



**Feasibility Study for a
Slum Fire Micro-Insurance Scheme in
Dhaka, Bangladesh**

Terms of Reference

Urban Slum Fire Readiness Project

**Version Date: 23 March 2019
Final version**

Project Details

Project Name : Urban Slum Fire Readiness Project
Project Number : B208048
Country and district(s) : Dhaka, Bangladesh
Start and End date of Project : *June 2017 to June 2019*
Date Baseline data completed : January 2018

Source of funding: : **Google Foundation via Tides Foundation**

Estimated Beneficiaries (Direct)

Total Households: : **3300**

Total people: : **30000**

Men: : **9557**

Women: : **9258**

Girls: : **4557**

Boys: : **4139**

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Terms of Reference Approval:

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Date Approved: 22 March 2019

Approved at WV
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Date Approved: 22 March 2019

i. Acknowledgements

The Terms of Reference for this evaluation was drafted by the Urban Slum Fire Readiness Project Team of World Vision Bangladesh in consultation with the project and programme field teams. The content is based on review of the project design in accordance with World Vision's LEAP requirements.

The parties that contributed to the preparation of this document are: Support Office, NO GAM and Regional DME team.

ii. Affirmation

Except as acknowledged by the references in this paper to other authors and publications, the evaluation TOR described herein consists of our own work, undertaken to describe and advance learning that will guide project implementation, as part of the requirements of World Vision's 'LEAP' Design, Monitoring and Evaluation Learning System.

Primary quantitative and qualitative data collected throughout the evaluation process will remain the property of the communities and families described in this document. Information and data must be used only with their consent.

Project Manager, Urban Slum Fire Readiness Project

World Vision Bangladesh

22 March 2019

iii. Glossary

A&D	Assessment and Design
A P	Area Programme
BFSCD	Bangladesh Fire Service and Civil Defence
CER	Central Eastern Region
CFRT	Community Fire Response Team
DNCC	Dhaka North City Corporation
DME	Design, Monitoring and Evaluation
FGD	Focus Group Discussion
GO	Government Organization
INGO	International Non-Governmental Organization
KII	Key Informant Interview
PWD	Person Living With a Disability
LEAP	Learning through Evaluation with Accountability and Planning
LFS	Local Fire Stations
NO	National Office
PBAS	Partnership Budget and Actual System
SO	Support Office
TOR	Terms of Reference
USFRP	Urban Slum Fire readiness Project
WVA	World Vision Australia
WVB	World Vision Bangladesh
WVI	World Vision International

Project Background

Dhaka is the most densely populated city of the world with 1,730 people living in per square kilometer (Dhaka Times, July 4, 2017). In Dhaka, Bangladesh, over 4,500 houses have been destroyed and 22 people killed due to accidental/incidental slum fires since 2010. As many as 2,379,444 people live in 13,935 slums in Bangladesh with the high risk of fire vulnerability (Information Source: Slum Census, 2014). According to Bangladesh Fire Service and Civil Defence (BFSCD), eight devastating fire incidents took place in slum areas of Dhaka City from January to October in 2017, causing damage worth of \$4267 economic losses. In many cases, slum fires are not reported and therefore these figures can be considered conservative. Unplanned city growth and poor infrastructure make it challenging for relevant authorities to respond and manage urban slum fires. Fires particularly in slums are common because of the typically flammable building materials in slums, (timber, bamboo, etc) fires ignite and spread easily, especially during the dry season (March-May). It is also noted that because of the high population density, firefighting and evacuation are very difficult and it is common for slum dwellers to lose household assets and belongings, an adversity that the poor are ill-prepared to deal with. Conventional smoke detectors are not suitable in slum environments due to the smoke generated by cooking, businesses and burning litter. Therefore, up until now slum fire risk reduction activities have focused on behaviour change, emergency planning, and risk minimization in Bangladesh. Till date there have been no suitable early warning systems that enable a rapid communitywide response. Overcoming this limitation, Urban Slum Fire Readiness Project uses an innovative system (particularly designed for the slum) of radio networked heat-sensing fire detectors (named Lumkani) to provide accurate and timely warning of slum fires enabling an informed and rapid response from community fire response teams. With this consequence project has initially installed 3,100 version-3 Lumkani detectors in Kallyanpur and Korail. However, after installation of Lumkani version-3 the project faced a significant challenge. Specifically, the Lumkani version-3 fire detector was subject to untimely/ spurious triggering, suspected to be caused by a combination of humidity levels and a manufacturing weakness. Considering the limited timeframe remaining on the project to remedy this situation 940 latest version-4 Lumkani devices were re-installed in Korail Slum, in an effort to improve the outcome in terms of early warning system. In total 3,046 Lumkani fire detectors were installed to protect about 2,500 household members in the targeted slums of Dhaka city. Community fire response team members have also been trained by Bangladesh Fire Service and Civil Defence (BFSCD) on Search, Rescue, Fire Fighting and First Aid and were also equipped with basic fire containment equipment so they are now capable to respond immediately after any fire incident.

Project Logframe objectives and Indicators

The objectives of the project are:

Project Goal: Reduction in loss of housing due to fire incidence for 30,000 people living in targeted slums in Dhaka, Bangladesh.

Outcome 1: Slum fire early warning system strengthened

Outcome 2: Improved capacity of Community Fire Response Teams to prevent and contain the spread of slum fires

Outcome 3: Target communities have increased awareness on fire risk reduction

Outcome 4: Slum fire micro-insurance business model field validated and contextualized for Bangladesh

Outcome 5: Learnings from the project are documented and shared with stakeholders

Goal, outcomes, intermediate outcomes and outputs' indicators:

Goal	Reduction in loss of housing due to fire incidence for 30,000 people living in targeted slums in Dhaka, Bangladesh.	G.1	% reduction in loss of housing from slum fires
		G.2	Number of houses affected by fire in the past 24 months
		G.3	% of respondents feeling that their community is better prepared to fire incident
I	Slum fire early warning system strengthened	I.a	# of detected fires which are limited to the house of origin
		I.b	Average # of houses damaged during each fire incident
		I.c	Average time between fire incident and response
I.1	3,300 households have Lumkani fire detectors installed and functional	I.1.a	# of households equipped with functional Lumkani fire detectors
		I.1.b	% of households equipped with functional Lumkani fire detectors
I.2	3,300 households have knowledge and skills to use and maintain Lumkani fire detectors.	I.2.a	# of households that know how to use Lumkani fire detector
I.3	Local Fire Stations have increased capacity in early warning system for fire incident	I.3.a	% of trained LFS members with acceptable knowledge on Lumkani fire detector system
2	Improved capacity of Community Fire Response Teams to prevent and contain the spread of slum fires	2.a	# Fire incidents where Community Fire Response Teams responded properly
		2.b	% of trained CFRT members feeling confident in their capacity to respond to fire incident

		2.c	% of target community members feeling confident in the capacity of their Local Fire Response Team to respond to fire incident
2.1	CFRT members have improved skills and knowledge in fire risk management	2.1.a	% of trained CFRT members with acceptable knowledge and skills in search, rescue, firefighting and first aid
2.2	CFRT are provided with fire containment equipment	2.2.a	# of CFRT donated fire containment equipment
		2.2.b	# of CFRT equipped with functional, full fire containment equipment at project end
3	Target communities have increased awareness on fire risk reduction	3.a	% of respondents prepared to fire incident
		3.b	% of respondents aware of basic steps to protect life and assets during fire incident
		3.c	% of respondents aware of proper fire incident response actions
4	Slum fire micro-insurance business model field validated and contextualised for Bangladesh	4.a	# of micro-insurance business model field validated by insurance companies and target HHs
4.1	Slum fire micro-insurance concept developed	4.1.a	# of micro-insurance concept developed
5	Learnings from the project are documented and shared with stakeholders	5.a	# of stakeholders participating in project Inception and Phaseout workshops
		5.b	# of alarm events per month reported, investigated and explained

The full version of the project Logframe and micro insurance research plan will be shared with the selected consultant after signature of the contract.

Support Provide by NO to the Study

World Vision Bangladesh National Office will provide the consultant with the following support:

1. Provide relevant documents
2. Give information about the Project working area, community, beneficiary etc.
3. Follow up evaluation process to collect quality data as per indicators keeping close communication with the consulting firm
4. Review and give feedback on the inception plan (including evaluation methodology, timeframe and data collection tools) and draft reports
5. Coordinate with World Vision Australia Support Office & other project stakeholders and incorporate their feedback
6. Effect payments based on agreed terms

I. Introduction

World Vision Bangladesh (WVB) is a Christian relief, development and advocacy organization that tackles the root causes of poverty and injustice to empower children, families and their communities to reach their full potential. World Vision began operating in Bangladesh in 1972 as a relief organization, and over the years has evolved to deliver multifaceted development interventions in health, nutrition, livelihoods and protection. World Vision operates in 27 districts across Bangladesh and is guided by four strategic priorities including: (1) Improved health and nutrition status of mothers and children; (2) Improved access and quality of education; (3) Strengthened child protection systems; (4) Increased community resilience.

Slum fires are a constant risk to the lives, homes, and livelihoods of the world's 800 million slum dwellers. According to the Bangladesh Fire Service and Civil Defense (BFSD) there have been nine major fire incidents in slums in Dhaka since January 2017, the largest fire incident happened in Mirpur area in March 2018 which destroyed 8,000 homes leaving 25,000 people homeless.

In early 2017, World Vision received funding from Google under the Google Australia Impact Challenge to:

- Pilot Lumkani (www.lumkani.com) device, an innovative fire detection and early warning system, has already installed in 3,100 households in two slums in Dhaka, Bangladesh;
- Develop a slum fire micro-insurance concept for Bangladesh that incorporates the fire detection and early warning system.

The Lumkani fire detection and early warning system:

- Uses rate-of-rise of temperature technology to accurately measure the incidence of dangerous fires;
- Is networked within a 60-metre radius so that in the event of a fire all devices in this range will ring together, enabling a community-wide response to the danger;
- Connects to smart centralized devices, which constantly check the health of the system and in the event of fire, stores GPS coordinates and simultaneously sends text-message warnings to members of the affected community.

With the funding from Google, World Vision and Lumkani based in South Africa have partnered with the Dhaka North City Corporation and Bangladesh Fire Service and Civil Defense to build the capacity of local fire response teams and install fire detectors in more than 3,100 homes across two slum areas. The project now wishes to undertake a feasibility study for slum fire micro-insurance in Bangladesh to incorporate the Lumkani fire detection and warning system

Guidelines

The Terms of Reference represents the requirements for an open and competitive process. Any proposals received after the due date and time will not be considered. All proposals must be signed by the submitting individual or by an official representative of the submitting company.

If the individual / organization submitting a proposal must outsource or contract any work to meet the requirements contained herein, this must be clearly stated in the proposal. Additionally, all costs included in proposals must be all-inclusive to include any outsourced or contracted work. Any proposals which call for outsourcing or contracting work must include a name and description of the individuals / organizations being contracted. All costs must be itemized to include an explanation of all fees and costs.

Contract terms and conditions will be negotiated upon selection of the winning bidder. All contractual terms and conditions will be subject to review by World Vision and will include scope, budget, schedule, and other necessary items pertaining to the project.

2. Overall Objectives of the consultancy

1. To determine the market opportunity including the size, locations, dynamics and needs of customers for fire micro-insurance in high density urban slums in Bangladesh that incorporates the early fire detection
2. To identify product and distribution opportunities for financial service providers to develop, pilot, and scale innovative fire micro-insurance products that meet the financial needs of low-income households on a commercially sustainable

Specific objectives:

1. Map and identify possible scope from insurance companies (policy, approach, challenges and opportunities) for providing fire insurance to slum dwellers to cover their loss due to accidental fire
2. To propose a product concept, premium pricing, potential partners and other aspects of a business model for wider country-wide expansion of the USFRP Explore the demand, challenges, capacity and opportunities from the slum dwellers for micro-insurance for reducing fire risks
3. Explore the opportunities, challenges, and way forward of initiation of slum fire insurance and similar effort in Dhaka and outside of Dhaka by other organizations
4. Determine the gaps between demand (capability from the slum dwellers) and supply side (capability from the insurance companies)

3. Scope of Work

- **Supply Side analysis: Will analyze the scope from supply side (insurance companies and similar past initiatives from the relevant stakeholders)**
 - o Include:
 - Analysis of Bangladesh insurance market, including a general overview, penetration levels, and the micro-insurance market;
 - Analysis of micro-insurance distributors and aggregators and potential to provide fire micro-insurance that includes major banks, microfinance institutions, savings and credit cooperatives, mobile network operators, NGOs and civil society organizations, and real estate(builders/developers) organizations.
 - Analysis of micro-insurance products being offered in slum and low-income areas and how these are distributed, sold and claimed

Demand Side analysis

- Explore the intensity of fire risks of vulnerable families do face, how they currently cope with fire damage and entitlements; to what extent do they have willingness to pay for fire micro-insurance, using desk-based research and interviews with potential customers through focus group discussions and survey are recommended.
- Include:
 - Analysis of loss and damage for the last 10 years fire accidents
 - Current fire risk mitigation strategies and damage recovery mechanisms (e.g. savings, loans from family and friends, selling other assets, etc.);
 - Analysis on perceptions of insurance including awareness, understanding, costs, trust in providers, etc.;
 - Analysis of micro-insurance products that are currently being bought by slum residents and what are the premiums, benefits and other details of these products
 - Analysis on household perceptions of the Lumkani fire detection and early warning system, including awareness, understanding, trust;
 - Analysis on willingness to take up fire insurance including how much value would household insure, how much (annual premium) would household pay for this level of coverage, how would households prefer to pay, etc.;
 - Economic analysis incorporating loss frequency, loss severity, loss analysis and premium analysis.

Potential Product Concepts:

- Based on findings from the supply and demand-side research, identify up to three potential fire insurance companies who could be potential stakeholders for providing fire insurance for slum dwellers , (the concept will be finalized after getting feedback from potential providers and consumers).
- Concepts only need to be developed based on the research findings and articulated at a high-level and should include:
 - Scope of Insurance by the selected companies (past initiatives- if there was any, opportunities, key outstanding questions or challenges and way forward)
 - Demand, challenge, capacity and opportunities of the slum dwellers for micro insurance for reducing fire risks
 - Brief analysis on the demand and supply side (if the supply side may meet requirement from demand side)
- Recommend marketing approaches to educate target consumers on the need for insurance to elicit interest and demand.

5. Methodology:

The research will use a mixed method of qualitative and quantitative approach. Using purposive sampling 25 KII's will take place with relevant stakeholders; 4 FGD (2 from project area and 2 from out of project) will be conducted in the two selected slums and a survey will be conducted with 384 HHs. slums and a survey 384 HHs.

Recommended Tools

Following reports and articles are recommended to review for secondary data

- Relevant journal articles
 - Project Report
 - Research Report
 - And any other relevant documents
- Following tools are recommended to use for primary data collection¹
- KII guiding questions
 - FDG checklist
 - Survey questionnaire (structured/ semi-structured)

6. Results and Deliverables

- **Inception Report**
 - o Outline the approaches/methodologies, tools, timelines, risks, mitigation measures, assumptions, capacity building of the enumerator expected results and milestones associated with the consultancy. The Inception Report should be informed by discussions with relevant staff from World Vision and key stakeholders.
- **Feasibility Report**
 - o Outline the findings from Supply Side Analysis, Demand Side Analysis, and Potential Product Concepts.
 - o The report should include Cover Page, Table of Contents, Abbreviations and Acronyms, Executive Summary, Methodology, Supply Side Analysis Findings, Demand Side Analysis Findings, Potential Product Concepts, Conclusion, References, Appendices.
- **Final Report**
 - o Final report on the consultancy which details methodology used, activities undertaken, challenges, lessons identified, and recommendations to address those lessons. Should be accompanied by a presentation from the consultant. After the presentation, WV will give written feedback and the consultant will incorporate that feedback into the final report

¹ Consultants may propose any other innovative tools for primary data collection

- The report must be accompanied by a summary of primary and secondary data tables/matrixes used in the report (both in hard and soft copy as where necessary), interview answer sheets and FGD/KII data entries (where applicable). FGD and KII answer sheets might be needed translated in English from Bengali.

7. Indicative Timeframe

- Proposal timeline:

- All proposals are due no later than 5pm Dhaka time on April 08 2019
- The feasibility study will be conducted from 24 April to 15 June 2019
- If additional information or discussions are needed with any bidders during this two-week window, the bidder(s) will be notified.
- The selection decision for the winning bidder will be made no later than 24 April 2019
- Upon notification, the contract negotiation with the winning bidder will begin immediately.
- Contract negotiations will be completed by 17 April 2019
- Notifications to bidders who were not selected will be completed by 21 April

Project Timeline:

- The duration of the consultancy is expected to be a maximum of 45 working days
- Timelines for deliverable submissions will be agreed to and detailed in the Inception Report.
- From the date of signing contract, duration will be started thus assignment will be calculated accordingly. Without prior approval, missing deadline will cause penalty according to the WV SCM Policy.

Indicative consultant days are as follows:

○ Indicative consultant days are as follows:

Products	# of days (working)	Calendar date
Publication of Terms of References / Request for Proposals		March 24 to April 08 2019
Technical Review for consultant hiring, BPS, Reference checking, BPS		April 09 April 18 April 2019
Agreement sign off between WVB and Consultant/ Consulting Firm		21-April 2019
Inception meeting	1	23-April 2019

Inception Report: Develop Draft Evaluation Inception Plan, including the following documents: o Review methodology o Sampling strategy o Data quality assurance mechanism o Timeframe (sequencing of assessment activities and data collection) o Required resources	3	24 April to 27 April 2019
Literature review and draft tools quantitative and qualitative data collection tools (i.e. FGD , questionnaire and KII guiding questions and PRA exercises):	4	28 April to 1 May 2019
Finalize Tools (incorporating the feedback of WVB)	3	4 May to 6 May
Orientation on data collection, and field testing	1	7 May 2019
Data Collection	18	9 May to 28 May
Data Analysis and Feasibility Report	5	28 May to 02 June 2019
Concept note develop based on the findings (simultaneously with feasibility report (Concept note will be share with the feasibility report)	5	02 June to 11 June 2019
Final Report and final concept note submit	3	11 June to 13 June 2019
Review, feedback and finalize the report.	2	13 June to 15 June 2019
Total Days	45	

8.0 Inputs from World Vision

World Vision will provide:

- o Contact information for relevant stakeholders
- o Comments on all products of this consultancy within ten (10) working days
- o Guidance information on sourcing documents and/or resources as appropriate
- o Baseline report on fire risk experience and perceptions of risk
- o Analysis on efficacy of Lumkani fire detection and early warning system on detecting fires and reducing risk of property damage
- o Both World Vision Bangladesh and World Vision Australia will review the report

8. Consultant Qualifications

- The consultant may be an individual or company preferably located in Dhaka, Bangladesh and should be able to assume duties by 23 April and will continue full time upto 15 June 2019 consultancy firms/consultants should have experience at least 5 years.

Required qualifications, skills, and experience of individual/firm:

Preferable:

- Preferably PhD in Social Science/Business (qualitative approach)
- Both Quantitative and Qualitative research expert
- Research Experience on disaster risk reduction
- Research Experience on slum dwellers
- Research experience on Micro-insurance in urban context will be added advantage

Must have:

- Experience of conducting both qualitative and quantitative research.
- Experience of conducting research in urban context
- Publication in Peer review journal (at least 2)
- Experience of working with government officials
- Capacity to deal with the Insurance Companies
- Masters in Economics / Development studies /Business

9. Standards of Ethics and Child Protection

The lead evaluator will be responsible for ensuring that data collection and analysis approaches are designed to mitigate child protection risks, and protect participants' privacy and wellbeing by establishing and following credible ethical evaluation principles. The lead evaluator must ensure all members of the evaluation team has been oriented in the ethical considerations employed in the evaluation. Ethical principles will include the following:

Voluntarism, confidentiality and anonymity of participants: All participation in interviews must be voluntary, will not create harm to participants during or after the data gathering, and their anonymity and confidentiality will be protected. Voluntary involvement must be assured by a scripted verbal explanation of the survey being conducted. The script must inform respondents that they may choose to not respond to certain questions and may end the survey at any time.

Do No Harm: Project and evaluation themes must be screened for topics and questions that may cause distress to some interviewees. Mitigating approaches and referral options must be developed accordingly.

Integrity: Data from participants must be presented honestly and proportionately, such as the authoritativeness, extent-shared and intensity of opinions across the target population, and aligning quotes with the evaluative themes intended by the informant. Unexpected or contentious findings should be triangulated with other forms of data to gauge significance.

Participant perspective: To the extent possible, given logistical limitations of each context, preliminary findings should be shared with a plenary of project stakeholders to invite their reactions and interpretations. These will be recorded and added to the final report.

Child Protection: If children (under the age of 18) are to be interviewed, it will be in the presence of a responsible adult from the child's family, or other implied guardian from the community. Children will not be exposed to questions of a highly personal, sensitive, potentially distressing or embarrassing nature.

If children are to be interviewed, child protection reporting protocols will be established and all staff made aware of when and how to report any issues that arise from data collection.

Evaluation coordinators must have completed and been cleared by a police check within the last two years. All evaluation coordinators and collectors will be required to review, sign, and adhere to a child protection code of conduct.

The lead evaluation must familiarise him or herself with the following ethical and protection guides (to be supplied to the selected lead evaluator):

- WVI Child Protection Code of Conduct
- WVI Guideline of Ethical Principles

10. Submission Details

- Bidders must submit a Technical Proposal and a Financial Proposal.
- The **Technical Proposal** must include:
 - Outline of approach to delivering the Scope of Work - maximum 4,000 characters
 - Outline of relevant experience in insurance (including micro-insurance), including experience in Bangladesh and other developing contexts - maximum 2,000 characters
 - Sample of work from a similar and previously conducted consultancy
 - CV of each person delivering the consultancy
 - Publication information
- The **Financial Proposal** must include a detailed budget including the name/s, # of consultant days, and daily rate in USD for each person delivering the consultancy.

Evaluation Criteria for selecting contact

- World Vision will evaluate all proposals based on the following criteria:
 - Quality of Technical Proposal
 - Cost Budget

11. Anticipated Limitations

Please note that the assessment will be conducted during Ramada (probable 6th April to 4th May) as well as Eid vacation,. So the relevant stakeholders might be in movement. Respondents in slums might be out of residence in day time for earning their alms.

12. Budget for the study:

Required budget for Evaluation is available in project budget up to **USD 11000 (USD Eleven Thousand only)**.The Evaluation related all cost (data collection from the field, analysis, interpretation and reporting) will be paid to the consulting firm. **Only the agreed amount** (as per agreement with WVB NO Supply Chain Management) will be given to the consulting firm. **No extra payment at any circumstance will be made to the firm except the contract amount.** In this regard payment will be in account pay cheque and VAT/TAX will be deducted by at source.

Mode of payments:

The consultant should have the opportunity to take **50** percent advance after submitting the inception report with appropriate work plan with signing contract, and the rest **50** percent to be given upon receiving the Final Report with necessary documents. The Consultant should provide relevant and evidences in support of their events and information provided for qualifying themselves.

13. Contact Details

Any questions regarding this consultancy can be directed to:

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