# Evaluations under COVID-19: how the pandemic affected the evaluation of the performance of the Coastal Climate Resilient Infrastructure project in Bangladesh, and what we learned

*This article reflects on the experience of the Project Performance Evaluation of the Coastal Climate Resilient Infrastructure Project (CCRIP) in Bangladesh, conducted by the Independent Office of Evaluation of the International Fund for Agricultural Development (IFAD) during the height of the COVID-19 pandemic in 2020. It focuses on how the project's evaluation methodology and approach were adapted to the challenges and restrictions imposed by COVID-19. These included the use of remote interviews and GIS data and imagery to compensate for the ban on international and domestic travel. Thanks to the local networks of national team members, the evaluation team was able to reach out to local technical staff and project beneficiaries in project sites that could not be visited. They participated in interviews, took photographic images, and recorded short videos documenting the road and market infrastructure built by the project, which the evaluation used as vicarious observations. While 'traditional' approaches entailing field visits and the collaboration of national and international specialists remain the 'first-best' option, and while technology cannot substitute for field visits, this evaluation points to measures that can be taken to control for bias in data collection and analysis. However, an important caveat on the use of Geographic Information System (GIS) data and imagery is that CCRIP had a strong focus on infrastructure, making remote sensing suitable to assess the quality of construction and specific aspects of its use. The same may not apply to other types of projects or evaluative questions.*

*Roberto La Rovere, Sally E. Smith and Fabrizio Felloni, Independent Office of Evaluation of IFAD*

## Key Messages

- The COVID-19 pandemic pushed evaluators to adapt and innovate under challenging situations. It is important to reflect on these experiences to identify which approaches or methods used during the pandemic should become a normal part of evaluation practice in the future.
- Traditional evaluation approaches with in-person field visits have advantages over remote evaluations. When a remote evaluation is the only option, measures can be taken to control data collection and analysis bias.
- GIS data and other spatial data and imagery are useful for visually identifying and reviewing (rural) infrastructure quality and sustainability, particularly when used in tandem with remote interviews. For projects involving less identifiable physical features, or mostly socioeconomic interventions, they are less suitable.

## Introduction

Early in the COVID -19 pandemic, international organizations rushed to issue guidance notes to help evaluators manage the possible impacts on evaluation processes.[1] Among the first, the Independent Evaluation Group (IEG) of the World Bank identified several areas of concern,[2] including: (i) restricted access of evaluators to stakeholders for data collection at the institutional level; [3] (ii) constraints due to being unable to conduct on-site data collection, limiting the possibility to develop contextualized perspectives and to conduct inductive inquiry[4]; and (iii) a growing risk of bias in conducting remote data collection, with stakeholders interviews at local government and grassroots levels more difficult to plan (compared to those at the central government level; i.e., the "government bias"). According to IEG, such challenges indicated a need to improve what is feasible and find ways around what is not feasible, using caution in reaching out to informants, capitalizing on existing or less common data sources, and making greater use of desk reviews, GIS and spatial observations and geotagged data, and *big data*.[5]

IFAD's Independent Office of Evaluation (IOE) also issued guidance for its evaluators,[6] focusing on the strengths and weaknesses of different methods and tools that could be used when a field mission was not possible due to global restrictions on movements.[7] While the issues and solutions described in the guidance are not all new, for instance, as compared to emergency and humanitarian evaluations, for organizations like IFAD, they entailed the need for a significant shift in evaluation methodology.

This article aims to reflect on the "real life" experience of adapting an evaluation approach for the Project Performance Evaluation of the Coastal Climate Resilient Infrastructure Project (CCRIP) in Bangladesh that was conducted during the height of the first wave of the COVID-19 pandemic. ▶▶

- The article covers three areas:

- **How the approach to the evaluation of CCRIP was adapted** to deal with the challenges presented by COVID-19, particularly the use of remote interviews and GIS data and imagery to compensate for being unable to conduct a field mission.

- **How effective this approach was in the case of CCRIP**, including due to the unexpected prospect that arose from extreme climate events (a cyclone and then floods) that hit the area after the project closed and enabled a natural experiment to evaluate climate resilience.

- **What lessons are relevant for other evaluations** both during a time of pandemic and in "normal" times, including in relation to the need to maintain the quality and integrity of the evaluation process, while also containing costs.

## Context of the evaluation

CCRIP was implemented by the Local Government Engineering Department of the Government of Bangladesh from 2013 to 2019 and was co-financed by the International Fund for Agricultural Development (IFAD), the Asian Development Bank (ADB), and Kreditanstalt für Wiederaufbau (KfW). The project aimed to improve livelihoods for poor households in twelve coastal districts in southwest Bangladesh by building or rehabilitating climate-resilient roads and markets in economically disadvantaged rural areas highly vulnerable to natural disasters and climate change. CCRIP also aimed to pilot and establish ways to mainstream climate resilience in rural infrastructure.

IOE's project performance evaluation of CCRIP focused on project activities and performance pertaining to IFAD funding and supervision. The evaluation sought to determine whether CCRIP's goal and objectives were effectively achieved - and in the manner anticipated – to identify lessons and recommendations for IFAD programs and operations going forward. Using a theory of change and contribution analysis approach, the evaluation aimed to validate and build upon the results presented in project documentation and in an impact assessment carried out by IFAD in 2018,[8] by triangulating data from various sources.

**Adapting the approach to the evolving context of the COVID-19 pandemic**. The project evaluation took place during what later became the worst phase of the pandemic in Bangladesh.[9] Preparations started in February 2020, with a field mission planned to take place in March 2020. The worsening situation and the emerging safety and ethical concerns arising from the health crisis[10] led to repeated postponements of the field mission. This demanded a continuous shift in the "business as usual" approach, followed by various alternative plans, up to the final plan implemented in mid-2020. The main changes to the approach, costs and process are summarized in Table 1. The key methodological changes are explored in more detail in the next section of the paper.

## Key methodological aspects of the revised evaluation approach

Three main changes were made to the evaluation approach because of the COVID-19 pandemic:

I. The in-person field mission, initially planned to be carried out by two international consultants supported by one national consultant, was substituted by a remote field mission by an enlarged team of four national consultants, coordinated and supervised by the international consultants;

II. Data collection and validations were done remotely by the international and national consultants, using a ▶▶

**Table 1:** Changes from the "business-as-usual" plan (February 2020) to the final plan (July 2020)

| Evaluation approach | Initial – before the pandemic started | Final – after the pandemic took hold |
|---|---|---|
| **Methodology** | | |
| **Methods and data** | Desk review of project documentation, M&E data, secondary data; in-person data collection and validation at central and local levels. | More in-depth desk review; remote data collection and validation (central, local level); use of spatial/GIS data and imagery/videos to assess infrastructure quality and performance. |
| **Sampling of communities for field visit** | Sampling based on location remoteness, climate vulnerability, infrastructure type, frequency of previous mission visits. | Additional selection criterion: area affected by Cyclone Amphan (to evaluate climate resilience of infrastructure) |
| **International and national consultants and resource persons** | | |
| **Number, type and role of international consultants** | Two consultants:<br>▮ Evaluation and livelihoods<br>▮ Poverty reduction<br>▮ Gender | Unchanged: Two consultants, but much more time spent on adapting the approach, on desk review, and supporting national consultants.<br>Senior independent advisor from Bangladesh hired to strengthen the peer review process. |
| **Number, type and role of the national consultants** | One consultant:<br>▮ Livelihoods<br>▮ Climate change<br>▮ Gender<br>▮ Overall facilitation | Four consultants:<br>▮ Livelihoods, climate change, gender<br>▮ GIS/spatial data, imagery and tools<br>▮ Infrastructure (independent engineer)<br>▮ Facilitation of evaluation process |
| **Evaluation costs** | | |
| **Travel costs** | International flights and local travel and subsistence for two consultants | Mission canceled |
| **International consultants** | Cost for two consultants | Additional cost for an independent external advisor to act as quality control reviewer |
| **National consultants** | Cost for one consultant | Cost for original consultant increased; new costs for additional three consultants |
| **Total evaluation cost** | | Estimated by IEO at 10-12% higher overall |
| **International consultants** | Standard workload for project evaluations | Workload increased by 20-30% |
| **National counterparts** | National counterparts' workload | Decreased as did not need to coordinate and accompany field mission |
| **Overall process and duration** | | |
| Duration of evaluation | Original plan: February to August 2020 | Revised: February to November 2020 |

- complex arrangement of internet-based and mobile communications; and

III. Extensive use was made of GIS data and satellite and digital imagery to evaluate the performance, quality, and sustainability of CCRIP infrastructure.

An additional change was made as a result of a major cyclone–Cyclone Amphan–and of heavy flooding that affected some project districts in May and June 2020 (see Box 1). The evaluation team had planned to select locations for field data collection, based primarily on climate vulnerability and remoteness of the location, the type of infrastructure the project had constructed, and several past visits by IFAD or other missions. Although far from welcome, the cyclone and flooding presented an opportunity to evaluate how well CCRIP infrastructure had coped with the type of extreme weather that it was supposedly designed to withstand. ▶▶

As the first stage of sampling, the evaluation selected two out of the twelve project districts (Satkhira and Khulna) as they had been most affected by the cyclone. A third district that was affected by heavy flooding but not the cyclone (Shariatpur) was also selected. Three communities with IFAD-funded road and market improvements were then selected to represent diverse geophysical and socioeconomic characteristics for each district. In total, nine locations were selected and classified according to the type of community market and connecting road, vulnerability to climate impacts, and spatial location, with their latitude and longitude at Map and Picture level applied on Google Earth Imagery (see Figure 1).

After an extensive desk review of available data and information, the team of international and national consultants interviewed a wide range of stakeholders and key informants at central, regional, district, and village levels.[12] Given that internal travels were not authorized for health reasons, interviews were carried out mostly via Zoom, Skype, and WhatsApp, in line with interviewees' preferences, with phone and video calls sometimes used for community-level stakeholders. For the latter, a snowball sampling approach was applied, in which respondents provided contact details for subsequent people to interview in the selected locations. In addition, photographs and videos of CCRIP infrastructure were taken by local contacts of the evaluators to complement the GIS data and satellite imagery that was acquired from secondary sources.[13]This allowed a *before* and *after* CCRIP, and *before* and *after* cyclone Amphan, visual assessment (see Figure 2), and the technical review of infrastructure quality (see Figure 3) by the consultant engineer.

Lastly, the team hired an independent external reviewer who had conducted a country-level evaluation in Bangladesh for IFAD in 2014 and knew the country and project implementation context. This provided an additional 'reality check' to the validity of the evaluation process and findings.

## Lessons learned from the CCRIP evaluation approach

Reflecting upon the experience of the CCRIP evaluation, several important lessons are emerging.

### Lessons learned from remote interviews and data collection

The remote approach allowed interviews to be conducted with stakeholders and key informants, while complying with a fundamental ethical principle for evaluations during the pandemic: cause no harm to evaluators or to informants. As a result, almost all categories of informants were reached, and many interviews were conducted (75 in total, of whom 41 were beneficiaries). Still, there was somewhat less access to independent informants than in a "normal" evaluation, with a tendency to reach more informants at the government level (i.e. the anticipated "government bias").

### Box 1. Impacts of extreme climate and weather events after CCRIP ended: a natural experiment

On 20 May 2020, Cyclone Amphan made landfall in southwest Bangladesh, bringing 150 km/h winds and causing the deaths of 26 people and damage to housing, infrastructure, and farms[11]. Most affected were the coastal regions of Satkhira and Khulna, both being CCRIP regions. A few weeks later, severe floods unrelated to the Amphan cyclone, which mainly hit other Bangladesh areas, also affected some parts of CCRIP areas. This provided an opportunity to assess the quality of CCRIP-built infrastructure and the resilience and sustainability of infrastructure to climate events in some project districts. It represented an opportunistic (initially unforeseen) natural experiment.

The use of snowball sampling for selecting informants at the community-level, which was the only practical option available, inevitably introduced the possibility of selection bias, although it must be acknowledged that evaluators often (i.e., even under 'normal conditions') do not have complete control over who is interviewed during field visits that are organized by project implementers. Moreover, the evaluators were able to draw on reliable secondary information on community-level impacts from an IFAD's impact study that involved rigorous sampling and data analysis methods.

The remote approach meant that it was somewhat more difficult to probe and triangulate information. This was partly because interviews at central and regional levels were conducted mainly by international consultants (in English), while interviews at district and community levels were conducted mainly by national consultants (in Bengali). However, the potential disjuncture this caused was greatly reduced by having a detailed evaluation framework and unified reporting structure.

Another limitation was that international consultants had no opportunity to interact directly with poorer, marginalized, and less educated groups or use observation techniques. This mainly concerned the poor and vulnerable women contracted for infrastructure construction and other beneficiary groups such as farmers and market traders, making it more challenging to assess gender dynamics and the relationships between stakeholder groups. This constraint was only partially offset by involving a national consultant with expertise in gender and social inclusion and experience working in the project area. There is also a risk that the remote modality, as opposed to face-to-face visits, could have affected the trust and willingness of informants to be open and honest, but the quality of information gathered suggests that this was not a major problem.

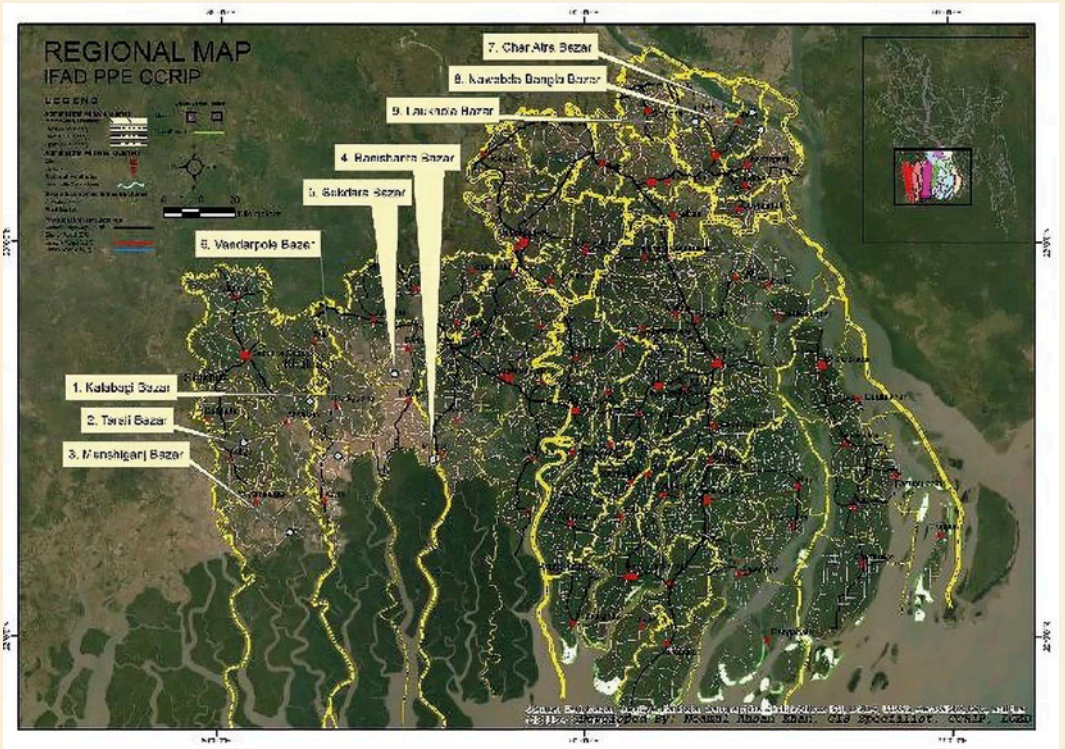
An additional challenge was that, because of the pandemic, some informants, especially at the government level, were extremely busy and not easy to reach for interviews. In a few cases, they had contracted COVID-19. The health of family members of some national consultants was also affected by the pandemic, further affecting the evaluation process. This raised the need for tact, flexibility, patience, and time from all sides. On the other hand, the remote process freed up the time that evaluators would have spent on travel, including time spent in Dhaka's notoriously heavy traffic, while driving to meet informants.

**Lessons learned from the use of spatial data and imagery**

The collection of GIS and spatial data and imagery on infrastructure (roads, markets), and the geo-referencing to the selected field locations, was one of the main innovations. It allowed a systematic visual technical assessment by the consultant engineer, which was then further validated by interviews with local people and engineers. One challenge was the difficulty to access maps and images that were precisely comparable in terms of the dates they referred to since the approach had to be to a certain extent opportunistic, i.e. sometimes comparing maps that differed by days or weeks. Yet the essential "before and after the project" and "*before and after the extreme weather events of mid-2020*" comparisons could be conducted.

The quality of the GIS/spatial data and imagery was also sometimes a limitation. Indeed, in some cases, the quality of the images and maps was poor, with low resolution, and some natural phenomena limiting visibility affected the images available. However, in most communities, particularly when the images were of lower quality, additional pictures and videos were taken around the observed project market and road infrastructure to allow additional infrastructure review. Here the evaluation benefited from the collaboration of local contacts of

**Figure 1:** Geo-location of the nine markets selected for the CCRIP data collection: Southwestern districts and the selected communities and infrastructure were in the path of Cyclone Amphan, May 2020.




Source: https://public.wmo.int/en/media/news/cyclone-amphan-highlights-value-of-multi-hazard-early-warnings

▶ the national consultants-either local engineers or other people-who could simply visit the infrastructure then take and send back imagery and videos using their mobile phones.

**Lessons learned on the evaluation process**

From a process management point of view, the evaluation needed not to overburden the IFAD country office or national partners at a time of considerable stress for them. The evaluation being conducted remotely, without a field mission, was positive in this respect, although the evaluation still required considerable administrative input on the part of IFAD at headquarters and at the country office, particularly during the initial period when the approach was being constantly revised. The amount of information and other support from government counterparts was still significant, but they were relieved of the responsibility of setting up and accompanying a field mission.

The organization of interviews with national partners and institutional informants based in Bangladesh was made possible by hiring a national resource person who had former exposure to the project and already knew many relevant people (i.e., involved in the IFAD impact study). The GIS consultant was also familiar with CCRIP from former work with the project, which eased the process, but also meant he could not be involved in data analysis to ensure impartiality. However, the international consultants' supervision and coordination remained essential at all stages of the process, and their role was fundamental in analyzing and contextualizing the evidence from all sources. The cost of hiring additional national consultants ▶▶

**Figure 2:** Example of using satellite imagery to assess infrastructure quality and performance before/after CCRIP and before/after Cyclone Amphan (Tarali Bazar, Kaliganj, Satkhira)


Image 1: Before CCRIP


Image 2: After CCRIP, before Cyclone Amphan

Image 3: After Cyclone Amphan

and a national resource person for organizing interviews was offset by savings on international travels with the total costs of the evaluation in line with IOE standards for project-level evaluations.

## Conclusions and lessons from the experience

The COVID-19 pandemic has forced evaluators to adapt, innovate and learn, and some of the approaches and methods that have been used will likely become a normal part of evaluation practice in the future. The experience with the CCRIP evaluation suggests a cautionary message regarding conducting evaluations entirely remotely, whether during the COVID-19 pandemic or under other circumstances. There is no perfect substitute for traditional evaluation approaches with an in-person field mission, both in terms of methodological rigor with key advantages remaining, a lower risk of bias, greater ability to reach all categories of informants, and easier ability to probe and use observation techniques for inductive inquiry. Although remote approaches most likely reduce the time to complete work, these approaches are not necessarily faster and less costly than traditional ones.

Notwithstanding, in this evaluation and in other cases, a remote evaluation may be the only viable option. In such a case, a strategy to arrive at a comprehensive and relatively nuanced set of findings and recommendations could include the following elements:

- A team of national consultants with complementary skill sets, and a local facilitator to arrange remote interviews, with international consultants coordinating the overall analysis;
- A plan to carry out interviews using a mix of internet-based, mobile, and traditional communication channels, with a detailed evaluation matrix and reporting structure to guide data collection;

**Figure 3: Example of spatial data and imagery collected for the evaluation of CCRIP-built infrastructure**

| | |
|---|---|
| Name of infrastructure | Tarali Bazar Market (Special Market), Kaliganj, Satkhira |
| Name of Connecting Road | 1. East Trali UZR - Kashibati GPS Road (ID 4017)<br>2. Jafourpur - Tetulia Via Nonamath Road (ID 5276) |
| District | Satkhira, Upazila, Shyamnagar |
| Geographic location | Latitude: 22°29'48.9"N — Longitude: 89° 4'11.51"E |
| Time Change Detection | |
|  |  |
| Photo image 1: Market (22 August, 2020) | Photo image 2: Market Connecting Road |
|  |  |
| Satellite imagery 1:4 June 2013 (Before CCRIP) | Satellite imagery 2: 17 March 2019 (After CCRIP) |

- Ensuring there is a good use of existing information and secondary data (including a household impact study), and expanding data collection to GIS data, imagery, and videos in the selected field districts; and
- Opportunistically, taking advantage of extreme climate events to evaluate climate resilience.

However, the applicability of this approach would have been more problematic if the impact study had not been available and if fewer M&E data could be found. A direct field inquiry would have been needed to gather more, different and unbiased data in project communities. It should also be noted that this evaluation was for a project partially focused on building or rehabilitating rural infrastructure, for which GIS or spatial data were particularly useful and appropriate for visually identifying and reviewing infrastructure quality and sustainability. If the project had involved infrastructure with less identifiable spatial features than roads and markets, or if the project had invested in socioeconomic interventions, the use of GIS/spatial data methods and tools is likely to have been less relevant.

Nevertheless, the application of these practices can help strengthen other remote evaluations during the COVID-19 pandemic and in different situations when a remote evaluation is the only feasible option. eVALU

## References

Vaessen, J., Raimondo, E., Branco, M. (2020): Conducting evaluations in times of covid-19: blog, April 9, 2020, IEG/The World Bank.

FAO OED (2020). Guidelines Series Risk analysis and guidance for management and conduct of evaluation during international and national level covid-19 crisis and restrictions.

IEO/GEF (2020). Lessons for covid-19 from GEF IEO Evaluations.

IED/ADB (2020). Evaluation Resources for covid-19 Response: Learning from past lessons to address the present crisis.

IEO/UNDP and OECD/DAC (2020) Evalnet Joint Guidance Note for Evaluation Units: Good Practices During covid-19.

IEO/UNDP (2020). Evaluation Guidelines, Evaluations during covid-19.

IOE, IFAD (2020). Alternative methods for data collection during the pandemic: IOE's response to covid-19. May 2020.

## Endnotes

1. E.g. FAO (www.fao.org/3/ca8796en/ca8796en.pdf), Asian Development Bank (www.adb.org/site/evaluation/evaluations/covid-19-response), Global Environment Facility (https://www.gefieo.org/news/covid-19-ieo-respose) and UNDP (http://web.undp.org/evaluation/guideline/covid19.shtml , http://web.undp.org/evaluation/media-centre/infographics/evaluation_covid19.shtml).

2. IEG/The World Bank, 2020, Vaessen, J., Raimondo, E., Branco, M. (http://ieg.worldbank.org/blog/conducting-evaluations-times-covid-19-coronavirus), and https://ieg.worldbankgroup.org/blog/adapting-evaluation-designs-times-covid-19-coronavirus-four-questions-guide-decisions (April 2020)

3. Due to travel restrictions, limited institutional access or "lockdowns", with evaluators needing to rely on opportunistic sampling, which is however prone to selection bias.

4. Tele conferencing was a partial solution being also prone to bias especially for interviews on complex or sensitive topics.

5. Options suggested by IEG include: front loading desk reviews, strengthening theory-based content analysis, using text analytics with machine learning, making more use of data from social media, and spatial data, http://ieg.worldbankgroup.org/blog/when-evaluators-cannot-make-it-field-they-can-always-observe-space ; http://ieg.worldbankgroup.org/blog/why-evaluators-should-embrace-use-geospatial-data-during-covid-19-coronavirus-and-beyond (additional blogs published in December 2020)

6. IOE, IFAD, 2020 (https://www.ifad.org/documents/38714182/42217951/LearningNote_Covid19_forweb2.pdf/98f22bb0-6c22-16c3-c54b-4f09b4f0fdcd?t=1610977391000).

7. E.g. Leveraging the content of existing documents, new technologies and sources of data, by harnessing and analysis of project documents, M&E data, subnational data from others active in same areas, impact assessments, satellite images; online or virtual interviews and surveys and – if possible – field visits by local consultants and a short validation mission in a later point in time.

8. Including quantitative data from IFAD's results and impact management system (RIMS) and project M&E; baseline, endline, and thematic studies by CCRIP; project documents: supervision reports, Mid Term Review, the Project Completion Report (PCR); basic GIS maps developed by the project; and secondary data and relevant academic studies. The project could also count on a full impact assessment study conducted by IFAD's Research and Impact Assessment division (RIA) and published in 2019.

9. For reference to covid-19 data in Bangladesh: https://covid19.who.int/region/searo/country/bd

10. These included: (i) increasingly stringent restrictions on international and in-country travel; (ii) the need to follow social distancing guidelines; (iii) a reduced availability of stakeholders or key informants for interviews; (iv) financial or psychological stress that many people were likely to be experiencing; and (v) possible sampling bias deriving from these issues.

11. According to the 23 May 2020 Situation Report of the International Federation of the Red Cross, see: https://reliefweb.int/report/bangladesh/bangladesh-cyclone-amphan-operation-update-report-dref-operation-n-mdrbd024 .

12. Including government agencies, local government representatives and engineers, former project staff, IFAD country staff, co-financing agencies, partner organizations, research institutes, market management committees, and various beneficiary groups.

13. The evaluation collected a total of 103 relevant images and 11 videos of CCRIP infrastructure, several maps and aerial images.

# Authors' profile

**Roberto La Rovere** is an evaluation professional with a passion for global development, environment, sustainability, climate, and research for development and policy. Over two decades, he has worked on assessments, evaluation, M&E at CGIAR centers in Africa, Syria, and Mexico, at UNDP's Evaluation Office, and more recently at the Green Climate Fund in climate finance. His early research interests resulted in him publish about one hundred papers, half of which are peer-reviewed. Roberto has a Ph.D. and M.Sc. from Bologna University, an M.Sc. in Development Economics from Wageningen University, and training from Yale, UNITAR, IPDET, and Dale Carnegie. In 2020, he was a senior evaluation consultant at IFAD. His work and living experience covers several countries in Africa, Latin America, the Middle East and Mediterranean, and Korea and East Asia. Roberto is fluent in English, Spanish, French and speaks colloquial Arabic.

**Sally E. Smith** is a senior-level researcher and consultant specializing in evaluation and impact assessment, rural development and sustainable agriculture, gender equality and women's empowerment in market systems, sustainability standards, and corporate responsibility. Formerly a researcher at the Institute of Development Studies, University of Sussex, she has published widely and has carried out evaluations and studies in over 20 countries for research and policy institutes, UN agencies, INGOs, standards organizations, and private companies. Recent assignments include: corporate and project level evaluations with IFAD's Independent Office of Evaluation; research on gender-responsive standards and trade for UNECE and ICTSD; and living wage and living income studies for the Global Living Wage Coalition.

**Fabrizio Felloni** is Deputy Director of the Independent Office of Evaluation of IFAD (Rome); he was previously a Lead Evaluation Officer at IFAD, Evaluation Specialist at the Independent Evaluation Office of the United Nations Development Programme (New York). He has worked on international development evaluations since 2000, leading and participating in corporate-level, country program, and project-level evaluations in Africa, Asia, Latin America, and Eastern Europe. Fabrizio holds a master's degree in Agricultural Economics from Washington State University (USA) and a Master-equivalent degree in Social and Economic Sciences from Bocconi University (Italy). He has been the author and co-author of several articles published in peer-reviewed journals in English, French, and Spanish.