

STUDYING THE POSSIBLE FRONTIERS FOR OPTIMUM UTILIZATION OF RURAL TELECOMMUNICATIONS DEVELOPMENT FUND (RTDF)

A study conducted as a part of Daayitwa Nepal Public Policy Fellowship 2022, together with the Ministry of Communication and Information Technology (MoCIT) and Nepal Telecommunication Authority (NTA)

Researchers:

Rashi Maharjan

Prakriti Basyal

Government Supervisors:

Mr. Binod Shrestha, Deputy Director, NTA

Ms. Rekha Pandey, Under Secretary, MoCIT

Mentor:

Dr. Jeeban Amgain

Executive Director, Academy of Innovation for Economic Development



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Abstract

The Telecommunications Act 1997 paved the way for the inception of Rural Telecommunications Development Fund (RTDF), which now accumulates to a significant amount. Despite such accumulation, the impact made by RTDF remains a big information gap in the literature. Established with an aim to develop, operate, and expand telecommunication services in rural areas of Nepal, a big question emerges: Why has it been difficult to develop, operate and expand telecommunication services in rural areas of Nepal? A qualitative research methodology was applied to answer this question and the scopes on: development, operation and expansion, were divided accordingly. This research concludes that the main reasons for the delay in the start of RTDF projects were a lack of coherent strategy and clarity before its implementation, structural problems of intergovernmental coordination, and the general lack of awareness among local governments and the beneficiaries of this fund. Therefore, this research paper recommends the concerned authorities mobilize resources as per the bylaw and strengthen Public Private Partnerships creating awareness from the local to the federal level of government by redesigning the scope of RTDF with a focus on a long-term strategy that ensures sustainability.

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Abbreviations

CBS	Central Bureau of Statistics
CSOs	Civil Society Organizations
GDP	Gross Domestic Product
GoN	Government of Nepal
ICT	Information and Communication Technology
IoT	Internet of Things
ISP	Internet Service Provider
KII	Key Informant Interview
MoCIT	Ministry of Communications and Information Technology
NTA	Nepal Telecommunication Authority
NPC	National Planning Commission
RoW	Right of Way
RTDF	Rural Telecommunication Development Fund
PPA	Public Procurement Act
QoS	Quality of Standard

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1. INTRODUCTION

1.1. Background

Bridging the ‘digital divide, ‘connect a school, connect a community, cent percent internet access to all by 2020, are a few of the terms that have been surfacing around for quite a while as a vernacular discourse for policymakers, and rightly so. For a country like Nepal, with difficult mountainous topography, and a 29.47 million population scattered around its unique terrain, it is indeed a challenge to ensure that all citizens have access to effective wireless broadband services. This challenge is furthermore exacerbated by the imbalance in connectivity between the cluster of the population that live in the rural areas which account for 80% of the entire population where connectivity is crucial, but out of reach, and the urban areas that enjoy unlimited access from numerous telecom or Internet Service Providers (ISPs) at an affordable price.

To address this conspicuous gap, the parliament made the ‘Telecommunications Act’ in 1997 which paved the way for the establishment of the Nepal Telecommunications Authority (NTA). NTA is an autonomous telecommunications regulatory body of Nepal that oversees the project under RTDF. Sub-section 30(4) of the Telecommunications Act mandates NTA to create a Rural Telecommunication Development Fund (RTDF) that would ensure connectivity in the rural areas of Nepal. Henceforth, the licensees must contribute 2% of their adjusted gross revenue to RTDF. However, for an act that had been passed 25 years ago, the progress that can be seen is not on par with the expectations that it had set out at that time. So far, there are only two major projects that are being implemented, and both projects have their respective issues.

The first project, Backbone Network, is supposed to lay a Fibre Optic (FO) along the mid-hill highway to connect district headquarters. Out of the 6,331 km highway coverage plan, only 1,656 km has been completed. The second project, Broadband Access Network, was set out to establish connections among local government, community schools, and hospitals. Even though a significant number of communities have been covered, the overall quality and usability have major room for improvement and effectiveness in the peril of sustainability. At a time when the global context post-COVID-19 has shifted to the possibilities and the necessity for the virtual world, it is

incumbent that the policymakers, concerned ministries, telecom operators, ISPs, and bureaucrats work with utmost urgency and coordination to use this fund to its optimum frontier. The goal is not just to cover as many places as possible, but to provide affordable and quality broadband services with consistency throughout the year to stimulate the growth of the overall economy.

Despite the act, policies and bylaws governing the utilization of RTDF and the collecting of large sums of the amount to make an innovative intervention in the development of rural telecommunication, the efficacy of the projects and the development activities conducted in the past, present, and future is low. Bridging the divide between rural and urban areas as envisaged by RTDF has become a far-fetched dream.

1.2 Rural Telecommunications Development Fund (RTDF)

To make it easier for the government to solely focus on connectivity and accessibility, Nepal Telecommunications Authority (NTA) created a Rural Telecommunication Development Fund (RTDF) that would accumulate 2% of the gross annual income generated by the licensed Telecom Operators. The inception of this Act dates back to 1997, but in comparison with the global world, particularly in South Asia, Nepal has a long way to go. As the World Bank report on South Asia's Digital Opportunity states, the path to a digital future needs a 'whole of country' approach and that is where this research fits in holistically. However, the same report states that South Asia has seen remarkable growth in 4G coverage over the last five years with Nepal being one of the exceptions. It is true that NTA's effort for this growth should not be undermined, the report does not take rural penetration into the account, it is a summary of the overall network users, and therefore it is important for the stakeholders to leave no place behind. Telecommunication services should be within the reach and accessibility of every citizen in the country. How will the concerned authorities work to achieve this goal should be a part of the discourse taken seriously from policies to their implementation.

Although true that had this fund been used efficiently enough, there would be no opportunity costs in terms of catching up with the global world, significant progress has been made. The two major projects under the RTDF have been operational. The first project, Backbone Network, is supposed to lay a Fibre Optic (FO) along a mid-hill highway to connect to the headquarters of each province. The second project, Broadband Access Network, established connections between local

government hospitals, community schools, and government offices. Among the other countries in South Asia, Sri Lanka and Nepal are the only countries that provide fixed broadband at, or below the threshold set by the UN Broadband Commission standing at 2% average GNI per capita for 5GB of fixed broadband data. It is more expensive for land-locked countries to pay for international links as the cost of transit is very high. This is due to the poor competition among service providers at international borders and the reluctance of the government and national network service providers to enter cost-efficient long-term leasing agreements.

1.3. Policy and Bylaws

1.3.1. The Telecommunication Act 2053 (1997)

The Telecommunication Act 2053 (1997) governs the policies, provisions, and bylaws that manage and regularize telecommunication services in Nepal with the objective to make the service reliable and easily accessible to the public. Several provisions under this act reinforce the importance of rural telecommunication development by providing room for fund collection and encouraging the licensee to deposit a prescribed percentage of their total annual revenue.

The inception provision can be found in Section 30 of the Telecommunications Act 2053 states the provision of the Rural Telecommunications Development Fund (RTDF), to develop, expand and operate the telecommunications service in the rural area

1.3.2. RTDF Bylaw

The RTDF disbursement Bylaw states the following provision for the accumulation of the fund (2012, NTA).

The fund accumulated can be as follows:

- a. Every year, the licensee must deposit two percent of the annual income received from the telecommunications services provided by them
- b. The funds received from the Government of Nepal for the development, expansion, and operation of rural telecommunication services

- c. Foreign funds for the development, expansion, and operation of rural telecommunication services received by the Government of Nepal from the government of international or foreign organizations or individuals who the government of Nepal permits
- d. Received from the mobilization of funds as per a, b, c, d or an increased amount thereof
- e. Funds received from other sources approved by the authority.

1.4. RTDF Major Projects

Currently, there are two major projects under the RTDF:

- 1. Backbone Network
- 2. Broadband Access Network

1.4.1. Backbone Network

The objective of the Backbone Network is to build fiber optic along the mid-hill highway to connect district headquarters. Initially, three packages were divided into seven provinces among three different Telecom operators- Nepal Telecom (Provinces 1,2,3), United Telecom Limited (Provinces 4,5), and Smart Telecom (Provinces 5,6). Due to no progress in the second and third packages, the work had been delayed. According to the report published by NTA on November 6, 2022, the third package has been taken over by Nepal Telecom. The second package however is at a halt due to a stay order issued by the supreme court. Out of the total length of 6,331km, only 1,646km has been covered so far (NTA).

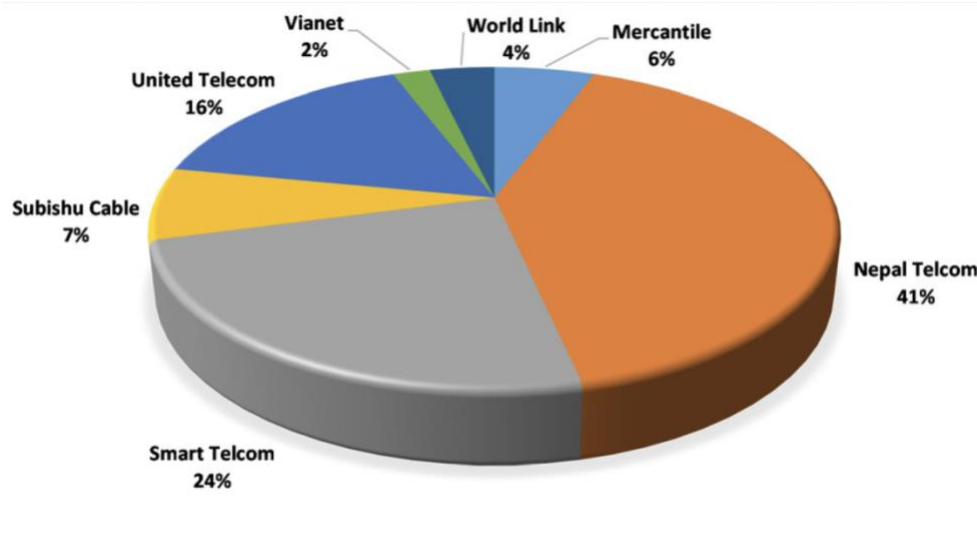


Figure 1 RTDF Distribution Share for backbone network and end-access network as of 2018:

Rural Telecommunications Development Fund distribution share of different packages to operators in Nepal (Source: National Planning Commission (NPC), 2018)

1.4.2. Broadband Access Network

With an objective to connect all community schools, hospitals, government offices, rural municipalities, and ward offices, 18 packages had been set. The aim for this project was to connect 720 municipalities, 6081 ward offices, 6325 community schools, and 5160 health centers.

2. SIGNIFICANCE OF THE RESEARCH

The role of ICT in developing nations like Nepal is indisputably a remarkable one (Dawadi et al., 2019). ICT contributes to the overall development of the country by aiding in sectors for community development, economic growth, education, natural resource management, good governance, health, and so on. The COVID-19 pandemic has proved that telecommunications need to be considered a basic necessity as opposed to a privilege. Improved education, innovation, development, and research are major attributes that complete the mission raised by Sustainable Development Goals (Griggs et al., 2013).

A background study published by the world bank concludes that a 10% increase in fixed broadband penetration increases the GDP by 1.38% in developing countries (2016, World Bank).

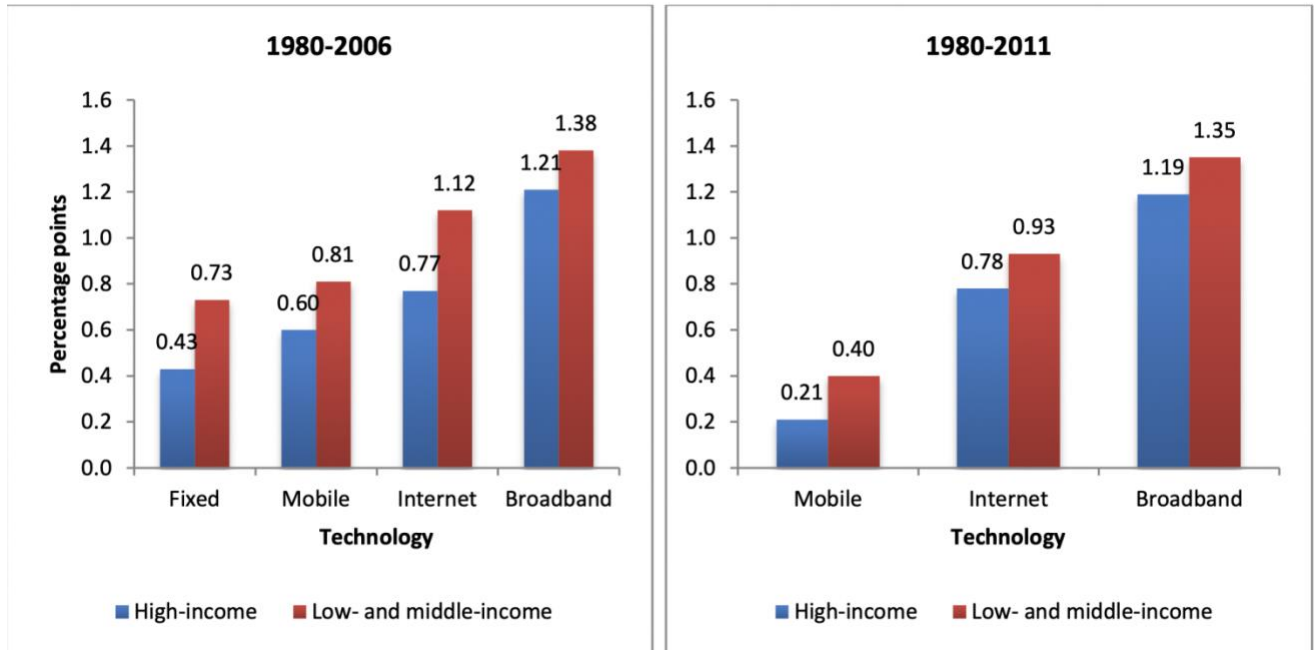


Figure 2 GDP Growth Impact:

GDP growth impact from 10 percentage point increase in different ICTs, by country economic development category (Source: Qiang et al. 2009 and Scott 2012.)

Less than 1% of rural households have internet access (2016, Central Bureau of Statistics), and more than 80% of households reside in rural areas. The data for the recent population is yet to be published by the central bureau of statistics. With the advancement of RTDF projects, this estimate is said to increase, however, it can be tested only after the data is officially released. It can be concluded that the broadband penetration is heavily urban-centered and the comprehensive development that Nepal is aiming towards cannot be achieved if the rural areas are equally considered in aspects of network connectivity and broadband access. This is why this research is relevant and significant in the present context. NTA and the concerned stakeholders should immediately implement concrete actions that bridge the digital divide before it gets too late and becomes the subject of further delays.

2.1. Objectives of the Research

The main objective of this report is to study possible frontiers for the optimum utilization of the Rural Telecommunication Development Fund (RTDF).

2.2. Research Questions

Within the overarching guiding question, the following questions and issues will be explored. These are structured into three broad groups, aligned with the three major areas of RTDF utilization:

2.2.1. Development

- What kind of development projects have been performed and are planned for the utilization of RTDF?
- What kind of issues do these projects face while implemented and after the completion of the projects?
- What are the laws governing the requisite competitive bidding process, monitoring, and evaluation of the RTDF development projects?

2.2.2. Expansion

- How can the efficacy of the expansion be improved?

2.2.3. Operation

- Why are the operations of projects facing many challenges?

3. RESEARCH DESIGN

3.1. Methodology

This study employed qualitative and quantitative data collection and analysis methods. Desk reviews of the relevant literature, news, and organizational reports were used as secondary resources to understand the challenges faced by RTDF in Nepal. To understand the research needs of the MOCIT, several consultative meetings were conducted with the secretary, joint and under the secretary of the ministry. Similarly, to understand the current status quo of the fund, several consultative meetings were conducted with the directors and other high-ranking officials at NTA. The consultative meetings became guidelines to devise research objectives and the list of primary data sources. The primary data sources were collected by conducting **7 In-depth Interviews (IDI)** and **15 Key Informant Interviews (KII)** with different stakeholders working as the contributors, implementation and monitoring, and evaluation bodies and beneficiaries of RTDF. The list of stakeholders interviewed is listed in Annex I.

Specifically, the methodology included:

- Desk review

This included a review of the national laws for rural telecommunication development, related policies, and bylaws for RTDF. Other documents like organizational reports of NTA and literature on similar funds that are used in mobilization in other South Asian countries for rural telecommunication development were reviewed.

- Stakeholder Interviews

These included IDI with stakeholders working to implement the rural telecommunication development projects at various levels, telecom operators, and internet service providers who are the contributors to the RTDF and KII with the staff at the NTA and MoCIT. The questionnaire asked to each party is listed in Annex II and Annex III.

- 1st level (projects implementing institutions)

- [list of IPS who have also been responsible for project implementation]

- 2nd level (contributors to the RTDF):
 - [list of telecom operators and IPS contributing to the fund]
- 3rd level (the primary policy advisory and policy-making entities):
 - MoCIT staffs
 - NTA staff
- 4th level (the consumers of the telecommunication services):
 - Civil Society Organizations (CSOs) and media of the rural area, the municipality officers including Chief Administrative Officer of Tansen, Siraha, and Nawalparasi.
 - Palpa-Tansen municipality ward offices, health posts, and school
 - Gulmi- Musikot ward 7
 - Rupandehi- Mayadevi rural municipality, Gaidahawa Rural Municipality

3.2. Scope

Specifically, the study reviews the policies and bylaws governing the utilization of RTDF and the outcomes of the projects and plans implemented under RTDF. The focus is heavily on learning from the story of the successes and failures of these projects, plans, and policies implemented in Nepal. The stakeholders and their past role in the utilization of the fund are carefully analyzed to map the possible frontiers for increasing the efficacy of the fund in the future. Additionally, the similar nature of funds in other South Asian countries like India and Bangladesh is also analyzed to devise possible recommendations to optimize the utilization of the fund.

3.3. Stakeholders

In terms of the formation of the RTDF policies and their implementation, the primary avenues where the law and policies are exercised are: i) the formation of the RTDF bylaws and policies by MoCIT, ii) the regulation and implementation of laws and policies by Nepal Telecommunication Authority and iii) the utilization and implementation of the fund by ISPs. While the primary avenues are examined as the primary source of data and analysis, the beneficiaries of RTDF which includes local bodies like ward offices, schools, and health posts are also interviewed to understand the awareness of the project and its impact amongst them.

3.3.1. Policymaker

MoCIT is the body responsible for enactment of the act and policy of RTDF. In addition, NTA is assigned as the regulatory body which has enacted regulations to monitor, evaluate and regulate overall work of RTDF. These regulating laws are entitled as bylaws and are made by NTA themselves.

3.3.2 Contributors to the fund

According to the RTDF Bylaw paragraph 2 section 5, every year the licensee must deposit two percent of the annual income received from the telecommunications services provided by them in the RTDF fund (NTA). The licensee with the largest revenue is thus the major contributor to RTDF. According to a report by NTA following licensees are notable contributors to the RTDF.

Table 1 Contributors to the Fund

Arrownet Pvt. Ltd.
C. G. Communications Limited.
Classic Tech Pvt. Ltd.
Dish Media Network Limited
Mercantile Communications Pvt.Ltd
Ncell Axiata Limited.
Nepal Telecom
Prabhu Digital Pvt. Ltd.
Smart Telecom Pvt. Ltd.
Subisu CableNet Limited

Techminds Networks Pvt.Ltd.
Vianet Communications Pvt. Ltd.
Websurfer Nepal Communication System Pvt. Ltd.
WorldLink Communication Limited

3.3.3. Implementing bodies

The implementation of RTDF which is the use of funds is governed by Paragraph 2 section 6 of RTDF bylaws. According to the bylaw, funds shall be used for the implementation of a telecommunication policy provided by the government of Nepal that can work for the development, expansion, and operation of telecommunication in rural areas. NTA acts as a **major** stakeholder in implementing the policies while the licensees who win grants or assistance through the bidding process are a major stakeholder in implementing the projects under RTDF.

The distribution of grant or loan assistance is provided as determined by the NTA based on the following priorities mentioned in clauses a,b,c, and d of the same section. They are

- a. To provide telephone (wire or wireless) or mobile or internet or internet telephone service in rural areas where there is no telecommunication service
- b. To provide mobile or telephone service in the areas where telecommunication service is inadequate.
- c. Services as per clause a or b are not sufficient to develop and expand the information technology or other infrastructure structures and network of information technology such as broadband internet to give access to information technology to the residents of rural areas
- d. Information other than services mentioned in clauses a, b, and c. Other telecommunication services required for the development of technology

3.3.4. Monitoring and Evaluation bodies

The major actor in the monitoring and evaluation of RTDF including fund collection, disbursement, and utilization is NTA. The procedures and criteria for monitoring and evaluation are determined by RTDF bylaws. The bylaws also govern the provisions relating to penalties, selection of service providers, operation of the funds, and methods of payment of grants or loan.

While the entire process for the utilization of the funds by ISPs is monitored and evaluated by NTA, the overall efficacy of the work of the NTA is monitored by CSOs and media.

3.3.5. Beneficiaries

The beneficiaries of RTDF are the local bodies where telecommunication services are being utilized. Due to the nature of RTDF, the major beneficiaries are rural areas where telecommunication services have not been reached or are insufficient, except in the metropolitan and sub-metropolitan city areas of Nepal. The major areas in the rural areas where the services are established, expanded, and operated are the ward offices, schools, and health posts. For instance, in the case of the Palpa district alone, according to the data published in 2021, RTDF has been utilized in a total of 159 sites covering almost all municipalities (NTA, 2021).

4. DISCUSSION AND FINDINGS

4.1. Completion of Broadband Access Network

Even though the start of RTDF projects was very slow and there were many unforeseen events such as the Earthquake of 2015, followed by the pandemic, there has been commendable progress in the Broadband Access Network. An update report published by NTA on the 22nd of December states that the project completion has now reached 100%. The completion of such a project is remarkable and expected to impact the rural areas of Nepal positively. It is true that the stakeholders, beneficiaries, and other parties concerned want the backbone projects to end soon so that everyone can benefit from the infrastructure-enabled network connectivity, but research shows that the wait is expected to be long. The covid pandemic has had an overwhelming impact in developing countries that will make the recovery slower than the developed countries (Bundervoet & Davalos, 2021). Therefore, despite the expected delay in the speed of development, this report published by the NTA ignites hope that the RTDF projects will be completed soon.

4.2. Rapid Development in ICT

In “Huawei Digital Nepal Conclave 2022”, the MoCIT minister emphasized the vision of the government to make Nepal an IT-savvy nation. He also quoted the aim of the communications sector to double its contribution to the country’s gross domestic product (GDP) within two years (myRepublica, 2022). In the past decade, Nepal has shown rapid development in ICT and its penetration in different sectors such as health, and education with escalated growth in the private sector. According to a report by NTA, there was an addition of 2.25 million new internet users in 2017 alone with mobile penetration exceeding 100 percent and internet penetration reaching 63 percent (GoN MoCIT, n.d.). Nepal ranks second in South Asia in rapid social media penetration as the popularity of social media has become a crucial driver for Internet adoption (GoN MoCIT, n.d.).

Additionally, the usage of ICT in service sectors has escalated swiftly in post-COVID Nepalese society. The concept of digitization and digitalization has evolved and has become an important area of development for the service industries, companies as well as government offices. Until the pandemic hit, Nepal had been a true believer in manual processes. A swift unexpected digital

transformation during the pandemic was possible due to a pre-established ICT development. Likewise, there are various policies that were adopted by the government which created room for transformative changes. Some of the laws and policies governing the ICT sector that provided a basic foundation are the National ICT Policy, 2015; National Broadband Policy 2015, and Electronic Transaction Act 2010.

4.3. The Relevance of RTDF for Development

From the in-depth interviews conducted, one thing was transparent- the common understanding of the necessity of RTDF funds for the development of telecommunications services in rural areas. There was a unanimous consensus for the establishment of such funds. While there was no doubt the funds were necessary, there was also an expectation that these funds be utilized for the said purposes and eliminate the digital divide.

“RTDF fund is necessary for establishing network connectivity not only in the places with tourist attractions but also in trek routes that are remote.”

4.4. Lack of a Coherent Strategy and Clarity

If there is no input, it is safe to assume that there is no output and therefore, no outcome. The RTDF was collected from the fiscal year of 2055/56 which stands at a total of 31,099,092,874.37 (NTA). Till 2015, this fund was inactive and not used in any projects to establish rural telecommunication services. Had there been a proper vision to guide the ISPs/telecom operators, the fund would have not stayed idle for such a long period of time. The inaction is also liable for the missed opportunities of purchasing equipment at a time when the inflation rates were not as high as now in 2022. The opportunity cost for not utilizing the fund is all the benefits of telecommunication services and its output in rural areas if the fund has been utilized immediately after its collection.

“If the fund had a vision, we would have a five-year plan, followed by a ten-year plan. We would also be provided with an action plan and quarterly qualitative and quantitative reports on the status quo of the project.”

Concerns have been raised for RTDF not having a strategic plan before its collection. In a policy debate series titled ‘Utilization of Rural Telecommunication Fund’, Dr. Rohan Samarajiva remarks on the low disbursement of the RTDF, despite years of collection.

4.5. Difficult Terrains

80% of the population that reside in rural areas live in different topographies of Nepal. Expanding network infrastructure and sustaining them in areas with difficult mountainous terrains has been a huge challenge that keeps delaying projects on a frequent basis. According to experts, there are times when a project has been delayed for over a season due to rainfall. From the interviewees, it was also raised as one of the main issues to set up connections in rural areas of Nepal.

“I recall when I was on site for a connection set up, the porters who had to cross extreme bridges with heavy materials made me realize the importance of the work that we are doing. I remember giving something sweet for a porter to eat and his face glowed like he was the happiest person on Earth. Despite harsh conditions and challenges, we should work hard to make access to remote areas of Nepal.”

4.6. Delay in Settlement of Conflicts

The Backbone Network has been a project surrounded by slow progress resulting from the delay in settlement of conflicts. The project was given to Nepal Telecom (Provinces 1,2,3), United Telecom Limited (4,5), and Smart Telecom (6,7). In 2021, when NTA did not see any progress after the completion of its tenure, which is typically 2 years unless extended, it decided to stop the contract with the telecom operators. The contract for Province 6,7 was handed over to Nepal Telecom. However, nothing has been done about the contract with United Telecom Limited. As stated in the RTDF bylaw, the settlements that do not reach a conclusion shall be taken to the supreme court and such has been the fate of Provinces 4 and 5. In 2020, on the 10th of October, NTA released a press statement reporting that the case has been taken to the supreme court. However, it has been two years that no progress has been made in this regard. The is a ‘stay order’ for the case which many interviewees find highly inappropriate.

“The Supreme Court being a government body should understand that this is a government project that is being halted, the delay in this project means the delay of the development work and benefit that the ISPs and Telecom Operators could provide to the end users.” It was highly recommended in the interviews that the authority press urgency to the supreme court to solve the matter.

4.7. Inter-agencies Collaboration

The interviews have all pointed toward the need for a steering committee for RTDF. A steering committee formed in all the districts at the local level is a need that can settle many conflicts that might arise. For example, for the Backbone Access Network, there are multiple stakeholders in action. The Ministry of Forest and Environment, the Nepal Electricity Authority, the Road Department, and the Local Municipality act as one the main stakeholders. The delay in getting the ‘Right of Way’ has halted the progress in Province 6,7. Furtherment, there needs to be a clear understanding among the inter-governmental bodies on the objective of RTDF so that they can internalize it into their own respective objectives.

“The introduction of Federalism in 2015 has enabled the implementing bodies in the form of local municipalities, therefore, it has now become easy for the government to implement projects at a local level by people who work closely with the government. This is why the local government shall also be included in the RTDF disbursement plan.”

4.8. Transfer of the Funds

According to the details provided by NTA from the interview, the amount of 16 billion has been transferred to the Ministry of Finance during 2020 to overcome the budget deficit due to the pandemic. The interviewees had mixed responses about the transfer. 3

Positive Response

This transfer was taken positively by some interviewees, mostly those representing the government. They viewed the transfer as a helping aid to a government body. As the funds were not used immediately and there was a huge crisis looming in the economy, this act was seen as justifiable. Additionally, the funds are to be returned if requested by MoCIT to implement the projects that fall under RTDF.

“If there weren’t enough funds to operate RTDF projects, it would have been understandable that the money transfer was unnecessary, but even when the money has been transferred, there is still a significant amount remaining for the projects.”

Negative Response

There were negative responses from non-governmental bodies as this transfer appeared to be taken from such a fund that had a completely different objective. If the funds were to be used by everyone and not for its said purpose, some interviewees proposed that the funds be collected from all the sectors receiving funds from the activities carried out by the Ministry of Finance.

4.9. Monitoring and Evaluation

The primary source of information on updates, progress, and the status quo of RTDF projects is the website provided by the Nepal Telecommunications Authority (NTA), however, the website fails to provide qualitative information about the impact made and quality maintained.

This was also raised as an issue to the interviewees where it was clear that NTA does assess the project from the bidders on a timely basis, to monitor whether the operators have maintained the quality and the standard. However, on the website, they have only mentioned the sites covered by the broadband projects.

An evaluation of how the projects impact the lives of people living in rural areas needs to be done so that the objective of RTDF is fulfilled.

4.10. Awareness About RTDF Among Local Government

RTDF and its projects are monitored and implemented from the federal level of the government, so its concept, theory, and progress are not handed down to the local government. The local government and other entities at the local level are the major beneficiaries of the projects and outcomes achieved by the RTDF. However, the interviews conducted in this study have shown that local governments are not aware of the projects and the concept of rural telecommunication development as introduced by the government. While the projects of road construction and other infrastructural development like water canal projects, and the establishment of hospitals and schools remain primary areas of work for the local government, the penetration of ICT in the

schools and health posts is among the less prioritized areas. On the contrary, at the federal level, which is ministries, rural telecommunication development has been the major area of focus. This lack of awareness among local bodies and poor collaboration with the federal government in big projects like RTDF can decrease the efficacy of the project implementation on the ground.

5. ANALYSIS

Table 2 Analysis Structure

Development	<ul style="list-style-type: none">- Procurement (bidding for the project, RFA)- Relevance of development of RTDF (Literature)- Transfer of funds (opportunity cost) Literature- Concept of rural (ideology)
Expansion	<ul style="list-style-type: none">- Rapid development ICT but urban-centric and RTDF- Lack of coherence strategies (only earthquake)- Difficult terrains- Delay in settlement of conflicts- Inter-agencies collaboration
Operation	<ul style="list-style-type: none">- Monitoring and evaluation- Sustainability- Quality of service (RFA)

The analysis will be done through an exhaustive explanation with inferences extracted from primary and secondary sources linked with relevant literature and case studies. As the research questions were divided into three different sections, the analysis will also be divided into their respective sections.

5.1. Development

5.1.1. Emphasis on rural areas

It is distinctly stated in the telecommunication act that RTDF has been established to address the needs of rural areas of the country. However, our interviews have landed quite polarizing views on the emphasis on rural areas.

“It is as though we are expecting people in urban areas to be connected with telecommunication services. There needs to be a focus on digital have-nots rather than focusing on building infrastructure because the whole idea of RTDF should be connectivity reaching all the citizens of Nepal. Therefore, if the end goal is people, there are people in the urban areas as well that need to be taken into consideration.”

This is the same problem that India is facing although having a much wider focus on accessibility and availability than Nepal. A report on “Role of Universal Service Obligation Fund in Rural Telecom Services: Lessons from the Indian experience” stated that there is a necessity to focus on the urban poor as it has been a crucial sector and growing immensely. The urban sector in India contributes more than 60% to India’s GDP, compared to 29% of that of the rural sector. Similarly, the population is also expected to increase in urban areas exponentially. The report also states that during the time frame of 2004-05, the number of rural poor declined, and the urban poor increased by a larger percentage than the decline. (Jain & G, 2009).

While most of the Universal Service Funds are crafted for Rural and Remote areas, a reevaluation needs to be done through a proper investment in R&D so that a proper assessment can be made.

5.1.2. Procurement for bidding

Like any other project bidding that has to go through the government, the projects for RTDF also have to go through a similar process and abide by the same act followed by bidders who wish to engage on government projects which is the Public Procurement Act (2063). Some definitions extracted from the document are as follows:

Bid- A document setting out price, proposal, or rate submitted by a bidder in the format specified by a public entity as per the notice published by that entity for procurement.

Bidder: Any person, firm, organization, or company that submits or may submit a bid to take part in the procurement proceedings

Bidding Document- A document prepared by the concerned Public Entity making an invitation to bid for submission by bidders by filling up or preparing price or proposal or rate in such document

Procurement Contract- means a procurement contract entered between a public entity and a supplier or a construction entrepreneur or consultant or service provider

The biddings are informed to potential bidders through a notice for the invitation to bids or prequalification proposals published in a daily newspaper of national circulation. The validity period of a bid is specified in the bidding documents and there is a provision to extend the validity if the Public Entity feels necessary which can be seen as a reasonable provision. Section 25 of this act states that the evaluation of bids involves criteria where if the bid price exceeds fifteen percent, such bid shall be deemed to be substantially nonresponsive and hence will be excluded from evaluation. Therefore, in accordance with the criteria and methodology set forth in the bidding documents, the bid with the lowest price shall be considered in comparison with the other bids. From the interviews conducted, it has been found that this clause of the lowest bidder has been one of the concerns of the internet service providers

“For us to provide a sustainable competitive network, the price needs to be set according to the standards. The lowest bidder does not necessarily pass the quality check most of the time.”

However, if we are to look into the practices of the world, it is a similar trend followed by most developing countries. The rationale behind low-cost subsidy is that it creates competition between the private sectors and seeks efficiency by handing the project to the bidder that promises to complete the given target with the lowest subsidy.

5.1.3. Potential abuse of Authority?

From the in-depth interviews conducted, the private sector expressed concerns about assigning the Province (5, 6) to Nepal Telecom, which is a publicly owned company, without prior bidding with the rest of the telecom operators and ISPs.

“There had to be a proper bidding application so that telecom operators and ISPs could have a fair chance to contribute to RTDF projects, but what we saw can also be condemned as an abuse of authority.”

However, there are opposing views from the government as this act is completely normal and within the jurisdiction of the government. While it is in the nature of interviews to produce mixed views, it is very much the responsibility of NTA to ensure that there is a fair bidding process, transparency cannot be substituted for convenience even though the projects are within the government parties, all the stakeholders need to be provided with equal chance and opportunities. If so cannot be done, their action needs to be clarified.

5.2. Expansion

5.2.1. Lack of a coherent strategy

If there is no input, there will be no input and this, therefore, leads to no outcome. For an act that was passed nearly three decades ago, the outcome that can be seen is futile. The opportunity cost in terms of the benefits brought by connectivity to the overall economy could have been exponential. RTDF projects started taking place after the massive earthquake that shook Nepal in 2015. As a matter of emergency, the districts severely affected by the earthquake were the primary locations where RTDF had started investing. A simple counterfactual question can be raised in this situation, had the earthquake not occurred, would the RTDF projects have been started?

The answer to this question is an easy no, had it been otherwise, there would have been a proper plan laid out by the government for the two major projects that are being operated now. This is the reason why, instead of the Backbone Network, the Broadband Access Network has been completed first.

There have been two distinct opposing views regarding the inaction from the interviews:

- 1. Time was required for the funds to accumulate*

During the interviews, this was a very prevalent school of thought. As RTDF projects require infrastructure building, time was required for ample collection of the funds. However, if we are to see the data collected from NTA, it can be seen that 16 billion is transferred to the Ministry of Finance and there is no intent from the ministry of finance to return it back as per the request of the Ministry of Communications and Information Technology. This shows that even when there are ample funds, there are only two projects with incessant delays looming around one of the projects.

2. There was no coherent plan for RTDF

Another school of thought has criticized the ministry for not investing in research and development before the start of RTDF projects.

“In Nepal, there is no attention drawn towards proper research before the commencement of any projects, it is just not within the Nepali culture to research. If you take a look at the majority of the projects in Nepal, you will clearly see a lack of vision.”

To date, if the website for RTDF updates is analyzed, there has not been any notice on the transfer of funds, the scope of RTDF projects, and future projects. However, if we take the Universal Telecommunication Obligation Fund of India into consideration, we will find that there is a separate branch under the department of telecommunication. It has exhaustively defined the scope, beneficiaries, and tools for evaluation and gives detailed information about the upcoming projects. Similarly, if we are to compare that with Nepal’s website, we can see that the RTDF falls under the jurisdiction of NTA which is the regulatory body for all the telecom operators and ISPs in Nepal. Therefore, their scope of focus is not just RTDF. It is true that there is an RTDF division allocated for the RTDF projects, but it clearly lacks manpower.

“There are a lot of things that have come as recommendations, for example, a geo-map of the projects covered by RTDF, but right now there are a lot of activities and responsibilities on our plate.”

The division of RTDF administrative structure:

Table 3 RTDF administrative structure

Director	Dr. Surendra Lal Hada
Deputy Director	Binod Chandra Shrestha
Assistant Director	Nirajan Koirala
Assistant Director	Jyotirma Shrestha
Assistant Director	Sabina Pun
Assistant	Ambika Gharti

For a fund that is this huge, the personnel assigned is inadequate, especially when we can see that the same personnel have been assigned to carry out other responsibilities as well.

5.2.2. Inter-agency collaboration

Inter-agency collaboration takes an important role in the expansion of RTDF projects and plans especially due to the diversity in need of the project in accordance with the area of its implementation. RTDF being a federal government project, its implementation is monitored and executed by federal government agencies. Due to the nature of the program, the role of provincial and local governments in it is undefined. The lack of awareness about the project among the administrative heads of municipalities, and media who were interviewed in this study has shown that the flow of knowledge from top to bottom is poor. The inclusion of local government is particularly important to understand the local context of the development and its necessity in the areas where projects are more required. The fact that RTDF projects have only focused on ICT penetration in three specific areas in all districts i.e., ward offices, schools and health shows that those projects are not unique to every district. A general approach that those areas are of higher priority in all districts has been done. Thus, it shows a lack of understanding and research on the local level whose gap can be filled in by the local government if they are actively engaged as well.

5.3. Operation

5.3.1. Monitoring and Evaluation

Through the primary source of data collection and conducting in-depth interviews, a preconceived narrative that there are no proper means of monitoring and evaluation for RTDF projects has been debunked. NTA conducts several tests and demands frequency tests on a periodic basis. The tests can depend on the nature of the contract, they also have different stages for monitoring as well. However, if an outsider wants to keep track of the progress in detail, the website fails to provide a holistic understanding of the services provided and their impact. There has been no study conducted on the impact of RTDF projects on the lives of people living in rural areas. The staff still follow an old model of storing the documents retrieved on files and papers and have to go through the tedious process of reviewing the files in order to retrace information when demanded.

5.3.2. Sustainability

A big concern for NTA remains on the sustainability of the projects and of the overall fund as a whole. Instead of a strategic focus on public-private partnership through innovation and exchange of ideas, there has been a traditional approach for RTDF projects, for instance, a government body issues an invitation to bid on newspapers and telecom operators apply and the low-cost bidder gets the subsidy. Taking India for reference, to foster public-private partnerships, they accept proposals from the private sector, the underlying assumption being that the private sector can research and gather information about profitable sectors. This makes the work for the operators easy and more effective.

6. CONCLUSION AND RECOMMENDATIONS

For projects to bear outcomes, there need to be actions, so that the actions can be evaluated in terms of impact. Since the start of RTDF projects has been slow, it will hence take time to assess the effectiveness and the value created for the people living in rural areas. While the idea behind RTDF is commendable, inaction has plagued the opportunities that could have paved the way for economic development and connectivity in rural areas. Taking into consideration the Telecommunication Obligation Fund of India and examples around the globe, it can be understood that implementing such a huge scale of infrastructure projects is not easy and requires strategic planning. This research has attempted to investigate the concerns of ISPs and Telecom operators that have hindered the implementation of RTDF projects.

National projects such as the RTDF entertains multiple stakeholders including governmental bodies and this has been the reason for the projects to lag and face incessant delays. Until and unless, all the governmental bodies prioritize RTDF projects and consider it to be a crucial pathway for economic development, especially in the rural areas of Nepal, the situation of telecommunication services is not going to change.

Transparency plays an important role in restoring the faith of the people; therefore, it becomes the utmost responsibility of the government to maintain accountability and clarity at all costs. The website that informs the general public about the updates on RTDF should be re-designed in such a way that the citizens can extract a comprehensive knowledge and scope of the projects. This will make the citizens and this awareness can create a demand from the consumer side as well, which is highly important and an advantage for the private sector as well.

Innovation and sustainability should go hand in hand, and the private sector plays an instrumental role in mobilizing resources for innovations. As mentioned in the bylaw, there needs to be a mechanism for RTDF projects where the private sector can pitch ideas that can be implemented through the support of NTA. Therefore, the paper would like to recommend the following points to the concerned authorities:

I. Add more manpower to the RTDF department in NTA

The first recommendation that this paper would like to suggest is to add manpower to the RTDF department in NTA. The current structure as shown in the division of RTDF administrative staff can be seen that the RTDF department that deals with billions of funds are only run by 6 people. Through the IDI, it was clear that the department as of now is highly understaffed. While the director and deputy director might also have other responsibilities excluding RTDF, this leaves only a total of 4 staff. Conducting this research, and identifying the reasons why the fund has not been utilized to its fullest potential, the following recommendations cannot bear fruit if the first recommendation is not taken into consideration. Expecting four people with just over 2 years of experience in RTDF projects, to conduct QoS of the RTDF projects, estimate the budget, and prepare for the overall monitoring and evaluation while assessing the impact this project has made, is almost unethical. NTA needs to distribute responsibilities to the staff equally and hire new staff as well. The already separate department of RTDF should have staff that overlook the RTDF projects solely from procurement to monitoring and evaluation. To keep track of the policy that does not consider inclusion, advancement in technologies such as the internet of things, advertise and increase the awareness of RTDF projects, NTA needs to strategically hire new staff to meet its objective of providing telecommunication services in rural areas. Therefore, this recommendation is a prerequisite before advancing to the following recommendations.

II. Emphasize the importance of technology with inclusion

While RTDF focuses much on connecting users to the end mile through infrastructure development, the scope of RTDF as of present is very limited. Installing infrastructure is not enough, the concerned stakeholders should also make sure that the benefits of such infrastructure are accessible to all. Technology, after all, is run by the people, therefore installing technology is just the beginning of the process to include everyone and create a just environment. These days things like ‘access to the internet’ is surfacing in the vernacular of policymakers as a basic right of an individual, therefore, it is only a matter of time before this right takes precedence in the paper. This demonstrates an urgency to create strong foundations beforehand. The bylaw for RTDF does not include inclusion in any form, this calls for attention to update the bylaw. As per the interviews conducted, this demand shall be fruitful if this issue is taken into consideration by the ministries, NTA solely, cannot amend and make changes to the policy or the bylaw, unless the ministry states so. Therefore, in order to create an environment where there is not only the availability but

accessibility of telecommunications services, the bylaw needs to be amended and added with the concept of 'Inclusion' leaving no one behind.

Although RTDF contains the term rural, it does not mean that all the rural areas of Nepal have been covered in its plan. There are still places where telecommunication services are required, but it does not fall under the RTDF scheme; this furthermore exacerbates the gap within the rural areas. The next step for RTDF should also include rural areas that have not been covered by the current projects. However, simply adding the term inclusion does not bear fruit if there is no concrete action plan, in order to reach it.

There are various ways to take steps towards inclusion, but a start can be by targeting samuhas(groups) in local communities of Nepal that have been raising issues on inclusion. For example, the Aama Samuha(Mother's group) formed in various local units of Baitadi has been making efforts to make women independent and create social awareness of gender equality (The Kathmandu Post, 2019). This group can highly benefit from technology, financial independence is a huge objective of this group and if they are given the opportunity to connect with entrepreneurs or given a market to sell their products nationwide, it is bound to uplift their status and raise their living standards. In this way, technology can open several doors for them. For the implementation, a concrete plan needs to be developed. Technology should never be a 'One shoe fits all' solution, similarly, contextual problems differ from province to province, therefore the same module can be referred to as a baseline and that can be replicated all over Nepal, but with context. A prior study should be conducted to assess the need of different Aama Samuha to create modules that fit their needs. After a module is created, then training can be given to the members or the leader of the Aama Samuha, who will then disseminate the information accordingly. The overall impact can be seen by assessing the number of employments generated or businesses created.

III. Strengthen inter-governmental coordination

Understanding that the governmental bodies have different scopes of interests, the concerned authority needs to be strategic in terms of pitching the project as a national backbone of the country. The concept of RTDF developed late in the 1990s, therefore it does not accommodate the new federal system that the country has gone through. Therefore, there is a strong need to incorporate the concept of RTDF in the three tiers of the government as well. The ministries need to understand

that the projects are not only concerned with NTA or MOCIT, the projects are overarching and hence to be considered as the foundation of governance. The 21 ministries have their respective sector strategy mapped out, understanding the need and the urgency of digital infrastructure; some ministries have drafted policies and strategies that include ICT for the community. Rather than all the ministries having their own agenda to bridge the digital divide, they can all refer to RTDF. This will ensure uniformity and negate duplicity and confusion.

Here are some of the plans from ministries that can benefit from RTDF

The school sector plan for Nepal School Education Sector 2022/23-2032/32 published by the Ministry of Education, Science and Technology has envisaged carrying out the School Education Sector Plan with 4 major objectives and their respective key strategies. Their second objective which is ‘To enhance the quality and relevance of overall school education by ensuring school readiness, foundational learning and quality learning achievements for each child’ includes properly managing the basic tools/devices of information and communication technology (ICT) to both teacher and the student as an integral part of learning and teaching (*Nepal School Education Sector Plan, 2022*). The plan furthermore states that digital libraries and digital laboratories will be established to expand the appropriate use of ICT in school administration, monitoring, and to facilitate learning, the ICT infrastructure, and internet connectivity will be extended to all schools and training to teachers and administrative staff will be trained on the use of ICT in school management and education. This plan includes all the government schools of Nepal, which means that the rural areas are also covered, RTDF should partner with the ministry of education and collaborate together to achieve the common goal of decreasing the digital divide all over Nepal, especially in the rural areas.

Another ministry that can be considered for collaboration is the Ministry of Urban Employment, in its annual development plan in s.n 35 has a separate budget for a digital library that falls under the Community Development Program aimed towards youth all over the country (Ministry of Urban Development, n.d.). This stands in line with the education sector plan from the Ministry of Education. We can find overlapping plans made by the ministries that could have been a product of a collaboration that can save time and budget.

The Ministry of Health and Population has a different section dedicated to the ‘Smart Health

Initiative' that provides numerous services such as **Health Facilities:** Registry Nepal, **Nepal Health Sector Strategy:** Results Framework, Routine Data Quality Assessment System, and **Health Dashboard:** Monitoring of Health Indicators. These facilities enable easy access to health facilities and can also help to assess real-time progress that ultimately leads to data collection for future reference.

The coordination of the ministry should go beyond the signing of a Memorandum of Understanding (MOU).

IV. Activate the advisory council and include local government

As per the Bylaw for RTDF, there needs to be an advisory council of 25 people including workers, technicians, representatives of government and semi-government bodies, and experts in the field if the authority deems it necessary, but no such council is functioning as of now. As of now, there is a steering committee for RTDF which consists of the head of NTA (Chairman), the Deputy Secretary from MoCIT, the Ministry of Finance, and the National Planning Commission. The steering committee is responsible for allocating the disbursement of the funds. However, considering the scope and the possibilities of opportunities that the RTDF project can generate, more manpower should be mobilized. The steering committee consists of highly ranked officials who are vested with a lot of responsibilities, RTDF requires concrete plans and strategies that need to be constantly monitored, therefore an advisory committee can be given the task of conducting periodic meetings and updates so that they can report to the steering committee.

The steering committee should consist of members of the local government as well because the projects are aimed to cater to people in rural areas. Therefore, an RTDF department should take precedence over the existing municipality or ward office structure. If a department cannot be separated in the beginning, appointing a person to oversee RTDF projects and study the needs of the citizens can also be a starting point.

V. Amplify efforts made towards monitoring and evaluation

From the interview conducted with NTA, it was found that after the operators are assigned a project, there are three phases of monitoring and evaluation for payment. The first phase is done when the operators finish 30% or 50% of the work. The second phase is done after 100%

completion and a third phase is carried out to measure the quality of service. The monitoring is done rigorously and NTA also hires consultants to do the evaluation onsite with some of the employees from NTA visiting the field as well. This is a commendable initiation by NTA to record and have strict monitoring and evaluation. However, the reports from the monitoring and evaluation are only accessible to the employees and there needs to be evaluation and assessment based on the impact made by the telecommunication services as well.

Unfortunately, the monitoring and evaluation are only done for payment, based on the evaluation and quality of service maintained by the author, the payments are made. After the completion of projects by the operators, there is no monitoring and evaluation done to measure the impact of RTDF projects or to analyze further what is to be done from the lessons learned. There are no reports and studies conducted and there are no means to concur that the telecommunication services provided through the RTDF projects are actually effective.

Citizens and Taxpayers, according to the IDI, are anticipating transparency and accountability, therefore, all the information could be updated on the website so that interested parties can also be informed. Depicting the current status of the fund is also another way of showing transparency. Examples can be taken from similar practices from around the world. Redefining the scope and design of RTDF and presenting the stakeholders with minutes and details of the funds since the inception of the fund can be a starting point.

Furthermore, the timeline of action for project completion should not be only two years, the examples of Smart Telecom and United Telecom shed light to the importance of evaluating ICT projects and their estimated time for completion taking account of various factors such as RoW, geographic location, procurement and contract approval and so on.

VI. Create ownership and accountability among stakeholders

As per the discussion with NTA officials, there appears to be a top to bottom approach in the disbursement of RTDF, and oftentimes stakeholders feel detached from the purpose of the overall projects

Ownership and accountability can be created among ISPs who receive grants by engaging them in dialogues and decision-making processes by the government bodies. Similarly, in order to improve

their accountability, the beneficiaries of RTDF need to be equipped with project development-related information. According to the interview conducted among the beneficiaries during this research, they are unaware of the nature of RTDF and the roles of different stakeholders.

Another aspect to gain accountability should also be to shed light on the delays that the information highway is facing from the supreme court.

VII. Create awareness at local levels

There seems to be a huge knowledge gap from the side of consumers regarding RTDF projects. During this study, the interviews conducted with government officials at the local level, media persons, and random samples of the general public who are the beneficiaries of the services have also shown that the awareness about the nature of funds is minimal (results to be found in Annex III). Unless and until the general public is made aware of the efforts of the RTDF projects, they are not going to be demanded from the local level. Therefore, it is necessary to conduct seminars or training that make the local government aware of the opportunities.

This can be done at the beginning of the installation of projects by the operator. The operator and NTA should sign an agreement that has clauses that introduce the objective of RTDF. Furthermore, efforts can be amplified by conducting a national awareness campaign on RTDF projects. Similar to a few projects on the website of NTA, for instance, the “NTA message regarding sharing wifi,” an RTDF awareness message can also be crafted and posted on the official website of NTA alongside national television broadcast for a limited period of time.

VIII. Mapping overproduction of telecommunication services and strategizing its distribution

Network services are redundant in some rural areas as prior research is not conducted before installing infrastructure which has led to the overproduction and underproduction of telecommunication services. For example, there are towers in areas where there are no visible households. Examples can be taken from practices around the world where organizations invest and dedicate a huge budget to Research and Development of the feasibility of big infrastructure projects.

The feasibility study should not be done just at the beginning of the projects but done with proper indicators of the baseline, midline, and end-line indicators. After the feasibility study, a strategic

plan should be drafted based on the key findings from an extensive process, drawing conclusions and learning evaluation, audits, and other assessments. Furthermore, development initiatives such as the construction of utility corridors should also be considered in order to reduce the duplicity of efforts made by ministries.

7. LIMITATIONS

Small sample size

One of the biggest challenges and limitations of this research is that not a lot of ISPs and Telecom Operators agreed to sit for an interview. This shows that there is a lack of understanding even among the private sector regarding the value of research. The findings of this research could have been much more nuanced had all the ISPs or telecom operators who were contacted responded to help this research.

Could not gather on-site information

Due to lack of resources and logistical constraints, this research has been based on the interviews and the desk reviews conducted in Kathmandu. If there was an opportunity for me to connect with the sites where the RTDF projects have been conducted, it would have helped me understand the monitoring and evaluation and assess the impact it has made on people's lives.

Limited Literature

There has been minimal literature regarding the effectiveness of RTDF. Therefore, it was difficult to gather information in the beginning. Even on the official website of NTA, there is no nuanced information and clarity on the design of RTDF projects and journal articles, academic journals related to RTDF are very few.

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ANNEX I

Survey Questions are as below for the telecom operator

- 1) Name of the telecom operator
- 2) The total contribution by your company to RTDF till date.
- 3) The Rural Telecommunications Development Act was regulated in 2054 BS, for the development, operation, and expansion of Rural Telecommunication services, since then the fund has been accumulating for the said purpose, does your organization support the idea behind the inception of such a fund?
Yes
No
- 4) What is your company's stance on rural telecommunication development? Are there any objective and mission statements regarding rural telecommunication development?
- 5) How is the government's performance in utilizing the funds to date? *
Satisfactory
Neutral
Unsatisfactory
- 6) Please justify the answer given to the previous question in detail.
- 7) Has your organization felt constrained by any event that resulted from poor-intergovernmental communication?
- 8) Should the RTDF continue to exist?
Yes
No
Maybe
- 9) As a suggestion, what can be done to optimize the RTDF fund's efficacy?
- 10) From the inception of the RTDF act, there has been a total of (amount) billion collected by the government, has the government been effective in utilizing the funds to serve the purpose it was established for?
Yes
No

11) Have there been any documented or verbal updates provided to your organization by the government on the utilization of RTDF? If yes, what sort.

12) The bylaws provide provisions to foster public-private partnerships, has the government provided space for public-private discussion and dialogues?

Yes

No

13) Is your organization willing to collaborate with the government if there is a possibility of an opportunity for public-private discussion and dialogues?

Yes

No

14) Please justify the answer given to the previous question in detail.

15) Thank you very much once again, would you like to keep the identity of your organization anonymous?

Yes

No

ANNEX II

Questionnaire for an interview with Nepal Telecommunications Authority

1. On the 6th of November, there was an update about RTDF which stated that almost all of the projects under the Broadband Access Network had been completed. While it is a feat achieved by NTA, what are the steps to be taken now?
2. How are the monitoring and evaluation done for the completed projects?
3. Why has there been a delay to utilize RTDF funds?
4. The transfer of 16 billion to the Ministry of Finance is an issue frequently raised by Telecom Operators and ISPs, was the act constitutional? What are the procedures to follow to bring the funds back?
5. Has there been any sort of conflict with inter-governmental bodies that has resulted to delay of the projects carried out by NTA?
6. To avoid cases such as UTL and Smart telecom, what can be done?
7. ISPs and Telecom Operators have raised the issue of a lack of a steering committee that oversees the projects under RTDF, has there been a mechanism of such sort? What are the preparations for it?
8. The concept of RTDF calls for clarity and context in the present situation, does RTDF mean geographical connectivity or providing telecommunication services to people who do not have access to it?
9. What is the vision for RTDF 5 years from now?

Questions ask to the local government personnel

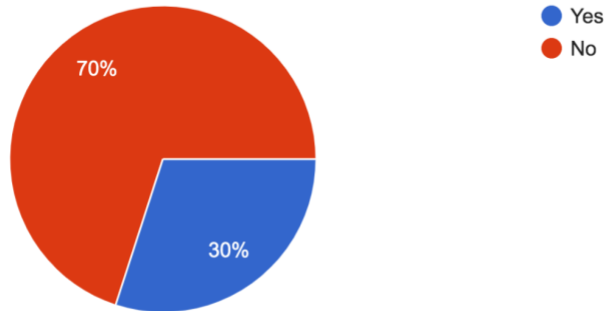
1. How well has ICT penetrated rural areas? Has the project reached needy populations?
2. Policies in other ministries that can address ICT-related issues but the ministries have not collaborated
3. Lack of knowledge about RTDF in local government
4. RTDF cannot be equally established in all rural areas

ANNEX III

Survey result of random sampling of the general public who are beneficiaries of RTDF

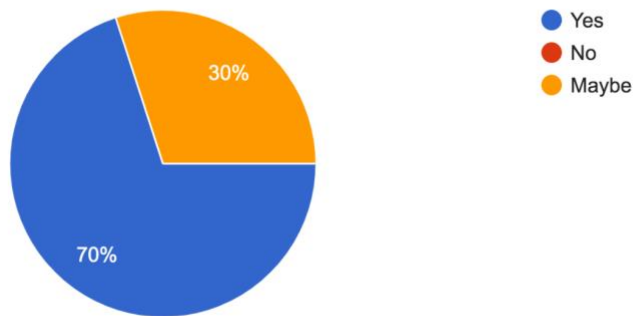
Have you heard about Rural Telecommunication Development Fund (RTDF)? [RTDF is a fund collected by the government to improve rural telecommunication services in Nepal]

10 responses



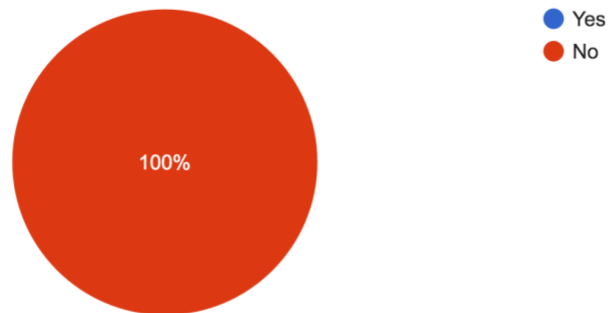
Do you think that it is important to know about RTDF?

10 responses



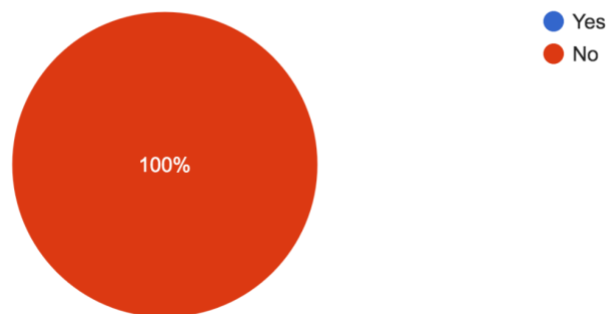
RTDF falls under The Telecommunication Act 1997, section 30(4), and since then, the fund has been accumulated, do you know of the two major projects under RTDF that are taking place now?

10 responses



Telecom Operators and ISPs are obliged to contribute 2% of their annual income to the Rural Telecommunication Development Fund (RTDF), did you know about this?

10 responses



ANNEX IV

RTDF Fund Details Till date

S.No	Particulars	Amount	Remarks
1	Total Collection Till Date	31,099,092,874.37	
2	Total expenditure	22,796,909,925.67	Including 16 Billion transfer to MoF
3	Advance Payment	961,416,123.83	
4	Available Balance	7,739,806,103.25	

***RTDF Fund Collection started from FI 2055/56**