Commissioning Development: Grantmaking, Community Voices, and their Implications for ICTD

Manika Saha
Monash University
Melbourne, Australia
manika.saha@monash.edu

Tom Bartindale
Monash University
Melbourne, Australia
tom.bartindale@monash.edu

Sharifa Sultana
Cornell University
USA
ss3634@cornell.edu

Gillian Oliver
Monash University
Melbourne, Australia
gillian.oliver@monash.edu

Dan Richardson
Monash University
Melbourne, Australia
Dan.Richardson@monash.edu

Shakuntala Haraksingh Thilsted
WorldFish
Malaysia
S.Thilsted@cgiar.org

Syed Ishtiaque Ahmed
University of Toronto
Toronto, Canada
ishtiaque@cs.toronto.edu

Patrick Olivier
Monash University
Melbourne, Australia
patrick.olivier@monash.edu

ABSTRACT

While information and communication technology for development (ICTD) researchers have prioritized advocating for community voices in innovation design and development, we have limited insights into how community voices are incorporated by the high-level decision-makers who fund and initiate development projects and programs in the Global South. Indeed, understanding local communities' voices (expressions of needs, challenges, and priorities) in tailoring effective development projects for sustainable development is widely considered an unmet goal. Using a qualitative survey of eight decision-makers (including grantmaking donors, central governments and INGOs) we explored a number of key factors, including national and global political climates, insider-outsider interactions, and evidence-based approaches that influence the high-level decision making process, workflows, and perceptions of community voice in project commissioning within Bangladesh's public health nutrition development arena. Our findings reveal the tensions that arise among high-level decision-makers, and highlight the challenges associated with connecting with communities during development project design and implementation. We suggest broader implications and design opportunities for inventive project commissioning approaches to bridge the gap between communities and decision-makers. Our findings are of potential value for ICTD and HCI4D researchers interested in sustainable innovation and understanding and participating in the complex workflows of the project commissioning process in sustainable global development.

CCS CONCEPTS

• **Human-centered computing** → **Human computer interaction (HCI)**.

1 INTRODUCTION

In the international development[1] sector many global and national development organizations, including government agencies, donors and non-governmental organizations, have initiatives to implement development projects, programs, and interventions for marginalized communities in the Global South. In these project commissioning processes, decision-makers within development organizations often practice top-down decision-making procedures [36, 45] despite the general recognition of the need to incorporate the voices of marginalized communities. While information and communication technology for development (ICTD) researchers frequently advocate for integrating the voices of disadvantaged communities in informing and designing technologies for community development [33], how these such projects and interventions incorporate community voices has not been thoroughly explored [32, 55, 67, 118].

We conducted interviews with eight influential high-level project commissioning[2] decision-makers, including development donors, International Non-Governmental Organizations (INGOs), and UN

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[1]In this article, international development projects and programs are defined as projects, interventions and programs focused on various aspects of social and economic development challenges (such as health, nutrition, agriculture, education and climate-related topics) faced by low-and middle-income countries (LMICs).

[2]In this article, the project and program commissioning process is defined as the process of selection of problem areas and priority settings.

and central government officials who have experience in project development and implementation—specifically in the initial decision-making process. To explore the actual practice of initial project development, in the current public health nutrition development sector in Bangladesh, we interviewed eight participants from grant-making organizations seeking answers to following research questions:

> **RQ1:** What are the key factors that influence program, project, and intervention commissioning processes by the decision-makers?
> **RQ2:** What are the decision-makers' views on incorporating community voices in intervention design and existing challenges in connecting with communities into program development?
> **RQ3:** What are the potential practical implications and opportunities for ICTD researchers to contribute in integrating community voices for effective international program development?

To our knowledge, this is the first study in ICTD of its kind, and our contribution to ICT and HCI for development fields are multiple. We found that donor and government agencies advocated for development initiatives and strategies that are broadly influenced by: institutional goals; hierarchical global and national politics and interests; evaluation protocols used by internal and external experts; their connections or networks; and existing evidence and supporting data. Our study also finds that there are tensions in grantmakers' evaluation processes for decision making, with the initial goals of the development initiatives often mismatched with community voices. Although there are often gaps between project commissioners and communities, the former have a deep desire to connect with communities where they think technology can make a difference.

In addition, we also contribute to the rich body of prior work that is concerned with understanding high-level decision-making processes and exploring opportunities for ICTD researchers to advocate for local community voices for sustainable innovations [3, 32, 55, 67, 118]. Our findings expand the understanding of institutional priorities [59, 72], post-colonialism [10, 60, 75, 106, 109] and bureaucracy [35, 74] in social computing, contributing to the scholarship in ICTD and human-computer interaction for development (HCI4D). We discuss how understanding the factors that influence development project design and implementation could help in finding effective ways to advocate community voices in this process. We also suggest practical implications and design opportunities for inventive project commissioning approaches to bridge the gap between communities and decision makers. Finally, we highlight several questions and concerns for researchers in ICT and HCI for development that need to be considered in future research on the Global South.

2 RELATED WORK

2.1 ICTD, HCI4D, and community-centric design

ICTD and HCI4D researchers and practitioners are increasingly focused on developing digital technologies and innovations through engaging with bottom-up approaches that engage with disadvantaged communities in the Global South. Such interventions have had positive impacts in fields such as agriculture [40, 89], health [66, 86, 107], nutrition [26, 104], health workers [66, 86], education [114], privacy and security [4, 4–6, 6–8, 12, 49, 95, 108], low-literacy [9, 11, 76], low-income [34], disabled [87, 113] and other marginalized communities [56, 121]. Furthermore, ICTD and HCI4D researchers have advocated for incorporating community voices to promote end-user participation in technology design practices [24, 115]. Further examples of including community voices include ethnographic works in which researchers advocate for considering the needs and challenges of various marginalized communities, such as women's safety and security [8, 65], privacy [4, 6, 7, 101], and health [18, 48, 62]. Other bottom-up-focused ICTD initiatives include participatory-media-related interventions, in which community voices are captured to inform programs and policies: examples include citizen journalism "CGNet Swarna" using Interactive Voice Response (IVR) [78]; various participatory video work including voiceless women [117] and youth [31]; development project monitoring and evaluation [17, 71]; and sharing awareness-building information on agriculture [30, 40, 111], health [68], nutrition [26], and climate [52].

Most of these ICTD initiatives and research are part of international development programs and projects that have been funded by different types of grant organizations, including large donors, INGOs, governments, and research organizations. According to a review by Kumar and Dell [67], more than half are "interventionist" towards various international development purposes of marginalized groups in the Global South. Furthermore, in the realm of international development, the United Nations and other NGOs are promoting use of digital technologies in all types of development projects and programs towards achieving the UN's all Sustainable Development Goals (SDGs) by 2030 [82]. Although there has been a growing interest in ICT for development interventions and research that focuses on disadvantaged communities, very little research thus far has examined the top level of the initial project commissioning processes currently happening in global development.

Over the last two decades, ICTD researchers have prioritized community-centered innovation design, as an inability to sustain ICT for sustainable development remains a major challenge [16, 29, 50, 118, 119]. There are numerous examples of such digital innovation projects, but they are frequently prone to failure in the Global South [16, 118, 119]. Many researchers for global development have prioritized understanding local community needs, challenges, and appropriate technology design and selection in addressing sustainable ICTD [13, 16, 50, 53, 112]. The necessity for researchers to understand the top-level decision-making process has been also broadly recognized in ICTD and HCI4D literature [19, 35, 57, 69, 70, 118]. A recent systematic review on ICTD research critiqued and highlighted the limited initiative and involvement of the ICTD researchers in policy and program development [102]. Similarly, Heeks [53] cited "design-reality gaps" as one of prominent reasons for ICTD program failure in the Global South.

Furthermore, Walsham noted the importance of understanding the political priorities and objectives influencing ICTD program initiation and design in the high-level central decision-making context, where government, national and international organizations

and donors work together and decide on development [118, 119]. Dearden and Tucker [32] highlighted that "*actors in the broader field of ICTD implementation (i.e., action by NGOs, aid agencies, and other organizations innovating and applying technology to development challenges) should examine how resources are used and how decisions are made so that systemic and sustainable capacity building is prioritized*". Jackson and colleagues investigated the role of policy design and highlighted the need for mutual learning between scientific study and policy to successfully navigate designs [63]. Kumar and Dell emphasized the need for HCI4D researchers to understand "informed practice" [67], and Ho et al. argued that sustainable digital innovation needs to expand from a design-based approach to users—involving decision-making stakeholders so as to consider all stakeholders' priorities and conflicting issues [55]. Thus, the need for nuanced understanding of top-level project decision-making by the decision makers in global development have been echoed many times in the ICT and HCI for development literature.

To summarize the existing literature, as a part of various international development programs and research, ICT and HCI for development researchers have great motivation to bring community voices to inform policy and technology designs. Moreover, the literature has also highlighted the need for understanding top-down decision-making contexts. Various international development initiatives fund billions of dollars in ICTD projects, interventions and research [84], and more insight is needed on the top-level international development decision-making processes that govern these [118]. In the ICTD domain, how international development projects and interventions are funded, designed, and developed by the decision-makers of various international development organizations (such as governments, donors, INGOs, and UNs) has been under explored, particularly with regard to how decision-makers perceive and incorporate communities' own expressed needs, challenges, and priorities into international development projects in the Global South.

2.2 International Development and community voice

In international development scholarship, there is a general recognition of the importance of incorporating the voices of those who are under-served and under-resourced into decision-making processes [105]. Decision-makers from high-income countries, donors and top-level governments, INGOs and United Nations organizations decide on problem areas and initiate development programs and projects for global development. Community engagement in decision-making has been identified as a key means to set the agenda for helping those considered marginalized and disadvantaged [93, 110], particularly engagement at the project implementation stage at the ground level. Hence, decisions on development project commissioning processes are made by the people at higher levels, but they may lack a clear understanding of the actual development projects and programs that have been initiated for them.

Enhancing equity, diversity, empowerment, and inclusion of communities considered to be disadvantaged and marginalized are important values of international development programs and projects in the Global South [82]. Here, disadvantaged and marginalized communities experience substantial and systematic deprivation in

core dimensions of well-being, such as food, health, and education. Yet in practice, this substantial and systematic deprivation of disadvantaged groups of people is created and entrenched by social and political interests, power dynamics, institutional priorities, and practices of the top-level decision-makers in the field of international development [92, 122]. Moreover, a legacy of post-colonialism and systematic bureaucracy persists within these structural inequalities [38, 61]. Easterly critiques grant organizations' top-down decision-making processes, arguing they have widened national-level government bureaucracies and promoted bad governance and financial inequality [36].

According to James Ferguson, 'development' cannot be implemented without financial and political interaction [38]. Ferguson also highlighted that international development projects could effectively quash political challenges by casting questions of how funding and resources respond to development interventions in political ways. In international development, foreign donors give approximately $150 billion USD yearly in funding [84], which is widely distributed in developing and implementing various developmental programs for the betterment of citizens in the Global South, especially marginalized communities. However, a negligible amount of measurable development actually happens in these marginalized populations, specifically in terms of addressing their basic needs (such as food, health, and education). We urge that the international development project commissioning process must be designed to share community voices regarding their needs, challenges, and priorities to ensure that their voices are heard, understood, and visible in the agenda for development projects. A significant amount of existing literature has explored community-based participatory research, political philosophy, international development studies, and other community engagement studies to understand the factors and challenges involved in engagement and participation at the decision-making stage [2, 14, 20, 27, 41, 54, 77, 79, 90, 124]. One of the United Nation's Sustainable Development Goals, SDG 16.7, also echoed the importance of "*responsive, inclusive, participatory and representative decision-making at all levels.*" However, while the importance of community voices in decision-making has been echoed many times in the literature, how these international development projects and programs are designed, funded, and developed through the project commissioning process from the design of calls for proposals to proposal evaluation is not well understood. In addition, the influential factors that construct project commissioning processes in top-level decision-making contexts—and the perceptions of community voices among those decision-makers—have received little understanding and attention thus far. Moreover, further questions around the existing challenges of grant organizations in connecting with marginalized communities, their perceptions around incorporating community voices for project design, and expectations towards improving the situation are also not yet well studied.

2.3 ICT for Development and Public Health Nutrition Context in Bangladesh

Bangladesh has recently marked the golden jubilee of 50 years of independence from Pakistan on 16th December, 2021. In the last two decades, Bangladesh has also made significant progress in the

economy, reducing hunger and malnutrition. However, after 50 years of independence, Bangladesh is still struggling to achieve sustainable development in many sectors, including agriculture, health, nutrition, education, and climate change. From its birth as an independent country, Bangladesh has been receiving substantial amounts of public foreign assistance from various donor countries and agencies for development in many sectors, including health, nutrition, agriculture, construction and education. Development partners disbursed USD 7.2 billion throughout Fiscal Year 2019–20 in Bangladesh [44]. A number of donors provide assistance in various areas related to agriculture, women's empowerment, nutrition, and private sector development, including the US Agency for International Development (USAID) [3], the Bill & Melinda Gates Foundation (BMGF) [4], the UK Department for International Development (DFID)[5], the German Society for International Cooperation (GIZ)[6], the Danish International Development Agency (DANIDA)[7], the European Union (EU)[8], and the World Bank (WB)[9]. The Bangladesh government has a political mandate to establish Bangladesh as "Digital Bangladesh". This political mandate guides Bangladesh's development progress by effective and useful use of technology in terms of implementing improvements in education, health, job placement, and poverty reduction, among others [42], to further the nation's socio-economic transformation [51]. As a reflection of this agenda, one of the government's biggest digital programs is "Access to Information (A2i)" [37]. The goal of this A2i program is currently embedded into more than 22 development sectors to create innovations that simplify government and improve citizens' lives [1].

Public health nutrition is a part of global health development, which is one of the major societal issues in ICTD [118]. In Bangladesh, public health nutrition is one of the most important development sectors. In 2016–17, about USD 2.7 billion was spent on different nutrition-related projects and interventions, which is equivalent to around 1% of GDP and about 9% of the national budget [73]. About 40 million people in Bangladesh are severely food-insecure [94]. Achieving Food and Nutrition Security (FNS) is one of the Sustainable Development Goals (SDGs) underpinned by agricultural development [82, 96]. To address food and nutrition insecurity, the Bangladeshi government has been collaborating with many international development stakeholders, including donors, the UN, INGOs, academia, and research organizations, to develop effective public health nutrition programs [91]. These are broadly focused on i) nutrition-sensitive interventions that aim to mitigate underlying causes of malnutrition by enhancing food security via improving agricultural systems, women's empowerment, water, hygiene, and sanitation, among other interventions, and ii) nutrition-specific interventions, which are preventative initiatives such as supplementation and immunization [98]. Thus, public health nutrition development has been mainstreamed within various health and agriculture related interventions in Bangladesh. Nutrition program

and policy decision-makers (including governments, donors, the UN, and other international organizations) have advocated for digital technology to support nutrition project implementation by providing various service-delivery related interventions to assist in information access, communication, connection, and other services, including market linkages and surveillance systems. While the importance of the collaborative integration of all relevant sectoral stakeholders for evidence-based nutrition programs and policies has been highlighted [21, 22, 46, 47, 83], there is limited knowledge on how nutrition programs are actually developed and the factors that influence them. Our broader development goal is to bring community voices to development program design and development. Hence, it is crucial to know the existing project and program commissioning process and the challenges associated with it, so as to explore how technology can assist in bridging the gap between decision-makers and communities and help communities bring their voices to the decision-making process.

3 METHODS

We conducted a qualitative study with decision-making stakeholders who have experience in project and program development activities, including project commissioning, planning, and agenda setting in international development. The objectives of this research are to understand the key factors that influence program, project, and intervention commissioning processes by the decision-makers; decision-makers' views on incorporating community voices in intervention design; existing challenges in connecting with communities; and the broader expectations of ICT innovations in integrating community voices into program development.

3.1 Recruitment

We conducted semi-structured online interviews with eight experienced project and program commissioners within the international development sector. They were recruited through direct email contact and recommendations from our acquaintances in the sector. We emailed ten potential participants and eight of them agreed to take part in an interview. Potential participants were fully briefed on the research scope by email, and data collection only proceeded once consent was given. The ethics review board of the authors' institution granted full ethical approval.

3.2 Participants

The participants were decision-makers and commissioners from various organizations, and consisted of: (i) donors, who play a direct role in funding projects and programs; (ii) international development practitioners, who play roles in funding projects by designing calls for proposals and applying for funds from donor organizations; and (iii) policymakers, government officials who play a role in creating policies and programs by applying funds from donors and creating funded programs through calls for proposals to national-level organizations. These decision-makers, whose demographic information is shown in Table 1, are expert project and program commissioning practitioners in the field of international development who have a combined experience of over 227 years working in program development and implementation in various developing countries around the world. They are all well-educated; none of their educational backgrounds is less than a Masters' degree. All of

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[3]https://www.usaid.gov/bangladesh
[4]https://www.gatesfoundation.org/
[5]https://www.gov.uk/world/organisations/dfid-bangladesh
[6]https://www.giz.de/en/worldwide/351.html
[7]https://bangladesh.um.dk/en/danida-en
[8]https://eeas.europa.eu/delegations/bangladesh_en
[9]https://www.worldbank.org/en/country/bangladesh

them are involved in different international development related projects and programs. All of them have experience working in teams that design calls for proposals and writing for development proposals. In addition, our participants assist relatively high-level positions at the organizations they work for, such as director, advisor, senior program officer, and team leaders who are generally involved in high-level decision-making in their organizations' program planning, managing, and coordinating. We therefore believe that the participants we recruited were very qualified for our study. Our interview sought a broader understanding of these high-level decision-making stakeholders' views of integrating community voices into program design and commissioning. Their top-level positions along with their extensive experience in international project development enabled us to capture rich data on our targeted topics.

3.3   Interviews

The first author carried out these interviews on online platforms during February to May of 2021. Each of these individual interviews were 60 to 90 minutes long and were conducted on Zoom or Skype. We stopped the interviews when we reached saturation [88], at which further interviews started adding very little new information. Our research is reflective of broader international development realities in the Bangladesh and similar developing countries. All of our participants have broad experience in various development sectors and specific experience in health, nutrition, and agriculture development in Bangladesh. The first author is a native Bengali speaker and an experienced public health nutritionist who has experience in various development projects in Bangladesh, working with a range of people from those in high-level program- and policy-making to those in the ground-level community. Three of the authors were born and raised in Bangladesh and are very familiar with the local context. All of the other authors are experienced in ICT and HCI for development areas and in qualitative research.

3.4   Semi-Structured Interview Schedule and Interview Style

This research aims to understand these high-level decision-makers' perceptions and experiences of development project commissioning. We critically explore the current international development project commissioning processes to understand how projects form and the role of community views (needs, challenges and priorities) and participation in projects design. From this critical standpoint, we have also tried to determine the role of the bottom-up community voice and their participation in the design of projects of which communities are the main beneficiaries. We developed a semi-structured interview (SSI) plan with the following high-level categories: i) collecting demographic and background information, ii) understanding stakeholders' experiences in the project commissioning process; iii) understanding decision-makers' views of community voices in project commissioning; and iv) understanding decision-makers' expectations of technology to improve connections with communities. After recruitment (details in Section 3.1), the first author conducted one-on-one semi-structured online interviews. Due to the COVID pandemic and distance from participants' host countries, the interviews were conducted through online platforms. We

followed our high-level themes based on our SSI, although the interview style was more open and informal. Interviews were conducted according to a conversational approach in which participants were given latitude to share from their broader practical experiences. Interviews were conducted in either English or Bangla (for those who were Bangladeshi). All of the interviews were transcribed, and the Bangla transcripts were translated into English.

3.5   Analytical Approach

We applied the thematic analysis method to analyze the interview data. The anonymized data were subsequently analyzed using open coding, following the methodological lessons of Thematic Analysis (TA) by Braun and Clarke [25]. The analysis began by iterating through the data several times and allowing codes to emerge. Examples of first-round codes included strategy development, evidences for project scoping, role of community views, challenges of project commissioning, expectations on technology uses in commissioning, and evaluation of grantees. We iteratively refined codes before clustering related codes into high-level themes and categories that represent our prominent findings described below. It is worth noting that the authors' experience as practitioners in the social-construction approach [28] also shaped the interpretation of the data in a meaningful way.

4   FINDINGS

The goal of our study is to reach a nuanced understanding of the project development process at the decision-making level, with particular attention to community participation. Four main themes emerged from our analysis of the interviews. First, our findings reveal four key factors influencing decision makers in an international development area. These factors include how i) institutional goals and strategies, ii) the national and international political climate, iii) insider specialists and their networks, and iv) evidence shape high-level decision-making in the project development process. Second, our findings reveal how grantee organizations' project proposals are evaluated and how participants perceive the role of community voices in this process. Third, our findings report decision-makers' key challenges that work as barriers to connecting them with communities. We found that there are tensions between community voices and the process of grantmakers' evaluation of grantees' proposals for decision making, since they are often mismatched. Finally, our findings also reveal decision-makers' expectations of digital technologies to make better connections between decision-makers and communities.

4.1   Understanding the influential factors in the project commissioning process

We found that to understand the project commissioning process, we needed to understand some key factors that influence grantmaking decisions for project development. We summarize them in the following sections.

4.1.1   Institutional goals and strategies. We found that grantmaking processes are frequently driven in a way that they stay aligned with institutional goals and strategies. For example, while discussing the

Table 1: Participants' experience in designing project agendas in international development

Code	Experience (years)	Affiliation	Education	Gender
P1	39	World Bank	PhD	Male
P2	36	USAID	MSc	Male
P3	32	Bangladesh Ministry of Health	PhD	Male
P4	12	Grant Foundation*	MSc	Female
P5	35	Food and Agriculture Organization of the United Nations (UNFAO)	PhD	Male
P6	40	Development Alternatives Incorporated (DAI)	PhD	Male
P7	8	Global Community Engagement and Resilience Fund (GCERF)	MSc	Male
P8	25	OXFAM	PhD	Male

*(**Note:** The organization name of P4 has been changed to "Grant Foundation" as P4 wanted to keep their organization's name anonymous while sharing our research outcomes.)

development projects run by the Bangladeshi government, our participants explained that their plans of action were often formulated around the government's existing policies associated with specific development areas. The participants further explained that each development policy and program has its specific goals with plans of action strategically formulated to achieve those goals, although the development processes of policies and of programs are typically linked to each other. For instance, our participants from the Ministry of Health provided an example where lessons were drawn from projects and programs to shape policies and policies were also influential to project development.

> *"The government funded many of our development programs and projects. For instance, the Food Policy Project, National Food Policy Capacity Strengthening Program (NFPCSP), and Meeting Undernutrition Challenges (MUCH) project. All of these projects provided us with lessons that fit into the policy and we used them to update policies and further formulate the projects. Hence, programs and policies are looped in a process."* [P3].

Sometimes donor organizations run by developed countries have their own country-specific goals and strategies for project commissioning. Such specific goals may include interest in supporting certain areas of development in given regions. Hence, the donor organizations initiate projects and interventions and make grants to achieve broader goals. Our interviewees from USAID, one of the biggest US-based funders of nutrition development in Bangladesh, explained to us how they determined ways to achieve their development goals for Bangladesh.

> *"USAID conducts a five-yearly country development cooperative (CDC) plan for Bangladesh. Our broader organizational goals are to assist Bangladesh in agricultural development for mitigating poverty, hunger and malnutrition challenges. These broader goals help us set the interventions and projects needed to achieve our development goals for Bangladesh."* [P2].

Similarly, donors from international banks such as the World Bank and Asian Bank also initiate their programs based on their country-specific strategies which may include broader long-term areas of support. Participants from the World Bank explained to us that

> *"...when an international development bank is supporting a country, they not only support the nutrition sector, but the other sectors within their infrastructure across the country for the upcoming three to four years. They sign agreements with the government of that country. They also follow a country assistance strategy. They decide together with the government which area to develop."* [P1].

Thus, program development processes begin with an organization's own goals and strategies, which may vary from one organization to another. All of our participants emphasized that one would first need to be well informed about institutional goals and strategies to understand how a specific program was formed.

4.1.2 National and international political climate. We found that each funding organization has its own strategies and development goals in commissioning projects, but our participants gave us some insight into how governments' political ideologies influence project commissioners to decide the development areas in which programs are funded. Furthermore, our interviewees explained how different government political parties' development priorities configured what would be the central focus of the country's development. In this regard, they gave examples of two major Bangladeshi political parties' core concentrations in agricultural development and explained how the development strategies changed depending on who was in power.

> *"When the Bangladesh National Party (BNP) was in power, they thought that even if we did not have rice—the staple food—we could import rice if we have the economic capability and thus still be self-reliant. So, they focused on growing cash crops, earning money by exporting them, and using that money to import rice to fulfill the shortage. But the current Awami league government believes that we must be self-sufficient in*

rice by growing it domestically. Thus, their political priorities shaped our agricultural development programs in Bangladesh." [P6]

This participant also provided us with other examples to explain how many factors in political environments brought changes in many other agricultural development projects following changes in government in Bangladesh. Moreover, they also explained how such changes in governance and their development priorities motivated the donor organizations' funding priorities and areas of development. For example, an interviewee from a donor organization gave an example of how a government's political priorities shaped USAID's program funding.

> *"...(W)hen the "Feed the Future" project started, at that time the BNP government was in power. This project placed more importance on high value crops and less importance on rice. But currently, "Feed the Future" is focusing on high value in production and self-sufficiency in rice-based projects."* [P6]

Our participants also noted that political climates are central to changing development priorities that are written in the country's five-year plan (as the life of a democratically elected government in Bangladesh is five years). Hence, following the governments' development priorities and strategies, the development projects and their grantmaking policies also update regularly in the country. Our participants also related that national and global priorities change with the times and new ideologies influence development programs and projects. A change in the development priorities of a government party can thus shift a donor organization's focus on funding areas for project commissioning. One of our interviewees asserted that

> *"...after more than ten years of dominant government, the Awami league's political priorities have shifted from self-sufficiency. Now, the emphasis is on nutrition, food security, and high quality food grade. This drive came from a donor's project. The current goal of USAID's "Feed the Future" program is to support Bangladesh in finding sustainable solutions to agriculture-led economic growth and ensure nutrition for disadvantaged groups. So in the next five years, you will see many nutrition projects."* [P1]

Our participants also mentioned that many development projects faced pressure to adjust to the interests of local political powers at the district level, explaining that if political leaders are specifically interested in a particular sector and had previously promised the citizens of that region to develop that sector during campaigning to be elected, then they might take charge of those development initiatives to further their re-election chances. A development donor from the European Union shared his experience of power politics from a local leader as an example.

> *"A member of parliament promised his community during campaigning that he would solve water- and sanitation-related challenges if he was elected. Now, if the funders' intended projects do not align with his interests, he would convince the funders that one of his interests is the most important sector in their region and*

> *manipulate the funders' intent. If the funders support their development, he then helps them access the community. Then he would act as though he had brought the development initiative there."* [P7]

However, it was not always the case that local politicians' interests reflected public interest. Instead, in many cases they picked some of their interested sectors for development from a list of public interests, based on possible corruption opportunities, as our participants suggested.

Our participants also pointed to global political factors that influenced funding decisions. The UN's Sustainable Development Goals (SDGs) are the key global priorities for most of the funders, and thus apply to every country trying to achieve SDGs with specific goals and strategies. Additionally, many powerful and international donor countries' political priorities regulate international development funding. A participant gave an example of how the US government took control in a certain case.

> *"You have to see who is giving money to developing countries and what their core priorities are. Let's say, Obama and Clinton prioritized climate, but Trump's government did not. So, the USAID was reluctant to fund projects addressing climate change issues during the last few years. Now that the Trump government is gone, development priority has changed back to climate."* [P6]

In summary, our participants echoed the necessity of understanding local, national, and global political factors in understanding problem scoping for program development in Bangladesh.

4.1.3 Insider specialists and their networks. Our participants also highlighted the role of organizations' insider specialists and their network of external specialists for program development decision-making.

(i) Internal expertise: Internal specialists' knowledge, experience, and collaboration with external specialists and stakeholders were identified as a key mechanism for initiating new development. Participants noted that internal experts' opinions are crucial, as they share information from their practical experience and knowledge by direct or indirect involvement with communities. Consultations and discussions occur among different governmental levels in Bangladesh. One participant said that *"One of our interviewees said, the government asks for a list on what projects they want to conduct to the ministries in the coming fiscal year"*[P3]. At the ground level, government officials such as health workers and agricultural extension workers work closely with communities. These officials share their observations and experiences from the field with their upper district level officials, and then, through consultations among divisional levels share needs with top level government officials. Five participants highlighted the importance of information from consultations with sub-national-level experts who directly work with marginalized communities (such as agriculture extension officers). One participant shared this account:

> *"I had prior experience with the livestock department. For example, field officials would identify a problem in fodder production, that the fodder is not enough to feed livestock. Then, this problem area with suggested*

solutions will pass from district to division and then to the policymakers. So, the government takes a project based on that or perhaps they take the project even though there is a problem with the diagnosis."[P2]

He repeated that in the traditional bureaucracy, which is grounded in these internal consultations, a list of programs is decided upon to share with the central government to make decisions on. Here, it is worth mentioning that, though the problems came at the ground level, there is no scope for community and field-level workers at the decision-making level—instead, decisions are made only at the top level.

Interviewees from donor organizations also highlighted their dependency on their internal stakeholders for program development. One interviewee from the Grant Foundation pointed out that

"...we rely on our internal expertise. So we have a team of X number of people, most of whose careers have … been built up in one or another area. So we have some in-house expertise … that helps us … identify where we might want to work in a particular development area."[P4]

(ii) External expertise and collaboration: Our participants also commented that fostering connections with their external collaborators or stakeholders and with outsiders are some of the most favorable opportunities for them to find problem areas in scoping development project initiatives. The importance of outsider expertise from the same Grant Foundation was noted: *"It could be something external, some kind of external expertise that we're relying on that sort of helps us define what the particular problem is that we're trying to address."*[P4] All of the participants shared that when a program development team is formed, there are generally conducting officers or agreement officers who act as representatives. Agreement officers typically lead the initial project and program design. Moreover, the importance of both internal and external stakeholders and connections were reinforced by all of the participants for project commissioning. The Grant Foundation participant remarked that

"[i]t's a bit of a combination between the expertise we have in our staff and then going outside and finding external experts. We do have a strategy team to help the foundation in development stuff. And then there is a bigger Strategy Team that is sort of across the whole foundation. And we all have our external connections. And then within each kind of individual portfolio as well, folks are having to spend some of their time developing strategy, so everybody's kind of engaged in it and one way or another within their internal and external connections."[P4]

Other subject matter experts are also a part of internal and external expertise. Relevant subject specialists are part of the core team for a specific area of program development. According to our UN participant,

"...if that project is gender related...the gender advisor or expert in our organizations will then become a part of this process. This expert can join from the technical

office, regional office, or headquarters. In specific areas of the project, experts from the technical office are involved."[P5]

Donors from bank organizations also shared their internal and external consultation mechanisms for development project initiatives. At WorldBank, a project initiative is based on consultation at different levels with different stakeholders, and then they develop the country strategy or support program. Based on the strategy, the government and others prepare their next steps, such as project design:

"Let's say the world bank will invest 1 billion USD in the next 5 years. For that, the government will design a project. … There will be stages like conceptualization, pre-negotiation, appraisal, negotiation, board, etc. Before going to the board, they do different types of negotiation by consulting in many ways internally. All of the organizations have their own board that approves the decisions. The members of this board are their representatives from all countries. It's like the governing board of a bank. They are the internal final authority that approves whether it will be worth investing in or not." [P2].

In summary, discussions and consultations for project making are broadly made in-house among the top-level decision-makers and communities are not part of the normal consultation process. Furthermore, there is no mechanism to bring them aboard as stakeholders so that they can share their challenges and participate in decision-making.

4.1.4 Evidence-based approaches. All of our participants confirmed that the project and program development process broadly centers on evidence-based approaches. Our participants mainly highlight two types of evidence-based approaches: data driven evidence and evidence-based practices from national and international successful interventions and lessons.

(i) Data-driven evidence: Data-driven evidence is information either in a qualitative or quantitative format that broadly portrays the situation in a country's specific development area. In Bangladesh, country level national data collections are conducted periodically. For instance, the Bangladesh Bureau of Statistics (BBS), funded by USAID, conducts the Bangladesh Demographic and Health Survey every 5 years to provide a range of information, including the health and nutrition status of women and children, childhood mortality, newborn care, and the country's health and family planning services [85]. All of our participants mentioned their use of national-level surveys and research data. Our donor organizations also specifically mentioned the use of situation analysis (SitAn) when making decisions on development projects. UNICEF conducts a situation analysis every 4–5 years that reflects the perspectives of diverse levels of consultation among the government and other stakeholders, including academia, civil society, young people, UN organizations, other international non-governmental organizations, and organizations who speak on the behalf of marginalized groups. The process of this SitAn includes various sectors such as health, nutrition, water sanitization, and social protection. According to one participant,

"SitAn is a really extensive process and when SitAn is done, it gives us information about all of the sectors of a country. For instance, if we look for nutrition, we will get information regarding its consultation, informational workshop, field visits, and all other situations. From benefits to the policy level, they come up with a SitAn for the particular sector."[P1]

Our participants repeated that when they need information on a specific topic, they organize expert-driven baseline surveys, analysis of important documents, information from consultations with stakeholders at different levels (such as high-level, departmental level, and sub-national-level government officials), interviews, and focus group discussions with different stakeholders, sometimes including communities. Our UN interviewee shared his experience:

"A baseline survey can be conducted. Then the secondary data such as government data can be analyzed. Then a focus or local group discussion can be held. Maybe you sit with 10 farmers, and then they discuss what the problems are, such as crop production, what the vocational issues are, what knowledge they have … or if you talk to agriculture officers, what are the issues in agriculture production, what problems they have seen … like if you sit with a fisheries officer … or fisherman … discussion with them will bring out what problems they are facing." [P5]

Our participants mentioned that sometimes feasibility studies are also organized by the government and other donor organizations to determine the community challenges and applicability of their proposed interventions. However, they confirmed that feasibility studies and consultation with communities are not mandatory activities for project decision-making. Five of our participants noted that consultation and feasibility studies depends on different types of resources, including time, human, and financial.

(ii) Practice-based evidence: Participants expressed their dependence on other evidence-based practices from national and international sources. They interpreted evidence-based practices as the most efficacious interventions, which have already been rigorously proven in the real world. Lessons from other countries, successful national and international interventions, national and international policy documents, reports, and global research outcomes and recommendations are highlighted as the most important evidence for project commissioners to inspect and update themselves on regularly for effective project development and implementation. Our participants from WorldBank provided an example where a big Bangladesh project was conceptualized by learning from other similar countries.

"The first and largest nutrition program in Bangladesh was the Bangladesh Integrated Nutrition Project (BINP). The way it was conceptualized, we would say it was a 2nd- or 3rd-generation nutrition program, based on the experience from other countries like the Project of Tanzania, or the one from the Tamil Nadu Integrated Nutrition Project (TINP)."[P1]

Furthermore, relevant document analysis by government, research, and other development organizations is another source of evidence for problem identification and project design that our participants

articulated. One interviewee said, *"donors also do desk study"*[P7]. Another interviewee noted that,

"[w]hen donors submit a call for proposal, they obviously hold a problem analysis program prior to it and they do it according to their own process. They generally do it at the macro level. Different kinds of research also take place among donors. They make problem statements and invite interested agencies for that."[P8]

The other important documents for evidence-based information, including policy documents, country investment plans (CIP), and national 5-year plans, have frequently been mentioned by our participants for scoping a project or intervention. It is notable that no specific process for discussion with a targeted population for problem and priority identification and project design was mentioned by any of our participants. Our interviewees also noted the importance of research as a source of evidence-based information to determine the scope of a program or intervention. Our participants from grant organizations highlighted that when donors submit a call for proposal, they first hold a problem analysis program according to their own process. Interviewees said that this is generally done at the macro level. According to one participant,

"[d]ifferent kinds of research also take place among donors. They make problem statements and invite interested agencies for that. They want to implement and design programs. Donors always provide prescriptions and point out the problems and we generally want to adjust those problems. The interested applicants to adjust those certain problems, submit their solution to the donors."[P7]

While all of the participants highlighted different types of evidence that are needed to understand communities' challenges and decision-making, our participants did not mention any straightforward process that includes community participation and community-driven evidences to make inclusive decision-making in project development.

4.2 Evaluation of proposals and perceptions of community voices

(i) Proposals evaluation criteria: Different grantee organizations submit proposals to donors who call for proposals on a given topic. Our participants said that they have a Contract Review Committee that reviews the applications/proposals from the bidder organizations. All of our participants highlighted that their review committees have various criteria of application while evaluating a request for proposal, including technical human resources, technical write-up, previous experience, connections with local organizations, and financial budget planning. Based on these criteria, the review committee discusses and marks the best proposal. However, our participants noted that most grant organizations have core criteria that they focus on more than others that greatly impact the final selection of grantee organizations. One of our participants explained this with an example and also shared his argument for exclusion of community voices.

"Let's say, technically my proposal got the highest point but there is a criteria in bidding that the lowest bid will

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get the fund, and I do not match that criteria, I will not get the fund. Technically I may be number one, but if I don't match the financial consideration, I won't get the fund. However, if the case is that technical work is most prioritized and money is not a big deal, then they negotiate about the financial proposal. When the work is technically critical, they consider and negotiate the financial limits. All of these are structured steps. So, there is no need for the community's voice since all these are operational issues."[P1]

(ii) Community voice in project commissioning: We specifically asked our interviewees about their views of community involvement and consultation during intervention proposal evaluations. We wanted to know how grant organizations understand grantee organizations' understanding of community challenges for their proposal writings and how grant organizations evaluate their capabilities. Our participants confirmed that community consultation before decision making on programs is not a common practice. They also highlighted the fact that no process exists that can guide decision-makers to consult with the beneficiaries of the interventions where development funds will be given. *"Consultation before the start of a project is rare. If the design is flexible, it can be rapidly implemented."* [P2]

However, participants pointed out that if grant organizations include community consultation among their criteria for proposal selection, then bidder organizations consult with the community. In other scenarios, grantee organizations are not bound to consult with the community for their proposals, and if an organization chooses to meet with a community to understand their views, this might be appreciated by the donor organizations, but it will not be a factor in a decision on the awarding of funds.

"If you mention that you need evidence that the community has been consulted on the proposal, and if the proposal does not include the evidence, you don't mark them for that criterion, because you will review the application/proposal based on the terms of reference you provided. Now, if you want the evidence, when you send the proposal, you must include the community voice and proof of it."[P6]

Grantee organizations' experience, including previous work experience and connection with local communities, are highlighted as crucial criteria in evaluating bidders' proposals. Our interviewees mentioned that they do consultation with the grantee organization, which helps them to assess bidder organizations' capacity to get intervention funds. One participant noted,

"...we have the scope to consult with them. During primary selection, USAID meets with the organizations several times to consult ... to talk out with them if they can conduct/implement this. These are to see if they have formulated the project, if they are doing the work properly at the community level, if they understand the context, etc."[P2]

(iii) Effects of power dynamics on the community voice: Our participants also shared how top-down decision making, bureaucracy, and power dynamics shape program decision-making. In addition to the challenges of the geographical accessibility of communities, our

participants also highlighted a lack of their willingness to contact communities. Three of our participants noted that there is a common tendency among decision-makers to have unconditional faith in their own knowledge and expertise, which means neglecting to listen to voices from ground-level communities and field workers.

"The government has a top down approach. Say I have set an agenda. I won't be able to set that agenda based on the community's needs all the time. So there is a challenge of accessibility to the community. Another challenge would be in the mentality among those conducting this who think they know everything about the work." [P2]

Another comment from an interviewee was *"...challenge is the top level mentality problem that we know more than the community. Hence, most projects are undertaken after indoor office discussion."* [P7]

Three of our participants also blamed their pride and ego as provoking power dynamics and distance them from the community. Such pride and ego reflect overconfidence in their knowledge and expertise and their belief that they understand what is going on in the community, the problem, and the solutions a community might need. One participant said, *"I think the big barriers for us as to why we don't do this yet, one, I think is just ego. We sort of, I think, feel confident that we have all the answers already"*[P4]. This overconfidence and pride on the part of decision-makers was also reflected by one of our government interviewees who believes some of the community challenges are well known and easily understood, thus not requiring any community consultations. He also mentioned that they conduct community consultation if there is a crucial need for it.

"Program development needs to be understood using common sense. This is not something that is written in a book. WorldBank has a country strategy for how they want to fund here in the next 5 or 10 years. They have some priority areas in that country strategy wherein they will think of projects and will communicate with the incumbent ministry. Or they will speak to stakeholders in that area. If this is regarding a community, they may also talk to the community."[P3]

Our participants commented that incorporating community voice in the project commissioning process requires the allocation of finance and additional time. One participant highlighted a lack of interest in spending money and time might disincentivise community engagement during project design. The participant said it might depend on dynamic power issues, dependency on local organizations, and global politics.

"For understanding a community you need time and investment. Maybe they don't want to do that investment or maybe we are depending on local organizations. How aid channeling takes place [depends on] relationships, power, etc., ... not a single aspect. It is global politics."[P8]

In summary, our findings show that there is little community voice in project commissioning by either grant and grantee organizations. Community consultation to better understand targeted

communities' challenges, lived experience, and preferences is not a priority for grantmaker and grantee organizations before setting development intervention agendas. Power dynamics are also highlighted as factors influencing the absence of community voices in project development.

4.3 Distance between grantmakers, grantees, and communities

Our project commissioner interviewees shared that they have a strong desire to connect with the communities for whom development programs are initiated. They identified several key challenges that work as system defaults from the very beginning of international development. Geographical distances; language barriers; and limited access to local organizations, grantee organizations, and communities are key barriers for the grant organizations who work from far for project implementation in developing countries. The participant from US-based Grant Foundation noted that

> "...we are such a large donor that that can sometimes even be difficult for us to find out within a particular country or region who are the folks that we should be talking to that we're not. It can be hard for us to identify that, particularly being US base, even right."[P4]

Our interviewees also mentioned that grant organizations nowadays often have their regional office in grantee countries, and the responsible officers who are based in donor countries most often rely on their colleagues who are based in regional offices in different countries to help "identify potential partner organizations." However, interviewees from large donor organizations also noted the difficulties in finding local organizations who closely work with communities. The reason, as noted by the Grant Foundation's participant, is that

> "...it is difficult for us to work with really small organizations, which are often the ones that are closest to the community. So a lot of times, we may give a very large grant to an international organization. And then they're giving sub-grants to some of the more community-based local organizations, but we don't often have direct communication with the community, as there's sort of a layer of separation between us, those smaller organizations and those communities"[P4].

Our participants highlighted the distances between communities and grant organizations. One interviewee acknowledged their disconnection with the community and limited understanding of communities' backgrounds and challenges.

> "I think there's been some frankly pretty disastrous consequences of us not understanding the context on the ground, not having the opportunity to hear from a community as we're developing something. But I would say, even beyond just at the project level, or the request for proposal level ... or in setting our strategy, there's a tremendous opportunity for us to get more direction from the people that we're trying most to help. And even telling us what we should be focusing on in the first place. And I think we rely on the folks that we

consider experts in this space, that's almost never the people who are most impacted!" [P7].

Furthermore, one of the biggest challenges reiterated by our participants is the gap between grant and grantee organizations, where trust, fairness, and transparency become major issues mentioned by our donor interviewees. They mentioned that there is a common tendency among grantee organizations to portray everything to grant organizations as positive, which makes it difficult for the donor organizations to understand what is going on in the field and to take essential steps if grantee organizations hide, or fail to accurately portray, the actual impact and challenges in the community where projects are implemented. These events come out during third party evaluation by donor organizations, when it is sometimes very difficult to make corrections in a certain situation. According to one participant, "we've already put in quite a bit of time and money into setting things up the way they are right or the project is done. And we can't sort of go back and redo it."[P2]. Six interviewees shared some experiences of lack of their understanding of project contexts and communities' lived experiences that turned out as negative project outcomes. One participant shared that

> "... one project was related to livestock and dairy projects towards women's empowerment over the milk production process and ownership over the income that was being produced. It looked like on paper that the project had gone quite well. Then some evidence came up later that there were unintended consequences of a lot of the mothers that kept their daughters home from school to do some of the stuff that they couldn't do, because they were sort of taking on this new opportunity with milk production. This women's empowerment project did not work well and we did not want that to be happening. Something that has been kind of missed, but what's happening on the ground..."[P4]

Thus, our participants shared the problematic connection with their grantee organizations who are implementing projects with communities. Most of the time, grantee organizations are reluctant to share if there is any problem on the ground. During communication for regular updates, according to a participant,

> "they want to get on the phone and say, everything's great, everything's going really well. Your project is going perfect, no troubles. That it's very difficult for us to get really honest feedback about the troubles that our grantees are running into."[P7]

Our donor interviewees highlighted that it is rare for grantee organizations to reveal any problems during field visits.

> "...When we could travel ... we go all the way out to the village to visit. And you will see it's a really big presentation. You only talk to the people who have something successful to say, I'm like, great, everything's going really well. We almost never go on those trips."[P4]

In summary, geographical distance, limited time, communication barriers, and lack of trust and transparency of grantee and local organizations have been highlighted as key barriers to grant organizations connecting with communities to include their authentic voices in program development and implementation.

4.4 Expectations surrounding technologies

(i) Technology for bringing community voices: Technology is recognized as an anchor to achieve any successful development in the Global South. Our interviewees opined that a desire for connecting with a community where they can have a direct communication with their target community. Participants also think that *"[p]roject development certainly must be by discussing with the community"* [P2]. Participants shared their expectations in taking communities' priorities into consideration for project development. They also want to involve targeted community members to know which project they need for development in a certain area. Interviewees confirmed that there is no system currently in place by which grant organizations can communicate with their targeted community members except through their local stakeholder collaborations. Two of our participants expressed a desire to have a polling system as a technological innovation to connect with communities so that the community could express their priorities and desires as to what projects and other relevant information they want. One participant shared his expectation of building a polling system to communicate with participants.

> *"…[S]omeone can do a poll asking which project they want. If we can build a simple technology-oriented polling system in local languages, then polling can be used to understand what they really want, very basic. Community based organizations (CBOs) or other local organizations may be consulted with. A polling system could be an easy solution for the community as well as for us!"*[P1]

During a project initiation or writing a call for proposal, grant organizations need to know what is happening at community level. As discussed in the above section, participants mentioned that they generally try to get information through media, relevancy documents, and consultations with relevant partners. However, our participants also expected that technology could bring some innovations to improve connections with communities. Three of our participants thought that if a community voice online repository hub and archiving system could be built in the target community, then responsible officers from donor organizations could listen to the community's needs, challenges, and relevant community information. Calls for proposals could then be initiated based on this information, which would also be useful during project designs for implementation. One concrete expression of this form of innovation is described by P2.

> *"While writing the call or expression of interest, I need to read the newspaper and try to understand local communities' challenges; say, for example, try to understand Sirajganj's problems … however, that can perhaps give me a community voice. We don't have such an archiving system where we can go and listen to community voices regarding their current challenges and what they need in their community for development … if that kind of community voice hub can be built for certain communities where we will work, then I think we could communicate with communities better and listen their voices to tailor effective solutions."*[P2]

(ii) Technology for maintaining regular connections: Distance is one of the core challenges to connecting with communities that grant-making interviewees noted. Moreover, in a crisis situation like the recent COVID lockdown, program decision-makers and implementers from governments, NGOs, and donor organizations have all faced challenges in maintaining regular connections with their communities. This disrupts their regular program monitoring and evaluation. The role of ICT, including mobile phones, internet, and social media, was perceived by the participants as a crucial tool in communicating with local organizations and communities, as was the need for better and innovative communication through these media interviewees. Our UN participant explained that

> *"… [D]uring such times, when projects are undertaken, then certainly technologies like using ICT, mobile technology, the internet, and even Facebook groups or some other way of taking in people's views, are necessary. More innovations to improve these technologies such as mobile phones and media are needed to better connect with communities."* [P5]

(iii) Technology for project management: In terms of project management and implementation, participants expected more innovations in monitoring and evaluation tools that could help them make direct connections with communities. Donor organizations also expect to have better connections that can help them to monitor their grantee organizations' activities on the ground, where a community will be accountable for informing donor organizations regarding field status. One participant provided this example: *"if you give technology to the communities, they can inform you immediately about the absence and carelessness of the officers."*[P3]

Participants also mentioned corruption-tracking concerns related to project management several times. Our grant organization participants expect to have more digital innovations that can assist them in monitoring the ground level programs. Participants think the community should measure corruption indicators, thus making program monitoring and evaluation accountable to the community. Our INGO interviewee shared the following experience.

> *"… [M]y job was corruption tracking in the government system. Village women were supposed to get a 5 kilo ration, and after measuring the ration, they discovered it was only 3 kilos. They typed 3 kilos in a mobile database and forthwith the data was received by the central server. Each and every villager is doing likewise. When the central server received it, I was informed about the 35% manipulation of ration distribution that day.*[P8]

Another participant said that *"…technology can be an instrument to hold the system accountable. More innovation around this type of corruption detector could be useful for project management and implementation for all development practitioners."*[P7]

In summary, our participants showed a deep interest in connecting with communities through digital innovations for development.

5 DISCUSSION: PRACTICAL IMPLICATIONS FOR ICTD RESEARCHERS IN INTERNATIONAL PROJECT DEVELOPMENT

Our study provides an in-depth analysis of how international development project commissioning works in public health nutrition decision-making in Bangladesh. Our study highlights key influential factors, including institutional goals and priorities, national and global political agendas, internal and external expertise, and data and practice-based evidence, and how each are systematically designed into the program and policy level's decision-making process. Participants shared some common challenges to connecting them with communities, such as communication gaps and power dynamics, and they shared their deep desire to connect with communities using digital innovations. Our findings generate several important takeaways for ICTD and HCI4D.

Our findings strongly align with existing work on what comprises inclusion and participation of marginalized communities in decision-making for development [43, 93, 122]. Evidence from our findings confirmed the limited opportunities for community voices to be heard when designing development programs. More specifically, our study reveals that there is a specific lack of opportunities to engage community voices in earlier stages of the project development life-cycle. This leads us to suggest that although ICTD and HCI4D have attempted to contribute to the bottom-up approach for community development, we lack the necessary understanding of the complex process of commissioning of a project to contribute in an impactful way. We argue that the field of ICTD has a responsibility to contribute to this arena, and offer broader practical considerations and opportunities for ICTD researchers to engage in the international development space.

5.1 Understanding the political contexts that underpin program commissioning

Our participants shared with us the various activities and stages that are involved prior to project design. We urge that ICTD and HCI4D researchers should be aware of—and closely involved with—these activities and stages, by gaining a better understanding of the nature of decision-making agencies' (such as government, donors, UN, and INGOs) work and activities. This includes their goals, priorities, and strategies; political climates, both local and global; evidence-based approaches; and their internal and external collaborations, which can serve as key entry points to connect with high level program and policy decision-makers. For instance, our findings reported how top-down national and global politics and institutional goals and priorities influence decision-making in Bangladesh's public health nutrition project development. Moreover, our participants also reported that existing bureaucracy and power-dynamic relationships acted as broader challenges to incorporating community voices in decision-making, supporting previous work [35, 74, 124]. Therefore, we argue that ICTD researchers need to reach a nuanced understanding of political climates and relevant power dynamics in the decision-making process to better understand how to connect communities using technologies for development.

Emerging scholarship has begun to shed light on these challenges, and the importance of understanding the political economy relating to digital innovation in the Global South [81, 103, 118].

Our study joins this scholarship, and argues that without attention to such dynamics, community engagement and participatory design work lead to presence without any community voice, or to voices without influence in decision-making. According to Walsham [119], for *"South-South and triangular cooperation, political analysis is needed on who is doing the driving of such projects and who benefits."* Political economy analysis has been widely used by development aid organizations under the broader political dimensions of development of a certain country [23, 120]. We also urge ICTD researchers to get involved with international development ecosystems by analyzing the political economy of decision-makers in specific development areas (such as public health nutrition), in macro-level structures (country- and global-level contexts, including political priorities), sectoral level institutions (such as relevant development institutions' policies), and actors (such as the motivations and interests of internal and external experts and their networks). We suggest more research needs to be conducted in this space to explore the political economy in different development areas to find pathways to connect with top-down decision-making contexts. Overall, ICTD researchers can benefit from political economy analysis by connecting with top-level decision-makers to advocate bottom-level community needs and priorities for program development.

We encourage ICTD and HCI for development researchers to take responsibility for community connections, working as intermediaries between these two top-down and bottom-up approaches [100]. We suggest that, as mediators, ICTD and HCI4D practitioners and researchers should explore community-centric approaches where communities can gain opportunities to share their priorities and suggestions for effective development interventions [100]. Then, using strategies such as political economy analysis, ICTD and HCI4D societies can assist in connecting community voices to decision-makers. We suggest that ICTD and HCI4D researchers and practitioners can bring community-centric approaches for evidence gathering that capture community needs, challenges, and priorities in specific development areas. However, questions around access, power and participation are certainly needed to provide marginalized communities with potential opportunities by the top-level decision-makers where ICTD and HCI4D researchers can contribute as mediators. We suggest that acting as mediators [100] between bottom-up and top-down contexts can give ICTD and HCI4D researchers access to the project commissioning process, allowing us to leverage and apply our expertise in community-centric engagements for capturing and incorporating community voices in project development decision-making.

5.2 Design considerations: Employ community-centric approaches in new ways across the ICTD landscape for program development

5.2.1 Opportunities for active engagement during project commissioning. Our study reports some current constraints on the project commissioning process for development, particularly general development project starting initiatives, including grant organizations' evidence-based approaches to preparing calls for proposals. Our findings showed that current project development is broadly

influenced by evidence-based methods, mostly designed for top-down approaches involving internal and external experts in development organizations. We encourage ICTD and HCI4D researchers to contribute in this space by exploring and tailoring appropriate community-centric designs and technologies for community-based evidence gathering. We believe that community-centric design and technology can assist marginalized communities in sharing their needs, challenges, and meaningful priorities to generate community-based evidence that can enhance the traditional evidence-based approaches for program development. As an example from one of the potential design spaces, we see that ICT and HCI for development societies have long advocated for including authentic community voices using various forms of participatory media production, including participatory video [17, 26, 68, 71], audios, podcasts and IVR systems [123]. With the potential of participatory media approaches, ICTD and HCI4D media production practitioners and designers should bring more appropriate design considerations that engage and capture community voices for problem scoping and suggestions during the initial stage of project development. For example, when decision-makers look for evidence during the project commissioning process, ICTD and HCI4D researchers acting as mediators can offer effective community-based approaches and technology-supported methods (e.g. participatory media) to capture authentic community voices for project design. We believe that ICTD and HCI4D works can bring communities towards the intersection of existing internal and external experts' environments, to share their lived experiences and practical knowledge as community-centric evidence to contribute to the development problem scoping and the design of interventions.

5.2.2 Opportunities to engage with finalizing project intervention.
Our findings report current constraints around evaluations of grantee organizations' intervention proposals in project decision-making to set development agendas and inform program decisions. Participants from within grant organizations shared that interventions on specific development projects are finalized by choosing the best proposal from grantee organizations, based on numerous criteria: the grantee organization's previous experience, human resources, local connections, meeting grant organizations' proposed priority area, the technical proposal write-up, and the budget plan. Our study found that there are limited requirements of grant and grantee organizations to understand the targeted communities' actual needs and priorities when proposing an intervention. Thus, limited community participation is common during both problem scoping and finalizing interventions for project design. We suggest that the ICTD research community can bring potential design approaches that include communities in an evaluation process to voice their development intervention preferences. As ICTD and HCI4D researchers, we can apply our knowledge and experience of community engagement as collective actions to close the gap between project commissioning organisations and the communities in the decision making process.

Our participants also showed a desire to connect with communities, using digital innovations such as polling systems to share communities' opinions and take part in decision making. Our participants also desired digital innovations for better, fairer project management, through providing greater agency and making the community accountable for development initiatives for effective development outcomes. We encourage ICTD and HCI4D researchers to bring different community-based participatory approaches [58, 115] and co-designs [64, 125] that can allow community emancipator participation towards democratic and representative decision making for project development. The use of such collaborative, grass-root approaches has been seen in different civic-technology practices, including community-led e-voting [116], civic tech movement [97, 99] and civic engagement [15]. However, we stress the need for design work and appropriate approaches around bottom-up marginalized community-centric engagement for development program decision-making in the Global South. We believe ICTD and HCI4D researchers have a wide space to explore this area to find better design and technology innovations. This can give communities opportunities to take part in program decision-making, which will help both in effective project design as well as building trust with communities by making them accountable for effective program implementation.

5.2.3 Call for more actions and research for ICTD researchers in development project. One of the strengths of the ICTD and HCI4D fields is that they have already established strong commitments to bottom-up approaches to informing policy and technology design by closely working with the community [56, 67]. Hence, we call for action by the ICTD and HCI4D communities to bring more research, design, and practical contributions to bridge the gap between top-down and bottom-up approaches to development project design and implementation. We advocate that community engagement be increasingly required during all phases of the project commissioning process, including finding community needs, challenges, and priorities as evidence. To this end, the community can present their issues by taking part in agenda settings for the design of effective interventions [93]. We call for a new design space in the project commissioning process, moving towards sustainable global development both with and for marginalized communities. We believe that with a deep understanding of the initial project development process, ICTD and HCI4D societies can go beyond traditional ICT and HCI for development—involving themselves at the very beginning of (or before) project development initiatives, rather than only informing programs and policies at the end of research.

More HCI design paradigms, including Value Sensitive Design (VSD) [39] and Participatory Design (PD) [58, 115] and co-design [64, 125] might be useful in making designs more inclusive. Moreover, we are also encouraging ICTD researchers to bring more action research in this project development space in the Global South. Finally, we raise questions for future work on ICTD and HCI4D researchers: i) How can we capture and incorporate authentic community voices into project design? ii) How can we engage marginalized communities and incorporate community voices into project commissioning processes, such as preparing calls, evaluating proposals, and informing program decisions? Such questions have hardly been raised in this field. Thus, we encourage ICTD and HCI4D researchers to explore how technology and innovations can contribute in this design phase for international development in

the Global South. However, we want to underline that any digital innovations used for these ends in the project commissioning arena must use simple, existing, and context-specific innovations for sustainable digital innovation in the Global South.

5.3 Limitation

We acknowledge some limitations regarding the generalizability of our study. Our findings are limited to the participants that we chose through our professional network and convenience. Moreover, our study only engaged decision-makers in public health nutrition development, which might differ from other development sectors in the country. While we believe that most of our findings may hold for a broad range of public health nutrition settings in Bangladesh, we acknowledge that the findings might have been different in other settings. Hence, we refrain from any kind of generalization of our findings beyond the studied setting. We focus rather on the strengths of such "studying up" studies [80] in engaging our experienced participants for the depth of the information they provided on the international project development process and of the critical interpretative tools in our analysis.

6 CONCLUSION

In this article, our goal has been to bring to the attention of ICT and HCI for development practitioners and researchers the importance of understanding the program development process to finding an effective way to incorporate community needs and priorities and suitable digital innovations in sustainable global development. We have presented the meaning of the data in accordance with our critical interpretative analysis; we hope to expand and deepen our findings with an extended engagement with experienced program development specialists from diverse program decision-making organizations in public health nutrition development contexts. Our in-depth analysis for understanding how project commissioners such as donors and government advocates for development are broadly infused by institutional goals and strategies, global-and national-level politics and interests, internal and external expertise as well as existing evidence-based practices and supporting data.

Our research revealed the tensions of the grant organizations and project commissioners and pointed out the challenges associated with power dynamics and trustful collaborations with grantee organizations to connect with communities for whom development projects are initiated and implemented. Our findings also showed the gaps between project commissioners and communities and a deep desire on the part of the former to connect with communities where they think technology can make a significant difference. In addition, we also contribute to the rich body of prior work concerned with understanding high-level decision-making processes and exploring potential opportunities for how ICTD and HCI4D researchers can advocate local community voices in sustainable innovations. We call for action, and research and design work in the new space of project commissioning to find appropriate approaches and context-friendly technologies to engage and capture authentic community voices for program development. We also raise questions for future work to ICTD and HCI4D societies toward

incorporating community voices into grant proposals and bringing communities into every step of the commissioning process for sustainable digital innovations and global development.

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