

# Effects of Covid-19 on Hydropower Projects in Stakeholder's Communication

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## Abstract

This research examines how hydropower projects in Nepal adjusted to the crisis of Covid by embracing new correspondence strategies to associate with the assigned area organizations. The fundamental objective of the survey is to sort out how the exercises change their particular gadgets amidst the difficulties in talking with projects have networks during development constraints. This article sorts out that four hydropower projects covered by the investigation embraced new instruments of correspondence especially virtual gadgets, for instance, video meeting stages, for instance, Zoom, Microsoft Gatherings as well as an online diversion to attract the endeavor accomplices multiple and a half years till September 2021, since the 24th Walk 2020, when the country went into the essential lockdown. With the weight of development impediments, projects stood up to inconveniences in attracting their endeavor have networks giving them only decision to use such modernized mechanical assemblies to enhance other standard gadgets for reliable contact with the accomplices. This investigation covers Sunkoshi Multipurpose Endeavor, Arun-3 Hydropower Assignment, Budhi Gandaki Hydropower Adventure, and Upper Tamakoshi. Two of them address projects a work in progress while two others address those in the pre-improvement stage. An emotional procedure for research was applied in this article using gatherings of senior specialists of concerned dares to assemble information about how their correspondence methodologies went electronic over the period. That is the very thing that the assessment assumes anyway expands stood up to a couple of moves on the most ideal way to oversee accomplices during the Covid crisis with no the correspondence procedures, they hugely used electronic gadgets to continue with their responsibility with their concerned accomplice organizations.

**Keywords:** Covid-19, Communication tools, Stakeholders, Hydropower Projects

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## **Introduction**

Governments around the world recognize that infrastructure investment is the key to boosting economic growth (Jallow, Renukappa, & Suresh, 2020). Large-scale infrastructure projects involve multi-stakeholders, who hold direct or indirect interests or influence in the projects. COVID-19 has posed a threat to the execution of large-scale infrastructure projects across the world. The impact of COVID-19 can be witnessed in any phase (development, construction, operation) of infrastructure projects (Deloitte Touche Tohmatsu, 2020a). COVID-19 is the biggest health, social and economic emergency after the Second World War (Jallow, Renukappa, & Suresh, 2020). Projects have a responsibility to properly communicate with their stakeholders and they should be more serious in sharing information during a crisis period. However, they would face a difficult time communicating with stakeholders during a crisis including natural disasters and health pandemics. The impact of Covid-19 could be seen in the infrastructure projects, including hydropower projects.

Given the abnormal situation, there has been a fear that a new recession will emerge when the economy collapses, highlighting the necessity to take measures for the infrastructure sector (Jallow, Renukappa, & Suresh, 2020). Mainly, economic activities were brought to a standstill due to the restriction on the movement of people and vehicles. Mainly infrastructure projects which rely mainly on supplies of goods from the outside and involve many people at the site are affected, forcing them to reschedule their implementation timeline.

COVID-19-related travel restrictions limited the functions of workers including auditors and consultants, leading to a delay in completing tasks and labor (Reada, 2020). Stakeholders are those who are affected or hold the capacity to influence the project's activities. Hence, they should be properly informed about what is going on in their localities, especially regarding projects. During COVID-19 and the resulting government-announced lockdown, engagement activities targeting stakeholders in project areas were further limited. Most of the development projects are implemented in rural areas where communication with the local communities is difficult due to weak accessibility and the absence of availability of modern communication means. With the imposition of lockdown and travel restrictions by the Nepal government since March 24, 2020, stakeholder engagement activities of big projects at the local level have come to a standstill. As per the data of the Independent Power Producers Association Nepal (IPAN)- an umbrella organisation of domestic power developers- around one dozen hydropower projects are directly or indirectly impacted in Nepal by the COVID-19 pandemic (myrepublica.nagariknetwork.com, 2020). The staff of government offices, non-governmental organizations

(NGOs), and private sector firms are forced to work from home. Nepal also suffered highly with infrastructure projects facing difficulties carrying out works. Major infrastructure projects stand in limbo putting a large informal labor economy at risk, without daily incomes (UN, 2020).

After the COVID-19 outbreak, a remarkable drop in economic activities was witnessed due to the government imposed lockdown in Nepal (NPC, 2020). NPC (2020) estimated that around 924,000 and 640,000 Nepalis lost their jobs within the country and abroad respectively due to the Covid-19 impact by mid-July 2020. Even the construction of national pride irrigation projects like Sikta Irrigation, Babai Irrigation, and Ranijamara-Kulhariya Irrigation was stalled for some time (NPC, 2020).

This paper explores the problems facing four hydropower projects in Nepal in engaging stakeholders especially local communities and finds out how the projects are applying alternative tools of communicating with local communities when field-based outreach activities are not possible during the pandemic. This study applied a qualitative method that includes interviews with managers or top officials of the projects under study.

### **Research Questions**

This research is based on the following research questions:

- a. What are stakeholder communication activities, impacted by COVID-19?
- b. What are the communication tools that the projects applied during the pandemic?
- c. Did projects change communication tools during the peak time of COVID-19?

### **Theoretical Framework**

Correspondence researchers perceive the significance of partners and apply partner hypothesis to comprehend how associations impart and consider themselves responsible to various partners (Johan and Foss 2009). This study was led with direction and explanation on the hypothetical bearings of Timothy Coombs' Emergency Correspondence Hypothesis and Edward Freeman's Partner Hypothesis. An emergency is the view of a flighty occasion that compromises partner assumptions, seriously influences an association's activities, and can have unfortunate results (Coombs T, 2007). An emergency is what is going on that disturbs an association's tasks and stances both monetary and reputational dangers (Coombs WT, 2007a).

An emergency is an unanticipated situation that influences the typical working of an association, happens because of the association's weakness and weakness to the outside climate, and causes distress, dread, or frenzy in the people who endure its effect. (Beam, 1999). Crisis can emerge in various ways, from normal to human mistakes, prompting exceptional circumstances looked at by all associations. To manage such unprecedented circumstances, associations ought to foster an emergency correspondence system. Emergency correspondence is the manner by which associations convey previously, during and after an emergency (Hagie and Irving, 2016). Emergency correspondence is the connection between different important entertainers with respect to an emergency (Vos, 2017). Vos (2017) further contends that great correspondence is vital for all associations to decrease weakness to chance and increment flexibility as an obligation to accomplices, workers, and different partners. I'm here. Coombs (1995) contends that during an emergency supervisors need to speak with various partners who might see what is happening in an unexpected way.

Emergency correspondence is utilized by associations previously, during and after an emergency (Coombs T., 2007). Coombs (2007) states that emergency the board forestalls or limits the antagonistic impacts of emergencies to safeguard the association, its partners, and the association from hurt (Coombs T., 2007). Organizations ought to foster a procedure or the executives intend to stay away from reputational or monetary misfortune and keep speaking with important partners. Emergency correspondence empowers prompt and proficient correspondence with the overall population, including designated partners, to limit the adverse consequence of emergencies however much as could be expected (Farha, 2015). Mendy, Stewart and VanAnkin (2020) accept that associations ought to foster long-haul objectives, tune in and figure out their partners, and make ready for dynamic partner discourse. Directors should gain from examination, point of reference, and experience to construct hierarchical strength during these questionable times and to involve the emergency as a vehicle for positive change (Mendy, Stewart, and VanAkin, 2020). Overseeing issues during Coronavirus requires emergency correspondence and partner commitment (Deloitte Well played Tohmatsu, 2020). Emergency executives and correspondence centers around inspecting how an association ought to answer during an emergency, current realities, and the effect of realities on an association's standing (Heath and O'Hair, 2009). A profound comprehension of the circumstance permits the task to foster designs to successfully manage the emergency ([www.pwc.com](http://www.pwc.com), date obscure).

Freeman (1984) endeavors to lay out the connection between an association and its outer climate and how an association manages that climate. During the Coronavirus emergency and lockdowns, and different types of movement

limitations, associations ought to take on working from home modalities when representatives are telecommuting utilizing an assortment of elective correspondence stations. Thomas Donaldson and Lee Preston (1995) further explain the stakeholder theory arguing that it has three applications; descriptive, instrumental, normative. Descriptive use explains the characteristics and behaviors of existing corporations, instrumental use focuses on how to achieve the desired organizational outcome and normative use prescribes ethical or philosophical principles to be followed by organizations (Johan & Foss, 2009). Organizational communication relates to stakeholder theory that also covers corporate social responsibilities or ethics in business organizations. Crisis communication theorists also uphold the approach of stakeholder theory by focusing on pre-and post-crisis communication by companies targeting their diverse stakeholders.

### **Methods and Procedures**

The study focuses on exploring the impact of COVID-19 on stakeholder communication activities of four hydropower projects and changes of communication strategies adopted by those projects prompted by the restriction movement of vehicles and people. The research is based on a qualitative method that includes interviews with project managers/top managers of the four projects under study. The interviews are concentrated on the research questions that focused on the impact on stakeholder engagement activities or stakeholder communication of the projects under the study. The interviews identified how communication tools were changed during the pandemic by the projects.

### **Determination of Projects**

The study covered three hydropower projects and one irrigation project. Among the three hydropower projects, two (456 MW Upper Tamakoshi Hydropower Project, 900 MW Arun-3 Hydropower Project) were selected among those under construction phase and 1200 MW Budhi Gandaki Hydro Power Project was selected among those in the pre-construction phase. And, Sunkoshi-Marin Multipurpose Project, is among the non-hydro project which is also under construction phase. These projects represent the pre-construction phases and construction phases of the projects so that stakeholder communication constraints could be understood through the interviews of the respective project managers. The interviews were conducted to know the responses from the project managers about their stakeholder engagement activities during the past year into the COVID pandemic (March 2020- September 2021).

**Data Analysis Procedure**

The information extracted from the interviews was tabulated in line with the research objectives and research questions. The data analysis was based on the research objectives and questions which lead to the way of finding the research. Similarly, interviews were transcribed before they were tabulated by reflecting the intended meaning of responses to questions from the interviewees. Research objectives and questions were the foundation for analyzing the data.

**Results**

All projects reported a significant impact on project activities during the peak time of Covid-19 due to travel restrictions including on movement of all kinds of vehicles as well as big public meetings. The development projects could not organize public meetings or other forms of the gathering of stakeholders because government-imposed lockdown restricted travels and vehicular movement. After several months of disruption during the lockdown, the projects resumed construction activities maintaining government-made protocol. The projects used traditionally modern digital communication tools to cope with the adverse situation created by the pandemic's peak time.

Particulars	Sunkoshi Marin Diver- sion Multi- purpose Proj- ect (SMDMP)	Arun-3 Hydro- power Project (AHPP)	Upper Tamako-shi Hydropower Project (UTHP)	Budhi Gan- daki Hydro- power Project (AHPP)
Phases	Pre-construc- tion phase	Construction phase (900 MW)	Construction Phase (456 MW)	Pre-Construc- tion Phase (1200 MW)
Status	Land acqui- sition and compensation distribution completed for the proposed powerhouse site	The overall con- struction of vital structures (tun- nel, access road, powerhouse) Transmission Line Construc- tion going on	Overall 99.7 percent of work complete	Land acqui- sition is in progress, still not complete, no physical progress in construction because it has not yet started

<p>Impact on Project activities</p>	<p>Significant Impact: Delay in process of land acquisition and valuation of land for a dam site, powerhouse, surge shaft, hydromechanical works, transmission line (TL), and other vital structures due to difficulties in organizing public meetings and interactions at the local level due to lockdown and other travel restrictions. Stakeholder meetings at local levels are also affected by the restriction in the movement of people and vehicles.</p>	<p>Significant Impact: The movement of workers and consultants was severely restricted in the project area for several months. Construction activities halted for a few months since the date of the lockdown announcement that caused much delay in construction works in vital structures such as tunnels, access roads, and other civil constructions. Stakeholder meetings at local levels were also affected by the restriction in the movement of people and vehicles.</p>	<p>Significant Impact: The movement of workers and consultants was severely disrupted for several months. Transport and installation of hydromechanical equipment to project sites and civil construction activities came to standstill for several months. Stakeholder meetings at local levels were also affected by the restriction in the movement of people and vehicles.</p>	<p>Significant Impact : Compensation determination and distribution were impacted, home survey stalled. Stakeholder meetings at local levels are also affected by the restriction in the movement of people and vehicles.</p>
<p>Response to Covid-19 situation by projects</p>	<p>The project resumed activities maintaining health protocols: After several months of disruption during the lockdown, the</p>	<p>The project resumed activities adopting health protocols:  However, the project maintained government set health</p>	<p>The project resumed activities maintaining health protocols: Public meetings with stakeholders were limited and health pre-</p>	<p>The project resumed activities maintaining health protocols: The project resumed activities with</p>

	project resumed construction activities maintaining government set protocol.	protocols while resuming project activities.	cautions were maintained in the project sites.	limited human resources by maintaining health standards.
Communication with local stakeholders about the project before Co-vid-19	No virtual medium used: Public meetings, interactions, grievances collection and address through telephone, information officers, local liaison offices, information, mass media (mainly radio, newspapers) were major mediums to disseminate information to stakeholders.	No virtual medium used: The project used to engage stakeholders through mass media (mainly radio, newspapers), public meetings, phone, interactions, small meetings, social mobilizers, and notices at project sites. Office of the Investment Board Nepal (OIBN), which is a project facilitating agency, has been supporting stakeholder communication through public events, audiovisual, and print materials from the early stage of the project	No virtual medium used: Local radio, local online news, local publications, phone, email, mass media ( radio, newspapers) public meetings, social mobilizers were the main tools to communicate with local stakeholders.	No virtual medium used: Public meetings, interactions with locals, phones, public notices, and mass media ( radio, newspapers ) were used to communicate with local stakeholders.



<p>Stakeholder Communication Strategy</p>	<p>No communication strategy:  No communication policy is in place in the project.  The project has been conducting stakeholder communication as per needs and information are disseminated through the information officer</p>	<p>No communication strategy: The project itself has no communication policy. OIBN has been facilitating communication through its dedicated Stakeholder Communication and Policy Advocacy Unit (SEPA) Unit.  Communication management is directly controlled by the top management of the project.</p>	<p>No Communication strategy: The project has been conducting communication activities without any communication strategy</p>	<p>No Communication strategy  The project has not put in place the project communication strategy. Ministry of Energy also looks to support stakeholder communication for the project.</p>
<p>Communication tools during Co-vid-19</p>	<p>Changes in communication tools: Telephone, radio, letters, emails, virtual meetings (Zoom, Teams), and very few public meetings involving limited numbers of people The project has not devel-</p>	<p>Changes in communication tools:  Virtual meetings (Zoom, Team), phone, radios, limited numbers of public meetings  The project issued six press releases about project progress and events, but</p>	<p>Changes in communication tools: Telephone, radios, letters, emails, small meetings, virtual meetings  The project issued 17 public notices mostly about biddings, constructions, public share, and workplace</p>	<p>Changes in communication tools: Telephone, email, virtual tools, radio, public notices, small meetings.  The project released 36 public notices and two press releases were issued dur-</p>

	<p>oped any official website. However, the project has its own Facebook page.</p> <p>According to Facebook, the project issued five notices and news related to project introduction, tender, and compensation. ( Source: Project's Facebook page )</p>	<p>the dates of the press releases have not been mentioned. <a href="https://sapdc.com.np">https://sapdc.com.np</a></p>	<p>safetyin the project and work from home issues. <a href="https://utkhpl.org.np">https://utkhpl.org.np</a></p>	<p>ing the study period. Most of the public information was related to compensation. <a href="https://bghep.gov.np/en">https://bghep.gov.np/en</a></p>
Effective-ness ofCO-VID-time communication	<p>Effective: Telephone, e-mail, virtual meetings, small meetings, radios were found effectively used to communicate</p>	<p>Effective: Telephone, email, virtual meetings, small meetings, and radios were effective</p>	<p>Effective: Telephone, e-mail, virtual meetings, and radios were found effective</p>	<p>Effective: Mainly telephone, email, virtual meetings, public notices, and radios were found effective</p>
Space for improvement in Stakeholder Communication	<p>Communication Strategy: Stakeholder communication strategy, priority on modern technology to reach out to local people.</p>	<p>Communication Strategy:  In addition to modern digital tools, traditional tools should also be given</p>	<p>Communication Strategy: Methods of communicating with stakeholders should be revisited keeping in pace with technology and the demands of</p>	<p>Special mechanism for communication  Special mechanism and dedicated human resources planned</p>

		importance, and communication strategy is necessary	stakeholders. Communication strategy would support better communication with stakeholders	communication activities to enhance stakeholder communication
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**Use of Mediums before the Pandemic**

Projects have been isolated into the pre-development stage and development stage. Table shows that all ventures under concentrate on embraced no virtual medium to speak with nearby partners before the Coronavirus pandemic. Public gatherings, cooperations, complaints assortment and address through phone, data officials, neighborhood contact workplaces, social mobilizers, public notification, and broad communications (for the most part radio, papers) were significant mediums to disperse data to partners before the pandemic. Notwithstanding, public gatherings, cooperations, phone, broad communications (principally radio, papers) became significant mediums to spread data to partners before the pandemic. Every one of the four tasks utilized public gatherings, phone, and broad communications.

**No Communication Strategy**

All four projects are found not having any communication strategy to communicate with local stakeholders. It shows that projects are not conducting stakeholder communication activities in a planned manner. Whatever stakeholder activities are conducted by the projects, are only on a required basis.

**Communication during COVID Period**

Telephone, radio, letters, emails, virtual meetings, and small public meetings, public notices through websites were used for communicating with local stakeholders. Among the tools, virtual meetings were used for the first time by the projects. However, traditional mediums such as telephone conversations, radios, and regulated public meetings were also used to disseminate information or interact with local stakeholders.

**Effectiveness of Communication Tools during COVID Pandemic**

During the COVID, communication tools used by all the projects, including telephone, e-mail, virtual meetings, small meetings, radios were found effective

to disseminate the information to intended stakeholders in project districts. At a time when big public meetings were restricted, such tools were effective to engage the local stakeholders of all four projects.

### **Space for Improvement in Communication with Stakeholders**

Interviewees opined that there is ample space to improve communication with local stakeholders by the projects. All interviewees viewed that projects should develop a stakeholder communication strategy and give high priority to using modern technologies in communication to reach out to local people. In addition to modern digital tools, traditional tools should also be given importance, and the communication strategy is necessary.

## **Discussion**

### ***Impact of COVID-19 on the Projects***

Big projects including the four projects studied were impacted by the COVID-19 and consequent lockdown and travel restriction. The project which is operating in remote areas is most affected due to the absence of reliable communication channels. Covid-19 and subsequent travel restrictions further aggravated the communication activities of the projects. Interconnectedness, complexity, and the global nature of supply chains, and the workforce of the construction industry affect the cost and schedule of infrastructure projects during the COVID-19 pandemic (PWC, 2020). A study on the impact of COVID-19 in construction projects shows that 95 percent of organizations in Kuwait delayed construction as workers were unable to work at any time due to the pandemic and resulting government restrictions on travel (Alenezi, 2020).

### ***Use of Mediums Before the Pandemic***

Virtual medium is a newly applied method to communicate with local stakeholders amid the restriction on movements of people imposed during the peak time of the pandemic. To ensure wider access to the information means, the preference of targeted communities should be given priority in the process of designing communication and engagement plans targeting the COVID (Gallagher, 2020). However, projects were highly dependent on traditional mediums which are not internet-based. Generally, development projects use public meetings, interactions, telephone, mass media (mainly radio, newspapers) were major mediums to disseminate information to stakeholders before the pandemic. All four projects mainly used public meetings, telephone, and mass media were used by all the projects. The pandemic has immensely changed the lives of the people and challenged their assumptions in addition to altering the

way people interact and do business (Chueu, 2020). Chueu (2020) views that companies must communicate more to respond to the people on various issues by adopting new technology (Chueu, 2020).

Before the COVID-19 pandemic, the ILO estimated that 7.9 percent of the world's workforce (260 million workers) worked from home permanently (Berg, Bonnet, & Soares, 2020). Globally, among employees, 2.9% were working exclusively or mainly from their homes before the COVID-19 pandemic (Berg, Bonnet, & Soares, 2020).

### ***No Communication Strategy***

Communication strategy is necessary for open, two-way, result-driven and multi-channel communication with stakeholders and organizations need to incorporate effective communication strategies that will support better organizational performance (Kibe, 2014).

Projects were not prepared for communications to stakeholders during such pandemic. Hence, all four projects are found not to have any communication strategy to communicate with local stakeholders. Whatever stakeholder activities are conducted by the projects are carried out only on a need basis. During COVID pandemic, different organizations adopted stakeholder engagement or stakeholder communication plans with selected tools to maintain their relationship with the stakeholders providing them information sufficiently and transparently. The COVID-19 Strategic Preparedness and Response Project (SPRP) of the Central African Republic (CAR) developed Stakeholder Engagement Plan (SEP) tools to respond to its stakeholders to the COVID-19. Projects at a stage of active engagement with stakeholders need to formulate alternate plans, considering Covid-19 restrictions and social distancing norms (EBRD, 2020).

Various business and Non-governmental organizations across the globe have been developing communication management plans to respond to the crisis created by COVID-19. A company should designate a team to deal with employees and other stakeholders (such as media, investors, customers, suppliers, local government) to communicate about the company's situation (Keijzer, n.d.). Amid the growing global response towards the COVID-19, capital projects, infrastructure project owners and stakeholders are facing huge challenges that need to deal swiftly ([www.pwc.com](http://www.pwc.com), n.d.). Infrastructure projects are facing a host of problems depending on their stages (from conceptualization to implementation) during the COVID-19 and project developers need to have a good understanding of the situation and be better prepared to cope with it accordingly. Kibe (2014) concludes that communication strategies play a central role in the high performance of any organization.

**Communication Tools during COVID-19**

Among the tools used during COVID-19 time, virtual meetings were used by the projects for the first time. However, traditional mediums such as telephone conversations, radios, and regulated public meetings were arranged to reach out to local stakeholders. The lockdown is found to have created difficulty in the movement of project staff making them work from home (Jallow, Renukappa, & Suresh, 2020). As per the standard of International Finance Corporation (IFC), projects need to carry out stakeholder engagement activities complying with the health guidelines issued by authorized national and local authorities. Projects are necessary to provide information to relevant stakeholders on time, developing safe and effective COVID-19 stakeholder engagement, and grievance management is crucial (IFC, 2020). EBRD suggests alternative information disclosure and stakeholder engagement measures to cope with COVID-19 restrictions where projects are suggested to use leaflets, email campaigns, text messaging, traditional media (radio, TV, newspaper), engagement through local players (local governments, civil society organizations, worker organizations, signage (community notice boards, information panels in community and project site for information disclosure.

Radio announcements, mobile phones, and announcements on bulletin boards are the methods that can be used to provide specific information as well as to disseminate the various available channels of communication, and creating secure communications channels, such as encrypted apps, can provide safer communications (IFC, 2020). EBRD (2020) suggests surveys and questionnaires (telephone, online), online engagement, social media, website, radio call-in shows, and telephone engagement as the appropriate tools during the COVID-19 crisis.

However, not all activities can be carried out using alternative ways and some require physical engagements. New media tools or online tools may not be accessible for vulnerable groups who may be among the project-affected local people. During the crisis, messages should be disseminated through credible, accessible, and widely utilized channels rather than applying additional channels of communication (Norton, Venkateswaran, & MacClune, 2020). Short, medium, and long-term strategic and tactical action plans will form the foundation for organizations' approach to maintaining communication during the COVID-19 (www.pwc.com, n.d.). Monitoring communication updates, developing contingency plans to reach each audience, creating a communication plan reviewing audience needs, identifying stakeholders and their needs, necessary communication tools are also things to be considered during the COVID-19 (Keijzer, n.d.). Information and communication technology

(ICT) has offered the opportunity to the firms to arrange for their staff to work from home responding to the challenges to safeguard both health of people and economies. However, the potential for working from home varies across the world due to differences in occupational structure as well as the infrastructure available to help to work remotely (Berg, Bonnet, & Soares, 2020).

The rising expansion of internet service across the world has increased the use of a smartphone, supported the development of web-based new media websites, social networking sites; blogs, e-newsletter has reshaped the communication modality leading to Computer-Mediated Communication (CMC) in human communication (Oyeniran, Jayesimi, Ogundele, & Oyeniran, 2020). Generally, CMC includes email, discussion lists, bulletin boards, and conferencing. As government prioritizes its budget on COVID-19 responses, it would result in a deficit in investment in infrastructures (Deloitte Touche Tohmatsu, 2020a).

Communicators in any organization need to reconnect their stakeholders during the time of COVID when timely communication holds high significance (Chueu, 2020). Organizations are facing problems in how to effectively communicate with shareholders, employees, customers, suppliers, regulators, and other stakeholders, who determine the success and sustainability of business (Fowlstone, 2020). The 2019 KPMG Project Management Survey shows that 51 percent of organizations were using collaboration software to support project delivery where new technology and collaboration tools have helped alleviate some of the stakeholder engagement issues. The survey concludes that communication skills and the ability to creatively convey information to their stakeholders are vital for project success (KPMG, 2020).

Through the social distancing orders announced by the government are in place, restricting face-to-face meetings, events, and workshops, stakeholder communities still expect to secure their meaningful participation in the planning and delivery of projects that impact them (www.ghd.com, 2020). Hence, both public and private sector organizations are exploring digital means of stakeholder engagement (www.ghd.com, 2020). Though the COVID-19 crisis prevents staff from physically going to the site to conduct works, modern tools such as video chat and meetings via online platforms have proven to be most effective in communications with stakeholders (Jallow, Renukappa, & Suresh, 2020).

COVID-19 and lockdown have made it impossible to organize stakeholder engagements in the field by many development projects. Close to 18 percent of workers work in occupations and live in countries where working from home is feasible (ILO, 2020 a). However, the number of those working from home

in developed countries is higher than those living in poor countries where access to the internet and necessary gadgets are limited. About 13-23 percent of employees work from home depending on countries (ILO, 2020 a).

### **Changed Communication System during COVID-19**

Since the COVID-19 crisis is unpredicted and unprecedented, and so are its impacts. The development projects had not incorporated the emergency communication activities to deal with such pandemics under their regular communication plans. Hence, projects left the conventional way of engaging stakeholder communities and took up the tools that fit with the COVID-19 crisis, where all kinds of movement of people and vehicles are tightly restricted. The rapid application of collaboration tools has been vital to keep stakeholders engaged and to maintain the relevance of project activities (KPMG, 2020). Technology has changed the way we communicate in recent years (Tench & Yoemans, 2017). The covid-19 pandemic inflicted a negative impact on development projects across the world over the last several months. A myriad of projects operating in various countries are applying varied engagement activities different from those which were used in the normal time.

COVID-19 has forced many projects to take tough decisions regarding project communication shifting from comfortable traditional means of sharing information and interacting with the relevant ([www.sac-oac.ca](http://www.sac-oac.ca)). International organizations have developed different guidelines that specified the approaches of engagement for delivering project information to relevant stakeholders and collecting responses from them. To cope with the crisis, organizations should change their way of functioning and adopt better work practices (Cohen, 2020). However, there are myriad communication channels available with the advancement of technology. GHD, the world's leading professional company, has developed a Digital Community Engagement Toolkit that provides a detailed and multi-dimensional view of tools that can be used to communicate with stakeholders. The COVID-19 crisis set the ground for organizations to develop their community engagement and appropriate consultation tools for yours to come ([www.ghd.com](http://www.ghd.com), 2020).

Engagement with local communities ceased to take place and the project adopted digital tools to communicate project information to them (Jallow, Renukappa, & Suresh, 2020). The use of social media has grown impressively over a few years with the service and technologies of social media improving in such a way that they have become strong alternatives for traditional communication channels (Farha, 2015). Since crises can create an 'information void' and disrupt normal communication arrangements between organizations



their stakeholders, the organizations must address the situation by providing correct information otherwise wrong information will take space (Coombs T., 2007). Organizations use online media to cope with the situation of crisis that bar movement of people and vehicles. Online mediums can provide opportunities to reach out to the targeted stakeholders during the crisis period. At a time when sharing messages through traditional means of communication or consultation events are not possible, the online medium will be an appropriate solution to engage the stakeholders. Social media provide a solution that traditional communication channels cannot offer as the internet can be accessed through different technologies (Farha, 2015).

Business process outsourcing giant, Tata Consultancy Services, reported that around 85 percent of its 400,000 employees in India and elsewhere in the world were working from home as a result of lockdowns in India and other places (Financial Times, 2020). COVID-19 and lockdown have limited business activities around the world and companies have shifted to work Work-From-Home (WFH) approach to accommodate and run the business and services (Gamil & Alhagar, 2020). To deal with the COVID-19, many countries have allowed IFC client projects to change their modality for engaging communities and other stakeholders to maintain meaningful relationships with them (IFC, 2020).

The persistent lockdown has forced many development project staff to resort to working from home. However, their tasks and social events targeting local stakeholders are not completely disrupted because they are using alternative means based on the internet. The culture of working from home has gradually been increased over two decades. Due to COVID-19, infrastructure projects in the UK faced a challenge in traveling and working at regular workstations, and the staff was told to work from home unless travel is essential (Jallow, Renukappa, & Suresh, 2020). The practice of physically attending working place has been gradually losing its significance on the back of the advancement of greater application of information technology (Shahid & P, 2020).

### **Effectiveness of Communication Tools**

Not all communication tools were effective during the COVID-19 where large gatherings of people were restricted. Communication tools virtual meetings, telephone, e-mail, website announcements or notices, radios showed their effectiveness during such crisis. Selecting the right tools for your project and community needs are key to effective consultations (www.ghd.com, 2020). The key message of Digital Community Engagement is that since having the right strategy is key to effective engagement, it is important

to choose the right tools. At a time when in-person engagements are not feasible due to various restrictive measures enforced by the government to control the COVID-19, virtual technology or other alternative mediums is advisable. Internet-based virtual meetings, online postings, emails, and the online survey, as well as SMS feedback, SMS notice, and phone calls are some alternative mediums to maintain two-way communication with targeted stakeholders (Gallagher, 2020). However, each form of communication has the risk of excluding some groups from the engagement process due to the digital divide. In Uganda, civil society organizations utilize local radio, cultural leaders, and social media for effective and factual information and to control rumors about COVID-19 (Gallagher, 2020). The world turned to virtual engagements with people beginning to work from home and in-person business meetings were replaced by video calls (www.certara.com, 2020). A study shows 78% of surveyed companies have been providing customers and key stakeholders with online resources 25% were considering moving from print-based engagement material to mobile-based presentations, 64% of them responded positively about the effect of virtual meetings compared to regular face-to-face engagements (www.certara.com, 2020).

### **Communication with Stakeholders is a Dynamic Process**

Top managers of the projects see sufficient room to strengthen communication with local communities. Stakeholder communication can be made more effective through the development and enforcement of stakeholder communication strategy and the use of modern technology to effectively reach out to targeted stakeholders. Besides modern digital tools, traditional mediums (mainly radio, newspapers, public meetings) should also be given importance. Local radios and public meetings are found the most preferred mediums in rural areas in normal time (Ghimire, 2021).

Maintaining maximum honesty and authenticity during a crisis is a key principle of any effective communication and organizations should put in place a crisis management system that can be operated online round the clock (Fowlstone, 2020). Fowlstone (2020) further suggests a dedicated crisis management team should be employed during an abnormal situation.

COVID-19 pandemic has affected scheduled stakeholder and community engagement activities and has made face-to-face engagements not possible any-more during this time when physical distancing is imposed (www.beca.com, 2020). Digital engagement tools are desirable during this time of physical distancing and travel restriction. Meetings with the help of Skype, Zoom, and Microsoft Teams support continuing communication and engagement with stake-

holders during the pandemic, and such tools are also beneficial for reducing travel costs and time (www.beca.com, 2020).

## Conclusion

The Coronavirus pandemic has meaningfully altered the way and method for correspondence applied by the four hydropower projects covered by the review. The Coronavirus emergency constrained the tasks to embrace specialized devices that can be utilized to draw in project-impacted neighborhood individuals without actual contact. Virtual devices, for example, video conferencing, Microsoft Groups, Zooms, online entertainment as well as customary instruments, for example, radio, email, phone are viewed as serious areas of strength for the actual commitment devices like public gatherings, cooperations, conversations among others. Pandemic fundamentally altered the manner in which undertakings contact nearby networks during the emergency time-frame while get-together and voyaging are confined. However, no task under the review was found to have fostered a correspondence system or correspondence intend to speak with partners. This examination recommends that ventures ought to give high need to figure out correspondence technique or correspondence plan so they can be more ready for such emergencies for powerful correspondence with the designated networks.

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