing. The adolescent girls also learn the technical computer skills under four-categories of IT Trade in this project.

b) JANO Project

Meeting Update
The idea behind meeting this project Team Leader was to discuss potential collaboration as JANO works in nutrition in Rangpur District (as well as Nilpharamari which WorldFish project does not cover). JANO is replicating proven best practices, and take to scale innovative local governance models for better nutrition outcome. The Team Leader mentioned about their interest in collaboration, however, with its donor being European Commission (co-funded by Australian Development Cooperation) are very concerned about branding, so this need to be addressed and worked out in the future meetings.

There are some other important take-aways from this meeting as well. This project does community awareness program through theatre for development where college students are trained. Some other interventions include individual counselling and works closely with public sector, private sector and civil society organizations; building their capacity for better planning, budgeting of nutritional program, and to provide effective oversight in its implementation. The two areas of nutrition the project focus include livestock and crop.

6.3.3 Advancing Universal Healthcare by Chemonics Ltd.

Smiling Sun Network under the USAID-funded Advancing Universal Healthcare project has almost 300 static clinics all over the country. A large number of them fall in the North-West of Bangladesh. They also run satellite clinics to provide medical services.

Meeting Update
The Chief of Party was present along with the Partnership Manager and Senior Advisor. They seemed very positive in testing out the wifi-hotspot concept in one or two clinics the under Smiling Sun Network. There can also be collaboration around outreach as they do regular satellite clinics. The latter might require coordination with their teams, but the first one is a low hanging fruit. But content creation and the type of content is a point of discussion for them.

Way Forward:
  ➢ The projects have primarily developed high interest and are very much willing to collaborate, subject to some approvals from the donors.
  ➢ There are some challenges, including the branding and field level, which may be solved over time, by further consultation and discussion

The Right Kind Solution:
Partnership with Advancing Universal Healthcare, funded by USAID, and managed by Chemonics Ltd can be done in the short-term. If World Fish can broker a partnership where their messages are delivered through the satellite clinics, it will massively help them in reaching a large number of audience in Rangpur and Rajshahi within a short period.

For the other projects, The Right Kind recommends engaging in information-sharing via external events. Information-sharing may consist of nutrition or aquaculture messages where partners can have their own

6.4 Potential Partners under Telecommunication Sector

6.4.1 Grameenphone

Brief Introduction

Gramenephone (GP) is the leading telecommunications service provider in Bangladesh. It provides the power of digital communication, enabling everyone to improve their lives, build societies and secure a better future for all.[8]

Meeting Updates

The Chief Business Officer (CBO) as well as technical specialists joined the meeting and shared their expert insights. GP talked about the three important aspect which is important to increase access of internet – connectivity, content and device. Speaking about device, the CBO mentioned about how people usually use feature phone in the rural areas which costs about BDT 800-1,000, whereas 3G supported phones cost around BDT 2,000 to BDT 2,500 and 4G supported phones cost around BDT 6,000. With Digital Bangladesh being a top-priority and is coming into play, it will be interesting to see how people shift to 3G/4G handsets from feature phone.

Two ways that GP can join hands, mainly via WTTX (Wireless to the X) and 4G cellular connection.

i.   WTTX is a router which serves the purpose of Home Broadband, and internet connection can be made readily available from the router. It can be used to deliver cost-effective broadband access to unconnected households, and it also uses a booster to ensure the highest possible network strength. As of the second half of 2018, more than 230 operators in over 120 countries were offering WTTx services to 75 million users around the world[9].

ii. Cellular connection can also be a potential medium, however, the location needs to be finalized upon consultation which will have a high-speed connection. With 4G internet coverage like to overshadow 3G internet coverage very shortly, solutions via 4G connectivity may come handy. GP although has upazila level 4G coverage data and can produce information about the same coverage in union level, provided that GP is provided with the latitude and longitude information.

> One important talking point that was learnt in the meeting is that about **85 % of the revenue market share in Rajshahi and Rangpur division** comes to GP and they can definitely be an important market player in the context of partnership collaboration.

6.4.2 Telenor Health

Brief Introduction

Telenor Health uses mobile technology to help make high quality health information, advice, and services accessible to all. A core operating principle for Telenor Health is ensuring that our services are safe, effective, patient-centered, and accessible. Tonic is an expression of Telenor Health's view that technology can have the greatest impact when it is used to 'connect the dots' across an individual's wellness and health experience.[10]

Meeting Updates

Telenor Health has been working with development partners and their core focus is in health care and health insurance. They work with Global Alliance for Improved Nutrition (GAIN) in raising awareness as well as creating content. Their call line is attended by MBBS qualified doctors to ensure phone-based access to primary healthcare. There were few potential areas of collaboration as per the discussion:

- ✓ Parking Lot: The contents of WorldFish project can be possibly stored in the online/offline platform of Telenor Health. This will ensure sustainability of the project messages beyond the project life.

- ✓ Chat-box: This can be used to respond to queries and provide useful information to the beneficiaries from both nutrition as well as a bit of aquaculture aspect.

- ✓ Games for Kids: This can contain visual and digital content highlighting the project messages.

- ✓ Toll-free IVR – This can be used in their the existing model, or can customize this to make it more interactive.

7. Looking Forward

Way Forward:
- Pilot with GP can be in the form of WTTX and Cellular Data.
- While GP can help in connectivity, Telenor can help in sharing project messages. Scope of collaboration may include Parking Lot, Chat-Box, Games for Kids, Toll-Free IVR.

The Right Kind Solution:
The Right Kind recommends trying out WTTX router in specific locations. The routers (depending upon the availability) can be taken from GP at free of cost for the pilot purpose. For the Cellular Data to make an impactful outcome, locations need to be consulted where the coverage is at its peak. Telenor Health can be also be partnered in the sense that after the expiry of the project, most of the important messages are lost. With Telenor Health, these storing of messages can be a sustainable solution, helping the beneficiaries in the long run.

There is other scope of possible opportunities that WorldFish may wish to explore in the future. The need to expand internet to low-income households is massive. With connectivity to internet, access to job opportunities will also increase, which ultimately will have a favorable impact on a country's growth in the long run.

7.1 Loon

Loon has been working to solve the barriers of extending Internet access to unconnected communities worldwide. They are providing Internet access to rural and remote areas. The company uses high-altitude balloons placed in the stratosphere at an altitude of about 18 km to create an aerial wireless network with up to 4G-LTE speeds.

Founded in 2011 and as of 2018, Project Loon continues to fulfill its mission to connect people everywhere by inventing and integrating audacious technologies.[11]

Technology used: Balloon-powered internet (advancements in materials science, atmospheric modeling, machine learning, communications systems, etc); The Loon System; Flight Equipment (antennas, solar panels, flight capsule, parachute).

Internet-in-a-Box is a low-cost digital library, consisting of a wireless access point with storage, which users nearby can connect to. Internet-in-a-Box brings the power of a free Digital Library of Alexandria into the hands of any school, hospital, or prison worldwide.

In short, Internet-in-a-Box brings the very best of the World's Free Knowledge (Wikipedia, Khan Academy, OpenStreetMap, E-Books and many others) to those who are offline — e.g. anybody nearby with an old smartphone, tablet or laptop[12]. This is particularly helpful and can be implemented in rural areas where digital information can be stored, and can be used to showcase the project message to the beneficiaries at a later date.

8. The Right Kind of Recommendation and Solution

The Right Kind of Recommendation

Many stakeholders from multiple sectors were consulted for this study purpose. This may be a challenging task to have all of them on board, however The Right Kind would like to recommend a roundtable participatory discussion session, workshop and meeting where all the stakeholders will be invited and The Right Kind would like to be partner for initiating and finalizing the discussions. This will help to get a clear overview of how WorldFish project messages and objectives aligns with other stakeholders vision, and this will take the discussion in the next possible stage for collaboration, and will also help WorldFish to shortlist the potential partners for this initiative.

The Right Kind, through consultations, also advises to work in an existing infrastructure which will make it easy to achieve possibly positive outcomes. Identification of location is particularly important to ensure that the internet services or the digital messages are utilized and making an impact in the lives of the beneficiaries (the beneficiaries may not have access to the messages otherwise). Some of the places where we can integrate internet may include community clinic, union parishad, bazaar or even a collection point or office of a reputed microfinance institute. Community Clinic is a place where women (and men) come for health related service and at the same time, they are in a better mindset to receive health and nutrition related information. Union Parishad is frequently visited by people for different

government related services. Bazar (mainly a fish market or a fingerlings market) and have a huge flow of people coming in every day. Reputed MFI (BRAC for example) is also another frequently visited place as women will have to go there weekly/fortnightly to make transactions.

The Right Kind of Solution (details in each sub-section)

- Connectivity via ISPs, WiFi solution by Aamra and Carnival Internet with NTTN operators and Government Sector as advisory support
- Collaboration with development partners in external outreach events
- Partnership with GP via router (WTTX) and cellular data (4G can be an option) and with Telenor Health via project message finalization
- A round-table discussion after six months in partnership with BDOSN, Aamra and others if interested

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[1] http://www.btrc.gov.bd/content/internet-subscribers-bangladesh-april-2019

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[3] https://thefinancialexpress.com.bd/views/analysis/internet-in-rural-bangladesh-a-story-of-transformation-1565087721?fbclid=IwAR2hgX0DR6UXORmN24K5tuKOT29VllBvyuqiXcxuGD9fu9ng5hklMS5gtvg

[4] https://www.thedailystar.net/business/news/wifi-haat-enlivens-rural-areas-1786606

[5] International Workshop on providing affordable internet services for all.
https://a2i.gov.bd/international-workshop-on-providing-affordable-internet-services-for-all/

[6] https://www.icco-cooperation.org/en/countries/Bangladesh

[7] http://www.carebangladesh.org/about_care.php#sc_1

[8] https://www.grameenphone.com/about/discover-gp/about-grameenphone/our-brand

[9] https://www.globenewswire.com/news-release/2019/02/27/1743442/0/en/Huawei-Release-WTTx-Wireless-Fiber- Four-Use-Cases.html

[10] https://telenorhealth.com/about-us/

[11] https://loon.com/journey/

[12] http://internet-in-a-box.org/

Annex 1

BOL Coverage Updates

S.L	Division	District	Upazila	Union	BW in Mbps	Approx Distance (KM)	Approx OTC	Approx MRC	Proposed Media
1	Rajshahi	Bogra	Adamdighi	Adam Dighi	2	2	23,000	17,600	Fiber
2	Rajshahi	Bogra	Adamdighi	Shantahar	2	10	28,000	33,600	Fiber
3	Rajshahi	Bogra	Bogra Sadar	Lahiri Para	2	12	28,000	37,600	Fiber
4	Rajshahi	Bogra	Bogra Sadar	Sekherkola	2	9	23,000	31,600	Fiber
5	Rajshahi	Bogra	Dhunat	Gosainbari	2	13	120,000	10,000	Radio
6	Rajshahi	Bogra	Gabtali	Dakshinpara Union	2	19	120,000	10,000	Radio
7	Rajshahi	Bogra	Gabtali	Durgahata	2	12	120,000	10,000	Radio
8	Rajshahi	Bogra	Gabtali	Naruamala	2	3	120,000	10,000	Radio
9	Rajshahi	Bogra	Kahaloo	Urail	2	4	120,000	10,000	Radio
10	Rajshahi	Bogra	Nandigram	Bhatgram	2	6	120,000	10,000	Radio
11	Rajshahi	Bogra	Nandigram	Burail	2	7	120,000	10,000	Radio
12	Rajshahi	Bogra	Nandigram	Nandigram	2	2	120,000	10,000	Radio
13	Rajshahi	Bogra	Sariakandi	Bhelabari	2	16	120,000	10,000	Radio
14	Rajshahi	Bogra	Sariakandi	Bohail	2	28	120,000	10,000	Radio
15	Rajshahi	Bogra	Shajahanpur	Asekpur	2	7	23,000	27,600	Fiber
16	Rangpur	Gaibandha	Fulchhari	Fazlupur	2	2	23,000	17,600	Fiber
17	Rangpur	Gaibandha	Gaibandha Sadar	Kuptala	2	10	28,000	33,600	Fiber
18	Rangpur	Gaibandha	Gobindaganj	Kamdia	2	32	28,000	45,600	Fiber
19	Rangpur	Gaibandha	Gobindaganj	Rajahar	2	26	28,000	65,600	Fiber

Annex 1

20	Rangpur	Gaibandha	Palashbari	Mohadipur	2	2	23,000	17,600	Fiber
21	Rangpur	Gaibandha	Sadullapur	Kumar Para	2	47	120,000	10,000	Radio
22	Rajshahi	Naogaon	Badalgachhi	Adhaipur	2	22	120,000	10,000	Radio
23	Rajshahi	Naogaon	Badalgachhi	Bilasbari	2	17	120,000	10,000	Radio
24	Rajshahi	Naogaon	Badalgachhi	Pahar Pur	2	12	120,000	10,000	Radio
25	Rajshahi	Naogaon	Dhamoirhat	Alampur	2	21	120,000	10,000	Radio
26	Rajshahi	Naogaon	Manda	Tentulia	2	24	120,000	10,000	Radio
27	Rajshahi	Naogaon	Naogaon Sadar	Kirtipur	2	20	28,000	53,600	Fiber
28	Rajshahi	Naogaon	Patnitala	Nazipur	2	5	23,000	23,600	Fiber
29	Rajshahi	Naogaon	Raninagar	Gona	2	13	120,000	10,000	Radio
30	Rajshahi	Natore	Bagati Para	Bagati Para	2	2	23,000	17,600	Fiber
31	Rajshahi	Natore	Bagati Para	Jamnagar	2	13	28,000	39,600	Fiber
32	Rajshahi	Natore	Bagati Para	Panka	2	7	23,000	27,600	Fiber
33	Rajshahi	Natore	Baraigram	Chandi	2	25	28,000	63,600	Fiber
34	Rajshahi	Natore	Bariagram	Gopalpur	2	22	28,000	57,600	Fiber
35	Rajshahi	Natore	Bariagram	Joari	2	16	28,000	45,600	Fiber
36	Rajshahi	Natore	Lalpur	Arbab	2	5	120,000	10,000	Radio
37	Rajshahi	Natore	Natore Sadar	Kafuria	2	13	28,000	39,600	Fiber
38	Rajshahi	Natore	Natore Sadar	Lakshmipur Kholabaria	2	12	28,000	37,600	Fiber
39	Rajshahi	Natore	Natore Sadar	Tebaria	2	6	23,000	25,600	Fiber
40	Rajshahi	Natore	Singra	Sukash	2	30	120,000	10,000	Radio
41	Rajshahi	Pabna	Atgharia	Majh Para	2	10.5	28,000	34,600	Fiber
42	Rajshahi	Pabna	Chatmohar	Danthia Bamangram	2	10	28,000	33,600	Fiber
43	Rajshahi	Pabna	Faridpur	Demra	2	7	120,000	10,000	Radio

44	Rajshahi	Pabna	Pabna Sadar	Bharara	2	10	28,000	33,600	Fiber
45	Rajshahi	Rajshahi	Bagha	Manigram	2	9	120,000	10,000	Radio
46	Rajshahi	Rajshahi	Baghmara	Goalkandi	2	11	120,000	10,000	Radio
47	Rajshahi	Rajshahi	Baghmara	Hamir Kutsha	2	12	120,000	10,000	Radio
48	Rajshahi	Rajshahi	Charghat	Salua	2	5	23,000	23,600	Fiber
49	Rajshahi	Rajshahi	Durgapur	Dharmapur (Pananagar)	2	13	120,000	10,000	Radio
50	Rajshahi	Rajshahi	Durgapur	Kismat Gankair	2	14	120,000	10,000	Radio
51	Rajshahi	Rajshahi	Godagari	Matikata	2	34	28,000	47,600	Fiber
52	Rajshahi	Rajshahi	Paba	Parila	2	9	120,000	10,000	Radio
53	Rangpur	Rangpur	Kaunia	Kaunia Bala Para	2	2	23,000	17,600	Fiber
54	Rangpur	Rangpur	Pirgachha	Chhaola	2	11	28,000	35,600	Fiber
55	Rangpur	Rangpur	Pirganj	Chaitrakul	2	20	28,000	53,600	Fiber
56	Rangpur	Rangpur	Pirganj	Kumedpur	2	8	28,000	29,600	Fiber
57	Rangpur	Rangpur	Taraganj	Alampur	2	12	120,000	10,000	Radio
58	Rajshahi	Bogra	Adamdighi	Champapur	2	15	28,000	43,600	Fiber
59	Rajshahi	Bogra	Bogra Sadar	Noongola	2	7	28,000	27,600	Fiber
60	Rajshahi	Bogra	Dhunat	Nimgachhi	2	13	120,000	10,000	Radio
61	Rajshahi	Bogra	Dhupchanchia	Dhupchanchia	2	2	23,000	17,600	Fiber
62	Rajshahi	Bogra	Kahaloo	Paikar	2	12	120,000	10,000	Radio
63	Rajshahi	Bogra	Sariakandi	Hat Sherpur	2	7	120,000	10,000	Radio
64	Rajshahi	Bogra	Shajahanpur	Madla	2	12	28,000	37,600	Fiber
65	Rajshahi	Bogra	Sherpur	Garidaha	2	9	23,000	31,600	Fiber
66	Rajshahi	Bogra	Sherpur	Shah- Bandegi	2	15	28,000	43,600	Fiber

67	Rajshahi	Bogra	Shibganj	Saidpur	2	19	28,000	51,600	Fiber
68	Rangpur	Gaibandha	Gaibandha Sadar	Malibari	2	7	23,000	27,600	Fiber
69	Rangpur	Gaibandha	Gobindaganj	Kamardaha	2	15	28,000	43,600	Fiber
70	Rangpur	Gaibandha	Gobindaganj	Kochasahar	2	18	28,000	49,600	Fiber
71	Rangpur	Gaibandha	Gobindaganj	Nakai	2	15.5	28,000	44,600	Fiber
72	Rangpur	Gaibandha	Gobindaganj	Shibpur	2	7	23,000	27,600	Fiber
73	Rangpur	Gaibandha	Palashbari	Harinathpur	2	21	28,000	55,600	Fiber
74	Rangpur	Gaibandha	Palashbari	Kishoregari	2	11	28,000	35,600	Fiber
75	Rangpur	Gaibandha	Sundarganj	Tarapur	2	5	23,000	23,600	Fiber
76	Rajshahi	Naogaon	Atrai	Bisha	2	6	120,000	10,000	Radio
77	Rajshahi	Naogaon	Atrai	Panchupur	2	9	120,000	10,000	Radio
78	Rajshahi	Naogaon	Mahadebpur	Chandas	2	10	28,000	33,600	Fiber
79	Rajshahi	Naogaon	Mahadebpur	Khajur	2	8	23,000	29,600	Fiber
80	Rajshahi	Naogaon	Manda	Nurullabad	2	18.5	120,000	10,000	Radio
81	Rajshahi	Naogaon	Naogaon Sadar	Sailgachhi	2	10	28,000	33,600	Fiber
82	Rajshahi	Naogaon	Patnitala	Matindhar	2	10	28,000	33,600	Fiber
83	Rajshahi	Naogaon	Patnitala	Nirmail	2	22	28,000	57,600	Fiber
84	Rajshahi	Naogaon	Patnitala	Patnitala	2	2	23,000	17,600	Fiber
85	Rajshahi	Naogaon	Porsha	Nithpur	2	8	120,000	10,000	Radio
86	Rajshahi	Naogaon	Raninagar	Mirat	2	14	120,000	10,000	Radio
87	Rajshahi	Naogaon	Sapahar	Aihai	2	4	120,000	10,000	Radio
88	Rajshahi	Natore	Natore Sadar	Dighapatia	2	10	28,000	33,600	Fiber
89	Rajshahi	Natore	Singra	Dahia	2	21	120,000	10,000	Radio
90	Rajshahi	Natore	Singra	Hatiandaha	2	5	120,000	10,000	Radio

91	Rajshahi	Natore	Singra	Sherkole	2	17	120,000	10,000	Radio
92	Rajshahi	Pabna	Bera	Jatsakhni	2	21	120,000	10,000	Radio
93	Rajshahi	Pabna	Bera	Puran Bharenga	2	15	120,000	10,000	Radio
94	Rajshahi	Pabna	Bhangura	Parbhanguria	2	20	120,000	10,000	Radio
95	Rajshahi	Pabna	Chatmohar	Failjana	2	17.5	28,000	48,600	Fiber
96	Rajshahi	Pabna	Faridpur	Faridpur	2	2	120,000	10,000	Radio
97	Rajshahi	Pabna	Pabna Sadar	Sadullahpur	2	18	28,000	49,600	Fiber
98	Rajshahi	Pabna	Santhia	Khatu Para	2	16	28,000	45,600	Fiber
99	Rajshahi	Pabna	Sujanagar	Sagarkandi	2	32	28,000	45,600	Fiber
100	Rajshahi	Rajshahi	Baghmara	Auch Para	2	19	120,000	10,000	Radio
101	Rajshahi	Rajshahi	Baghmara	Ganipur	2	11.5	120,000	10,000	Radio
102	Rajshahi	Rajshahi	Godagari	Gogram	2	36	28,000	49,600	Fiber
103	Rajshahi	Rajshahi	Godagari	Pakri	2	37	28,000	50,600	Fiber
104	Rajshahi	Rajshahi	Mohanpur	Bakshimail	2	6	120,000	10,000	Radio
105	Rajshahi	Rajshahi	Mohanpur	Dhurail	2	3	120,000	10,000	Radio
106	Rajshahi	Rajshahi	Mohanpur	Ghasigram	2	13	120,000	10,000	Radio
108	Rajshahi	Rajshahi	Tanore	Kalma	2	17	120,000	10,000	Radio
109	Rajshahi	Rajshahi	Tanore	Talanda	2	6	120,000	10,000	Radio
110	Rangpur	Rangpur	Badarganj	Radhanagar	2	13	120,000	10,000	Radio
111	Rangpur	Rangpur	Badarganj	Ramnathpur	2	9	120,000	10,000	Radio
112	Rangpur	Rangpur	Gangachara	Kolkanda	2	10.5	28,000	34,600	Fiber
113	Rangpur	Rangpur	Gangachara	Marania	2	13	28,000	39,600	Fiber
114	Rangpur	Rangpur	Pirgachha	Pirgachha	2	2	23,000	17,600	Fiber
115	Rangpur	Rangpur	Rangpur Sadar	Chandanpat	2	11	28,000	35,600	Fiber

116	Rangpur	Rangpur	Rangpur Sadar	Haridebpur	2	15	28,000	43,600	Fiber
117	Rangpur	Rangpur	Rangpur Sadar	Pashuram	2	12	28,000	37,600	Fiber
118	Rangpur	Rangpur	Taraganj	Ekarchali	2	10	120,000	10,000	Radio
119	Rangpur	Rangpur	Taraganj	Sayar	2	5.5	120,000	10,000	Radio

Annex 2

BDCOM Updates

Division	District	Upazila	Union	Lat/Long		Media	Infra budget	Remarks
Rajshahi	Bogra	Adamdighi	Adam Dighi	24.822137°,	89.040304°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Bogra	Adamdighi	Shantahar	24.808777°,	88.987184°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Bogra	Bogra Sadar	Lahiri Para	24.944295°,	89.384506°	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Bogra Sadar	Sekherkola	24.898864°,	89.393421°	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Dhunat	Gosainbari	24.740137°,	89.604451°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Bogra	Gabtali	Dakshinpara Union	23.772077°,	90.667437°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Bogra	Gabtali	Durgahata	24.843676°,	89.523703°	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Gabtali	Naruamala	24.896413°,	89.448444°	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Kahaloo	Urail	24.837404°,	89.299130°	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Nandigram	Bhatgram	24.702332°,	89.245301°	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Nandigram	Burail	24.655339°,	89.316627°	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Nandigram	Nandigram	24.646869°,	89.248888°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Bogra	Sariakandi	Bhelabari	24.888773°,	89.570984°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Bogra	Sariakandi	Bohail			Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Shajahanpur	Asekpur	24.796133°,	89.351231°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rangpur	Gaibandha	Fulchhari	Fazlupur	25.271500°,	89.653403°	Radio	Height required : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding

							feet,	
Rangpur	Gaibandha	Gaibandha Sadar	Kuptala	25.389844°,	89.525337°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Gaibandha	Gobindaganj	Kamdia	25.209085°,	89.217002°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rangpur	Gaibandha	Gobindaganj	Rajahar	25.125416°,	89.261245°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Gaibandha	Palashbari	Mohadipur	25.286160°,	89.378989°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Gaibandha	Sadullapur	Kumar Para	25.419080°,	89.488323°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogaon	Badalgachhi	Adhaipur	24.971045, 88.932721		Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogaon	Badalgachhi	Bilasbari	24.895593, 88.983312		Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogaon	Badalgachhi	Pahar Pur	25.031769, 88.981869		Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogaon	Dhamoirhat	Alampur	25.098690, 88.768828		Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogaon	Manda	Tentulia	24.652338, 88.661709		Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogaon	Naogaon Sadar	Kirtipur	24.890544, 88.918869		Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Naogaon	Patnitala	Nazipur	25.041908, 88.760604		Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Naogaon	Raninagar	Gona	24.696697, 88.967529		Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Natore	Bagati Para	Bagati Para	24.303042, 88.963083		Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Natore	Bagati Para	Jamnagar	24.316757, 88.868996		Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Natore	Bagati Para	Panka	24.299222, 88.887210		Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Natore	Baraigram	Chandi	24.214521, 89.175960		Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities

Rajshahi	Natore	Baraigram	Gopalpur	24.197933, 89.137408	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Natore	Baraigram	Joari	24.324735, 89.109206	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Natore	Lalpur	Arbab	24.235042, 88.959367	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Natore	Natore Sadar	Kafuria	24.372837, 88.901502	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Natore	Natore Sadar	Lakshmi pur Kholabar ia	24.371090, 89.033177	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Natore	Natore Sadar	Tebaria	24.400527, 88.968661	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Natore	Singra	Sukash	24.615529, 89.264078	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Pabna	Atgharia	Majh Para	24.135081, 89.196807	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Pabna	Chatmohar	Danthia Bamangr am	24.181452, 89.233200	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Pabna	Faridpur	Demra	24.139619, 89.495203	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Pabna	Pabna Sadar	Bharara	23.968287, 89.301709	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Rajshahi	Bagha	Manigram	24.210659, 88.804678	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Rajshahi	Baghmara	Goalkandi	24.540896, 88.874265	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Rajshahi	Baghmara	Hamir Kutsha	24.557871, 88.875640	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Rajshahi	Charghat	Salua	24.337375, 88.773614	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Rajshahi	Durgapur	Dharmap ur (Pananag ar)	24.449529, 88.812663	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Rajshahi	Durgapur	Kism at Gank air	24.506644, 88.824120	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Rajshahi	Godagari	Matikata	24.444300°, 88.347279°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Rajshahi	Paba	Parila	24.422451°, 88.669716°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rangpur	Rangpur	Kaunia	Kaunia Bala Para	25.748670°, 89.428015°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Rangpur	Pirgachha	Chhaola	25.673867°, 89.502542°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities

Rangpur	Rangpur	Pirganj	Chaitrakul	25.471243°, 89.178520°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rangpur	Rangpur	Pirganj	Kumedpur	25.462749°, 89.247566°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Rangpur	Taraganj	Alampur	25.785906°, 88.973118°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Adamdighi	Champapur	24.754335°, 89.139833°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Bogra	Bogra Sadar	Noongola	24.907570°, 89.327927°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Dhunat	Nimgachhi	24.751244°, 89.516526°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Bogra	Dhupchanchia	Dhupchanchia	24.873751°, 89.178084°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Bogra	Kahaloo	Paikar	24.907775°, 89.275684°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Sariakandi	Hat Sherpur	24.941548°, 89.579217°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Shajahanpur	Madla	24.802242°, 89.431734°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Sherpur	Garidaha	24.695689°, 89.412704°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Sherpur	Shah-Bandegi	24.650268°, 89.423387°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Bogra	Shibganj	Saidpur	25.051463°, 89.426708°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Gaibandha	Gaibandha Sadar	Malibari	25.328978°, 89.541507°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rangpur	Gaibandha	Gobindaganj	Kamardaha	25.089676°, 89.382899°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Gaibandha	Gobindaganj	Kochasahar	25.087498°, 89.425573°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Gaibandha	Gobindaganj	Nakai	25.222369°, 89.448510°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Gaibandha	Gobindaganj	Shibpur	25.118630°, 89.424925°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Gaibandha	Palashbari	Harinathpur	25.322678°, 89.368886°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Gaibandha	Palashbari	Kishoregari	25.271757°, 89.301513°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities

Rangpur	Gaiban dha	Sundarganj	Tarapur	25.603270°, 89.521823°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogao n	Atrai	Bisha	24.555864°, 89.061455°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Naogao n	Atrai	Panchupur	24.602816°, 88.987486°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Naogao n	Mahadebpu r	Chandas	24.891757°, 88.697367°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogao n	Mahadebpu r	Khajur	24.926395°, 88.712134°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogao n	Manda	Nurullabad	24.722376°, 88.751789°	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogao n	Naogaon Sadar	Sailgachhi	24.749055, 88.931283	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogao n	Patnitala	Matindhar	25.028812, 88.631938	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogao n	Patnitala	Nirmail	25.154470, 88.625011	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogao n	Patnitala	Patnitala	25.061215, 88.732477	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogao n	Porsha	Nithpur	25.024255, 88.447542	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naogao n	Raninagar	Mirat	24.711786, 88.879967	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Naoga on	Sapahar	Aihai	25.174834, 88.488092	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Natore	Natore Sadar	Dighapatia	24.440256, 89.014422	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Natore	Singra	Dahia	24.480606, 89.235179	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Natore	Singra	Hatiandaha	24.445947, 89.073511	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Natore	Singra	Sherkole	24.489972, 89.097205	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Pabna	Bera	Jatsakhni	23.952719, 89.640546	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Pabna	Bera	Puran Bharen ga		Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities

Rajshahi	Pabna	Bhangura	Parbhanguria	24.184219°, 89.384312°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Pabna	Chatmohar	Failjana	24.109650, 89.286188	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Pabna	Faridpur	Faridpur	24.156307°, 89.444669°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Pabna	Pabna Sadar	Sadullahpur	23.964057, 89.384311	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Pabna	Santhia	Khatu Para	23.995854, 89.508059	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Pabna	Sujanagar	Sagarkandi	23.855782, 89.600803	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Rajshahi	Baghmara	Auch Para	24.606452, 88.715363	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Rajshahi	Baghmara	Ganipur	24.532335, 88.736086	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Rajshahi	Godagari	Gogram	24.451411°, 88.415884°	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Rajshahi	Godagari	Pakri	24.554547, 88.477470	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Rajshahi	Mohanpur	Bakshimail	24.546211, 88.654436	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rajshahi	Rajshahi	Mohanpur	Dhurail	24.528983, 88.602066	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Rajshahi	Mohanpur	Ghasigram	24.585763, 88.610228	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Rajshahi	Tanore	Kalma	24.686802, 88.519503	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rajshahi	Rajshahi	Tanore	Talanda	24.632365, 88.587307	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Rangpur	Badarganj	Radhanagar	25.727636, 89.004191	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Rangpur	Badarganj	Ramnathpur	25.665881, 88.999034	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities

Rangpur	Rangpur	Gangachara	Kolkanda	25.901558, 89.197404	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Rangpur	Gangachara	Marania	25.835073, 89.298539	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Rangpur	Pirgachha	Pirgachha	25.660368, 89.405864	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rangpur	Rangpur	Rangpur Sadar	Chandanpat	25.742610, 89.142176	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rangpur	Rangpur	Rangpur Sadar	Haridebpur	25.774104, 89.149957	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Rangpur	Rangpur Sadar	Pashuram	25.818036, 89.237340	Fiber	30,000 tk	We will go through infra sharing modality through telco operators
Rangpur	Rangpur	Taraganj	Ekarchali	25.810870, 89.070783	Radio	Height required feet, : 80	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities
Rangpur	Rangpur	Taraganj	Sayar	25.762771, 89.010303	Radio	Height required : 80 feet,	if at least 2 storied bulding available with 400 sq feet roof top approx cost of installation will be 90,000 BDT including the wireless equipments + grounding facilities

Annex 3

Circle Network Updates

SN	District	Union	Qty	MRC	OTC
1	Bogra	Adam Dighi	5 Mbps	510,750.00	6,000
2	Bogra	Shantahar	5Mbps	10,750.00	6,000
3	Bogra	Lahiri Para	5Mbps	10,750.00	6,000
4	Bogra	Sekherkola	5Mbps	10,750.00	6,000
5	Bogra	Gosainbari	5Mbps	10,750.00	6,000
6	Bogra	Dakshinpara Union	5Mbps	10,750.00	6,000
7	Bogra	Durgahata	5Mbps	10,750.00	6,000
8	Bogra	Naruamala	5Mbps	10,750.00	6,000
9	Bogra	Urail	5Mbps	10,750.00	6,000
10	Bogra	Bhatgram	5Mbps	10,750.00	6,000
11	Bogra	Burail	5Mbps	10,750.00	6,000
12	Bogra	Nandigram	5Mbps	10,750.00	6,000
13	Bogra	Bhelabari	5Mbps	10,750.00	6,000
14	Bogra	Bohail	5Mbps	10,750.00	6,000
15	Bogra	Asekpur	5Mbps	10,750.00	6,000
16	Gaibandha	Fazlupur	5Mbps	10,750.00	6,000
17	Gaibandha	Kuptala	5Mbps	10,750.00	6,000
18	Gaibandha	Kamdia	5Mbps	10,750.00	6,000
19	Gaibandha	Rajahar	5Mbps	10,750.00	6,000
20	Gaibandha	Mohadipur	5Mbps	10,750.00	6,000
21	Gaibandha	Kumar Para	5Mbps	10,750.00	6,000
22	Naogaon	Adhaipur	5Mbps	10,750.00	6,000
23	Naogaon	Bilasbari	5Mbps	10,750.00	6,000
24	Naogaon	Pahar Pur	5Mbps	10,750.00	6,000
25	Naogaon	Alampur	5Mbps	10,750.00	6,000

26	Naogaon	Tentulia	5Mbps	10,750.00	6,000
27	Naogaon	Kirtipur	5Mbps	10,750.00	6,000
28	Naogaon	Nazipur	5Mbps	10,750.00	6,000
29	Naogaon	Gona	5Mbps	10,750.00	6,000
30	Natore	Bagati Para	5Mbps	10,750.00	6,000
31	Natore	Jamnagar	5Mbps	10,750.00	6,000
32	Natore	Panka	5Mbps	10,750.00	6,000
33	Natore	Chandi	5Mbps	10,750.00	6,000
34	Natore	Gopalpur	5Mbps	10,750.00	6,000
35	Natore	Joari	5Mbps	10,750.00	6,000
36	Natore	Arbab	5Mbps	10,750.00	6,000
37	Natore	Kafuria	5Mbps	10,750.00	6,000
38	Natore	Lakshmipur Kholabaria	5Mbps	10,750.00	6,000
39	Natore	Tebaria	5Mbps	10,750.00	6,000
40	Natore	Sukash	5Mbps	10,750.00	6,000
41	Pabna	Majh Para	5Mbps	10,750.00	6,000
42	Pabna	Danthia Bamangram	5Mbps	10,750.00	6,000
43	Pabna	Demra	5Mbps	10,750.00	6,000
44	Pabna	Bharara	5Mbps	10,750.00	6,000
45	Rajshahi	Manigram	5Mbps	10,750.00	6,000
46	Rajshahi	Goalkandi	5Mbps	10,750.00	6,000
47	Rajshahi	Hamir Kutsha	5Mbps	10,750.00	6,000
48	Rajshahi	Salua	5Mbps	10,750.00	6,000
49	Rajshahi	Dharmapur (Pananagar)	5Mbps	10,750.00	6,000
50	Rajshahi	Kismat Gankair	5Mbps	10,750.00	6,000
51	Rajshahi	Matikata	5Mbps	10,750.00	6,000
52	Rajshahi	Parila	5Mbps	10,750.00	6,000
53	Rangpur	Kaunia Bala Para	5Mbps	10,750.00	6,000

54	Rangpur	Chhaola	5Mbps	10,750.00	6,000
55	Rangpur	Chaitrakul	5Mbps	10,750.00	6,000
56	Rangpur	Kumedpur	5Mbps	10,750.00	6,000
57	Rangpur	Alampur	5Mbps	10,750.00	6,000
58	Bogra	Champapur	5Mbps	10,750.00	6,000
59	Bogra	Noongola	5Mbps	10,750.00	6,000
60	Bogra	Nimgachhi	5Mbps	10,750.00	6,000
61	Bogra	Dhupchanchia	5Mbps	10,750.00	6,000
62	Bogra	Paikar	5Mbps	10,750.00	6,000
63	Bogra	Hat Sherpur	5Mbps	10,750.00	6,000
64	Bogra	Madla	5Mbps	10,750.00	6,000
65	Bogra	Garidaha	5Mbps	10,750.00	6,000
66	Bogra	Shah- Bandegi	5Mbps	10,750.00	6,000
67	Bogra	Saidpur	5Mbps	10,750.00	6,000
68	Gaibandha	Malibari	5Mbps	10,750.00	6,000
69	Gaibandha	Kamardaha	5Mbps	10,750.00	6,000
70	Gaibandha	Kochasahar	5Mbps	10,750.00	6,000
71	Gaibandha	Nakai	5Mbps	10,750.00	6,000
72	Gaibandha	Shibpur	5Mbps	10,750.00	6,000
73	Gaibandha	Harinathpur	5Mbps	10,750.00	6,000
75	Gaibandha	Tarapur	5Mbps	10,750.00	6,000
76	Naogaon	Bisha	5Mbps	10,750.00	6,000
77	Naogaon	Panchupur	5Mbps	10,750.00	6,000
78	Naogaon	Chandas	5Mbps	10,750.00	6,000
79	Naogaon	Khajur	5Mbps	10,750.00	6,000
80	Naogaon	Nurullabad	5Mbps	10,750.00	6,000
81	Naogaon	Sailgachhi	5Mbps	10,750.00	6,000
82	Naogaon	Matindhar	5Mbps	10,750.00	6,000

83	Naogaon	Nirmail	5Mbps	10,750.00	6,000
84	Naogaon	Patnitala	5Mbps	10,750.00	6,000
85	Naogaon	Nithpur	5Mbps	10,750.00	6,000
86	Naogaon	Mirat	5Mbps	10,750.00	6,000
87	Naogaon	Aihai	5Mbps	10,750.00	6,000
88	Natore	Dighapatia	5Mbps	10,750.00	6,000
89	Natore	Dahia	5Mbps	10,750.00	6,000
90	Natore	Hatiandaha	5Mbps	10,750.00	6,000
91	Natore	Sherkole	5Mbps	10,750.00	6,000
92	Pabna	Jatsakhni	5Mbps	10,750.00	6,000
93	Pabna	Puran Bharenga	5Mbps	10,750.00	6,000
94	Pabna	Parbhanguria	5Mbps	10,750.00	6,000
95	Pabna	Failjana	5Mbps	10,750.00	6,000
96	Pabna	Faridpur	5Mbps	10,750.00	6,000
97	Pabna	Sadullahpur	5Mbps	10,750.00	6,000
98	Pabna	Khatu Para	5Mbps	10,750.00	6,000
99	Pabna	Sagarkandi	5Mbps	10,750.00	6,000
100	Rajshahi	Auch Para	5Mbps	10,750.00	6,000
101	Rajshahi	Ganipur	5Mbps	10,750.00	6,000
102	Rajshahi	Gogram	5Mbps	10,750.00	6,000
103	Rajshahi	Pakri	5Mbps	10,750.00	6,000
104	Rajshahi	Bakshimail	5Mbps	10,750.00	6,000
105	Rajshahi	Dhurail	5Mbps	10,750.00	6,000
106	Rajshahi	Ghasigram	5Mbps	10,750.00	6,000
107	Rajshahi	Kalma	5Mbps	10,750.00	6,000
108	Rajshahi	Talanda	5Mbps	10,750.00	6,000
109	Rangpur	Radhanagar	5Mbps	10,750.00	6,000
110	Rangpur	Ramnathpur	5Mbps	10,750.00	6,000

111	Rangpur	Kolkanda	5Mbps	10,750.00	6,000
112	Rangpur	Marania	5Mbps	10,750.00	6,000
113	Rangpur	Pirgachha	5Mbps	10,750.00	6,000
114	Rangpur	Chandanpat	5Mbps	10,750.00	6,000
115	Rangpur	Haridebpur	5Mbps	10,750.00	6,000
116	Rangpur	Pashuram	5Mbps	10,750.00	6,000
117	Rangpur	Ekarchali	5Mbps	10,750.00	6,000
118	Rangpur	Sayar	5Mbps	10,750.00	6,000
Total Amount Without VAT (BDT)				**12,68500.00**	**70,8000.00**
Total Amount With 5% VAT (BDT)				**13,31925.00**	**74,3400.00**

About WorldFish

WorldFish is an international, not-for-profit research organization that works to reduce hunger and poverty by improving aquatic food systems, including fisheries and aquaculture. It collaborates with numerous international, regional and national partners to deliver transformational impacts to millions of people who depend on fish for food, nutrition and income in the developing world. Headquartered in Penang, Malaysia and with regional offices across Africa, Asia and the Pacific. WorldFish is a member of the CGIAR, the world's largest research partnership for a food secure future dedicated to reducing poverty, enhancing food and nutrition security, and improving natural resources.

For more information, please visit www.worldfishcenter.org