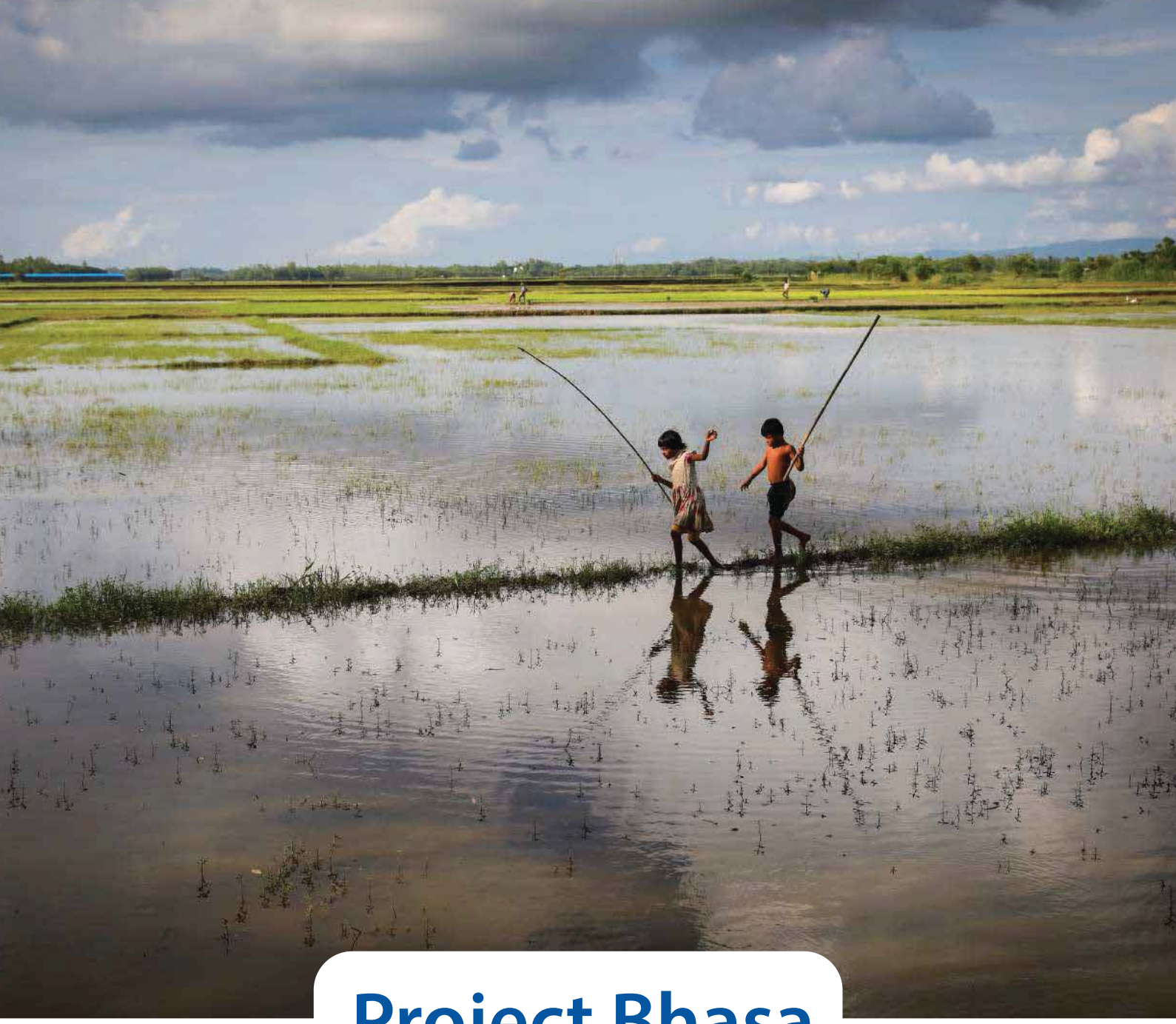


Project Bhasa
Completion
Report

Phase 1
2016 - 2020

CIPRB | Lifeboats | The George Institute for Global Health

Project Bhasa Completion Report | 2016-2020

Phase 1

CIPRB | Lifeboats | The George Institute for Global Health

Partners

Centre for Injury Prevention and Research, Bangladesh

The Centre for Injury Prevention and Research, Bangladesh (CIPRB) is a world leading injury prevention organisation based in Bangladesh. Through pioneering research and Innovation, CIPRB saves lives by delivering quality programmes throughout Bangladesh, designed to combat injury-based fatalities and morbidities. Over the past decade, CIPRB has used evidence-based methods to investigate, design and communicate successful, scalable drowning interventions across Bangladesh and the region to address drowning.

Royal National Lifeboat Institution, RNLI, United Kingdom

Anybody can drown, but nobody should. Founded in 1824, the RNLI is a charity dedicated to saving lives in and around water. Building on over 190 years of lifesaving experience in the UK and Ireland, the RNLI is now partnering with governments and organisations around the world to share technical expertise and help make drowning prevention a global priority.

The George Institute for Global Health, TGI, Australia

The George Institute for Global Health is a health and medical research institute whose mission is to improve the health of millions of people worldwide. The Injury Division seeks to identity and test cost-effective programmes to reduce the global burden of injury, influence policy and scale up proven programmes for sustainable change. Our work covers a range of topics from surveillance, observational studies and large scale pragmatic intervention trials through to programme evaluation and policy research. Our global research extends from Australia across Asia and Africa, with major ongoing collaborations in India, China, Vietnam and Bangladesh.

Acknowledgements

The Project Bhasa team would like to thank everyone who supported this project. Without their invaluable help, input and guidance Project Bhasa would not have happened. Particular and heartfelt thanks goes to;

Other stakeholders

1. Additional Director General (Development and Planning), Directorate General of Health Services (DGHS) – Chair, National Steering Committee for Project Bhasa.
2. Director General, Ansar and VDP
3. Director General, Bangladesh Fire Service and Civil Defense
4. Divisional Commissioner, Barishal Division
5. Director General, Department of Women Affairs
6. Line Director – Non-communicable Disease Control Programme, Directorate General of Health Services (DGHS).
7. Director (Health), Department of Health Services, Barishal Division
8. Deputy Director (Medical), Bangladesh Coast Guard
9. Programme Manager-3, Non-communicable Disease Control Programme, Directorate General of Health Services (DGHS)
10. Health Specialist, Unicef – Bangladesh
11. Medical Officer, Non-communicable Disease, WHO – Bangladesh

Donors who helped fund this project;

UK Aid
Isle of Man Government
Whitewater Trust

Abbreviations

BHIS	–	Bangladesh Health and Injury Survey
CIPRB	–	Centre for Injury Prevention and Research, Bangladesh
CPR	–	Cardiopulmonary Resuscitation
CSI	–	Community Swimming Instructor
DGHS	–	Directorate General of Health Services
ECD	–	Early Childhood Development
IDELA	–	International Development and Early Learning Assessment
NGO	–	Non-Govermental Organization
RNLI	–	Royal National Lifeboat Institution
SOP	–	Standard Operating Procedure
TGI	–	The George Institute for Global Health
UIPC	–	Union Injury Prevention Committee
VGF	–	Vulnerable Group Feeding
VIPC	–	Village Injury Prevention Committee

Contents

Executive Summary

Drowning is a major cause of global mortality, accounting for an estimated 235,000 lives every year according to the World Health Organization, many of them children in low- and middle-income countries. But this silent epidemic still does not get the attention it deserves.

This burden is particularly significant in Bangladesh, where drowning is a leading killer of children. There was a slight decrease in the numbers of children drowning between surveys released in 2003 and 2016, but an estimated 40 children under 18 still drown in Bangladesh every day. These are wasted lives, preventable deaths.

Environmental conditions in Bangladesh substantially increase the risk of drowning, particularly for children, who face high exposure to open water close to their homes, and the additional risk of frequent flooding. In rural Bangladesh people of all ages are widely exposed to water risks as they go about their daily activities, including children playing around ponds, women and girls doing household chores and passengers on small boats.

Some global guidance exists on how to prevent drowning, primarily from the World Health Organization and their 2017 publication, 'Preventing drowning: an implementation guide'. However, there are still limited examples of how to implement effective community-based interventions for drowning prevention in low- and middle-income countries.

To add to the body of knowledge and respond to the burden of drowning in rural Bangladesh, the Centre for Injury Prevention and Research, Bangladesh (CIPRB) and the Royal National Lifeboat Institution (RNLI) came together with research partner, the George Institute for Global Health, to develop a comprehensive community-based child drowning prevention project. The project was named 'Bhasa' – a Bangla word meaning 'afloat'.

Designing Project Bhasa

Project Bhasa was designed to better understand the burden and context of drowning within the Barishal Division, an area of Bangladesh that was indicated to have particularly high drowning rates. Barishal Division has an abundance of water bodies, including ponds, ditches and canals, many of which are connected to larger rivers.

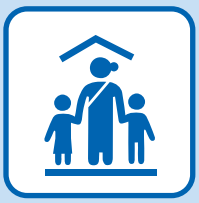
The objectives of Project Bhasa were:

- To explore the drowning situation, particularly for children, in the Barishal Division.
- To design, implement and evaluate community-based child drowning prevention interventions in the Barishal Division.
- To engage policy makers and decision makers to increase awareness, co-ordination, and resource mobilisation to prevent child drowning in the Barishal Division.

The initial activity was a significant household survey carried out in the Barishal Division. The findings of the survey helped inform a situational analysis of drowning in the Barishal Division, which suggested that focus of Project Bhasa should be to focus on drowning prevention for children aged 1 to 10 years, as they represented over 60% of total drowning deaths.

The project was developed so that two interventions already proven to be effective in another area of Bangladesh – SwimSafe and Anchal – were implemented to directly target children aged 1 to 10 years in a number of communities in the Barishal Division, covering a population of approximately 420,000 people. A third core intervention, community first response, was implemented to provide basic first aid and resuscitation training for those responsible for delivering SwimSafe and Anchal interventions, and others in the wider community.

Core interventions



Anchals provide community-based day-care for children aged 1 to 5 years old, who are cared for within a supervised, protected environment during the peak hours of drowning risk. Each Anchal is run by a trained Anchal Maa (caregiver) and Anchal Assistant (caregiver's assistant) who supervise 20–25 children from 9am to 1pm, six days a week.

This is the most vulnerable time for child drowning in Bangladesh, because during that time parents are busy working and doing household chores. During their time in an Anchal, children are involved in early childhood development (ECD) activities aimed at stimulating their physical, intellectual, linguistic, social and emotional development.

SwimSafe provides survival swimming skills and rescue technique training to children aged 6 to 10 years old through a series of structured lessons by Community Swimming Instructors to small groups in adapted local ponds. The local ponds are specifically identified in collaboration with the local community and modified with bamboo platforms. Children attend the classes until they reach the required competencies, including swimming 25 metres unaided, floating in water for 30 seconds, and land-based rescue techniques.

Community First Response provides basic first aid and resuscitation training to selected community members, equipping them with skills to treat injured or unwell people until they receive professional medical treatment. Those identified to receive training within Project Bhasa included Anchal Maas and Assistants, Community Swimming Instructors, and other community members likely to provide first aid and resuscitation for children in their care or to other casualties.

Implementation

Community engagement was a key factor to ensure that the core interventions were successfully implemented. Community leaders were approached to form committees that were tasked with raising awareness of the drowning burden and the prevention activities of Project Bhasa, supporting and monitoring the interventions, and encouraging parents to ensure their children attended the Anchals and SwimSafe, as appropriate.

A broader engagement strategy was also developed to raise awareness of drowning prevention with local and divisional government and secure their support for the aims of Project Bhasa. This included engaging national and divisional government stakeholders, through steering committees, and working with other organisations, including UN agencies and NGOs.

Project Bhasa interventions covered approximately 25% of children aged 1 to 5 years in the intervention areas and 70% of those aged 6 to 10 years. The three core interventions (Anchal, SwimSafe and Community First Response) successfully met delivery targets, and largely followed intended operating procedures.

Project Bhasa aimed to have 10,000 children enrolled in the Anchal intervention, representing 29.3% of all children aged 1 to 5 years living in the intervention areas. This required the provision of 400 Anchal centres in the intervention areas. In total 558 Anchals were set up over the three years of implementation, and 17,651 children were enrolled (50.5% boys, 49.5% girls). The number of children enrolled in the Anchals was higher than the target for a number of reasons, including the fact that 3,881 children who reached the age of 6 graduated from an Anchal, and over 5,000 children dropped out over the project period.

Project Bhasa showed that it is possible to improve early childhood development provision and outcomes for children through the Anchal model. Children aged between 3.5 and 5 years old who attended Anchals for at least one year were assessed through an internationally recognised tool for early childhood development called IDELA. It was found that the children's average score increased by 23.4%. In the comparison areas, the children's average score increased by 6.3%.

Community Awareness and Engagement Activity:

Village Injury Prevention Committee (VIPC)	**3,217 VIPC** meetings were organised over the project period, with **151 VIPCs** created
Union Injury Prevention Committee (UIPC)	**123** UIPC meetings were held across **26** unions
Courtyard meetings	**1,058** courtyard meetings were attended by 29,722 people
Water safety awareness for school children	**167** schools participated, with **448** sessions conducted for **19,038** students. Over **10,000** girls and approximately **9,000** boys took part.
Interactive Popular Theatre	**117** shows were organised in three intervention areas, reaching **39,313** people
Video Shows	**109** shows were organised and reached **28,169** people
Community radio	The child drowning prevention public service announcement was heard by communities in two of the intervention areas
Social Autopsy Meeting	**73** social autopsies conducted in response to child drowning deaths in the three intervention areas, involving around **3,500** people

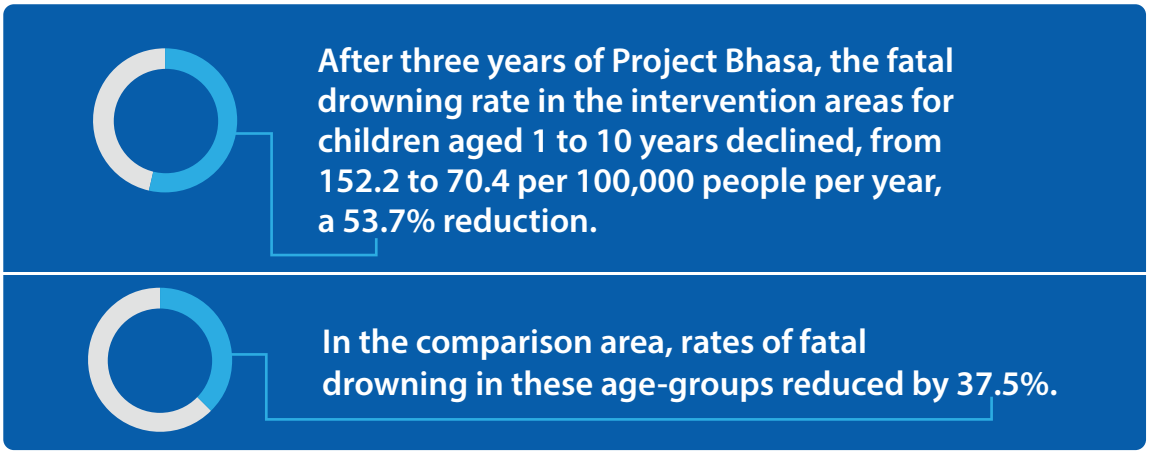
Over three years, Project Bhasa aimed to have 30,000 children graduate from SwimSafe, representing 70% of children aged between 6 and 10 living in the intervention areas. At the end of the project period, SwimSafe had enrolled 35,422 children from these areas. Overall, 84.7% of children who had enrolled graduated, 3.6% children failed, and 11.7% children dropped out or were absent on assessment day.

Project Bhasa had a target to deliver first responder training to 3,000 people over the project period. In total, 2,842 participants received training during the project period Communities also reported being satisfied with the interventions. Both Anchal and SwimSafe interventions were used by families of different ethnicities (Bengali and Rakhine) and all religions and were accessible to families of all socio-economic status as there were no fees.

Key findings

Project Bhasa was designed to better understand and respond to the burden of drowning in selected communities of the Barishal Division, and to encourage decision-makers to play their part in the urgent effort of protecting children from this leading killer.

As well as the areas where interventions were implemented, there were areas with a similar population size randomly selected from the rest of the Barishal Division for comparison. None of these comparison areas had existing drowning prevention measures in place.



Over the project period, drowning rates reduced substantially. Although there was an overall reduction in drowning rates in the project intervention areas, there was also a reduction in the comparison areas, so it was not possible to say with certainty that the reduction in drowning was a direct result of the Project Bhasa interventions.

Project Bhasa was not designed to measure the effectiveness of individual interventions, but to consider the acceptability and uptake of a package of measures for drowning prevention. The scale of interventions was based on availability of resources, so it may be that the scale of the interventions was not large enough to measure a significant effect. Without further information on drowning deaths in the comparison area, it is difficult to draw conclusions.

The results of the household survey carried out at the start of the project in the Barishal Division confirmed that children aged 1 to 10 made up over 60%, of the total drowning deaths, and helped shape the efforts of the project to respond to the burden. The child-focused drowning prevention activities were welcomed by the communities they served, with delivery targets for the core activities met or exceeded.

Through the ongoing monitoring and evaluation, several areas for improvement were identified that would better enable the core interventions to be implemented more effectively. Consistent attendance and drop out of children were found to be a challenge, especially relating to younger children. Anchal staff faced particular challenges around the attendance and engagement of younger children, those under 2.5 years old. In SwimSafe, attendance of girls was lower than of boys mainly due to cultural barriers. Neither Anchal nor SwimSafe had specific strategies to support access for children with disabilities. These factors limited the ability of the interventions to protect all children from drowning and highlighted an equity gap.

The set up and inclusion of Union Injury Prevention Committees (UIPCs) and Village Injury Prevention Committees (VIPCs) in the project was found to be a successful method for enabling community ownership of the interventions. Although the committees' engagement varied between sites, overall, they provided a powerful tool to involve community members in the implementation of the project.

There was a high turnover of key government personnel, at divisional and national level in particular, throughout the project period. Significant time and resources were taken up by briefing and building relationships with new representatives, which disrupted the momentum of steering committees and the development of drowning prevention plans.

The project provided opportunities for women's empowerment, particularly increasing women's access to resources and skill development. There is also some evidence to suggest that the interventions are changing perceptions around the social status of women in communities where the project was active. Several academic articles and related publications on various aspects of Project Bhasa, including gender, have been produced, to add to the growing evidence base on the implementation of drowning prevention interventions in high burden, low resource settings.

Looking ahead

The findings of Project Bhasa suggest that out-of-home childcare may not be the most suitable solution for children aged two and under, who are most vulnerable to drowning. Other ways of protecting younger children need to be carefully considered and tested.

Phase two of Project Bhasa seeks to sustain and expand drowning prevention activity across the Barishal Division. This will require adjustments, targeted improvements, and the engagement of a much wider group of stakeholders.

Phase two will also aim to secure the endorsement and implementation of the draft divisional drowning prevention plan for Barishal, to ensure increased government ownership of the response to the problem, and effective coordination of activity by a wider range of partners.

The findings from phase one of Project Bhasa, as well as the ongoing implementation of phase two, can help inform and enhance overall efforts to prevent drowning within Bangladesh. Ultimately, sustained action on drowning prevention requires government leadership and long-term investment.

The Government of Bangladesh has shown global leadership on drowning prevention, including through their efforts to secure a first-ever UN Resolution on global drowning prevention in April 2021. The new UN Resolution sets out the actions that every country should take to prevent drowning, establishing a framework for Bangladesh's domestic drowning prevention ambition, and an expectation that the long-awaited national drowning prevention strategy will be finalised and launched by the end of 2021.

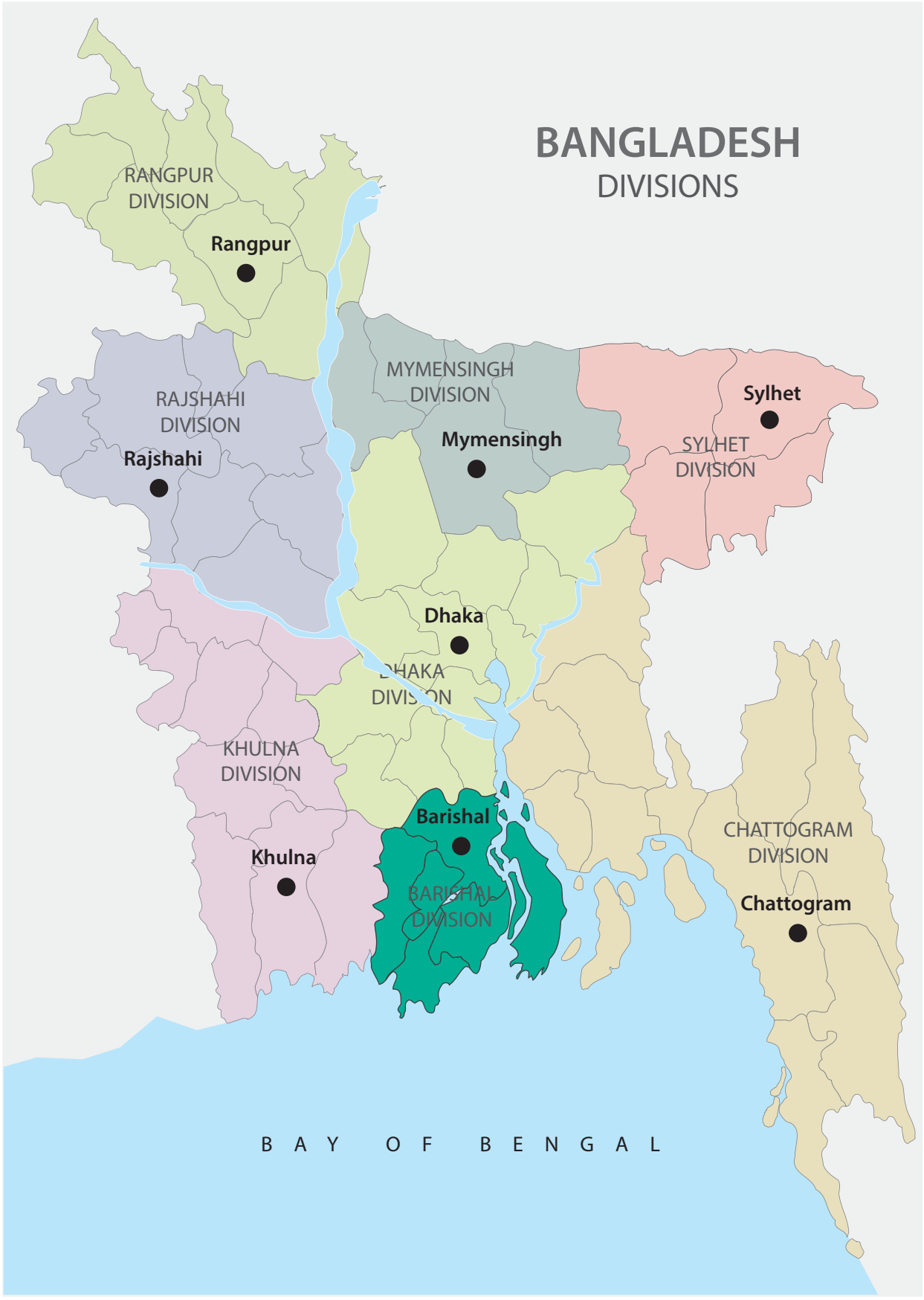


Figure 1: Location of the Barishal Division in Bangladesh

Introduction

In 2016 the Centre for Injury Prevention and Research, Bangladesh (CIPRB) and the Royal National Lifeboat Institution (RNLI) were motivated by a shared commitment to drowning prevention and came together with research partner, the George Institute for Global Health, to develop a comprehensive community-based child drowning prevention project. The intention of the project was to respond to the burden of drowning in rural Bangladesh, concentrated mainly in children, and add to the body of knowledge about what works to prevent drowning in a high burden, low resource setting.

> The project was named **'Bhasa'** – a Bangla word meaning **'afloat'.**

Project Bhasa was designed to better understand the burden and context of drowning within the Barishal Division, an area of Bangladesh that had been identified as having particularly high drowning rates.

This report outlines the process to develop, implement and evaluate Project Bhasa between 2016 and 2020. It highlights critical factors, successes and challenges in the delivery of child-focused interventions for drowning prevention in select communities in the Barishal Division. Finally, the report provides a summary of the project results, in addition to recommendations and areas of improvement used to inform a second phase of the project which is now underway.

1

The scale of drowning in Bangladesh

Drowning is a major global public health issue

According to the World Health Organization (WHO), drowning is a serious but neglected public health problem, claiming the lives of an estimated 235,000 people a year globally. The overwhelming majority – more than 90 percent – of these deaths occur in low- and middle-income countries (LMICs). Children under 5 are disproportionately at the highest risk of fatal drowning, and boys are twice as likely to drown as girls. Drowning is a significant problem in South-East Asia accounting for almost one third of all drowning deaths worldwide in 2019.[i]

The drowning situation in Bangladesh

Bangladesh is a highly disaster-prone country. It is especially vulnerable to cyclones and frequent flooding, both of which claim many lives each year. Since the country is intersected by many rivers, drownings also happen because of inland water transport accidents.

The national Bangladesh Health and Injury Survey (BHIS), published in 2016, revealed that, across all age groups, the fatal drowning rate was 11.7 per 100,000 population per year, establishing drowning as the third leading cause of death due to injury in Bangladesh.[ii]

The BHIS 2016 estimated that in Bangladesh 19,000 people die each year due to drowning, among them approximately 14,500 children aged under 18. This is equivalent to 40 children dying every day in Bangladesh. In all age groups, fatal drowning rates were higher for males than females.

According to the survey, drowning was the leading cause of injury deaths for children under the age of 18 (25.7 per 100,000 per year). The highest rate of drowning was observed in children aged 1 to 4 years old, followed by children under 1 year and children aged 5 to 9 years old (see Figure 2).

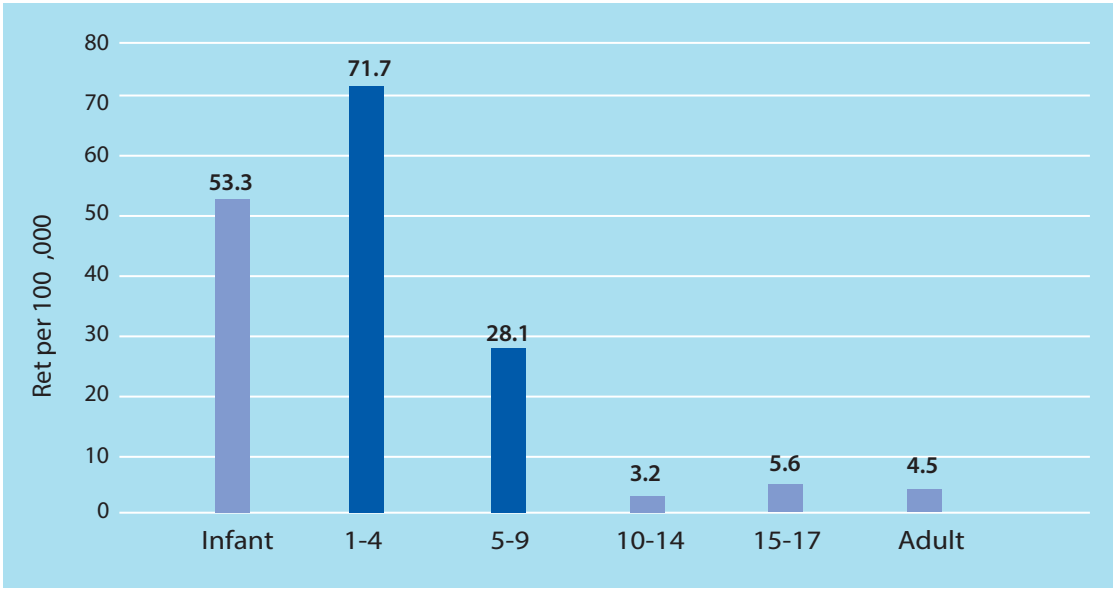


Figure 2: Fatal drowning rates by age in Bangladesh (BHIS 2016)

The survey data also showed that across all age groups, two of the three districts with the highest rates of fatal drowning were in the Barishal Division; the district of Bhola (33.2/100,000 population per year) and the district of Barishal (27.8/100,000 population/year). Bhola and Barishal districts respectively also had the first and third highest rates of fatal drowning in children under 18 and under 5 (Figure 3).

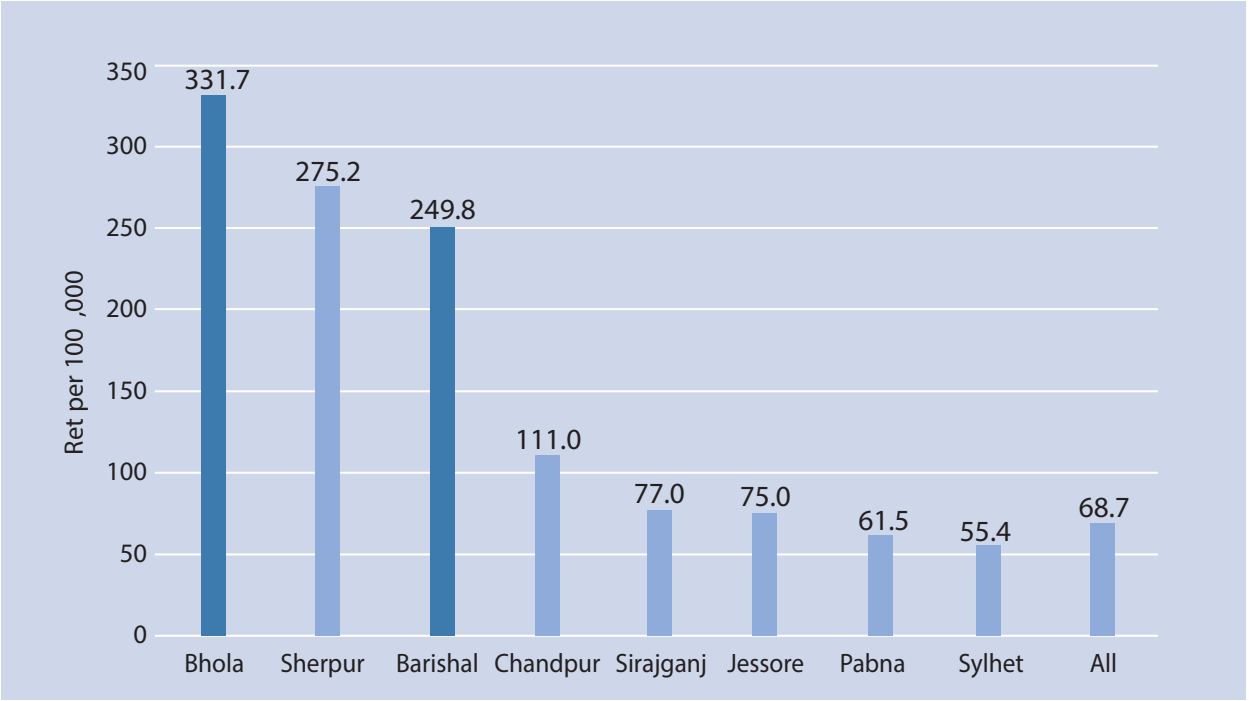


Figure 3: Drowning deaths in children under 18 by districts surveyed in BHIS (BHIS 2016)

The drowning situation in the Barishal Division

Barishal Division is situated in the central southern region of Bangladesh, where several large rivers converge (Figure 1). It has a population of over eight million people. There is an abundance of other water bodies, including ponds, ditches and canals, many of which are connected to the larger rivers. As a result, people of all ages are widely exposed to major water bodies as they go about their daily activities, including children playing around ponds, women and girls doing household chores and passengers on small boats. As a low lying, coastal division, the Barishal Division is vulnerable to natural hazards and the effects of climate change. All six districts in this division (Bhola, Barishal, Patuakhali, Barguna, Jhalokati and Pirojpur) are regularly affected by water-related hazards and disasters. Past examples include cyclones such as Ila, Sidr, Mohasen and Bulbul, all of which have hit Bangladesh since 2007, causing significant disruption and loss of life.

BHIS (2016) surveyed sixteen randomly-selected districts across Bangladesh. In the Barishal Division, the rate of drowning was shown to be three times higher than the national average.

The high rates of fatal drowning found in Bhola and Barishal districts suggested that similarly high rates of drowning are likely to exist in the remaining districts, which have similar geographical characteristics.

Drowning prevention in Bangladesh

The Government of Bangladesh recognises that drowning, especially for children, is a major health issue in the nation.

Drowning requires a multi-sectoral response, with various sectors, including health, social and children's affairs, local government, education, transport, and law-enforcement agencies needing to be involved.

However, an approved national drowning prevention strategy is yet to be implemented. Drowning is not yet on the government's priority agenda, and there are no public-sector organised or coordinated interventions anywhere in the country.[iii]

There is existing evidence from Bangladesh to suggest that with appropriate interventions, drowning deaths of children are preventable. The trial of a large-scale community-based injury prevention project, known as the Prevention of Child Injuries through Social-intervention and Education (PRECISE) project identified that supervision of children aged 1 to 4 years old in community day-care (Anchals), and organised swimming skills training (SwimSafe) for children between four and ten years old, are two effective interventions to prevent child drowning in rural Bangladesh. The protective effect of Anchals and SwimSafe was 82% and 96% respectively. [iv]

The effectiveness of Anchals was further demonstrated by the implementation study, Saving of Lives from Drowning (SoLiD).[v] In addition, another study in Bangladesh generated evidence to suggest that even in low-literacy, resource-poor settings, the training of 'lay people' in water rescue, first aid and resuscitation skills is feasible.[vi]

There is a lack of understanding, awareness and initiative from non-governmental organisations (NGOs) in Bangladesh. Because most NGO activities are aligned with the national priority agenda and to donor interests, funding for drowning prevention is extremely limited. Over recent years only a very small number of international aid agencies or philanthropists have shown interest in providing funding and technical expertise for drowning prevention. As a result, most NGO activities do not address drowning prevention issues, even at a local level.

2

Objectives of Project Bhasa

Project Bhasa

Several studies from Bangladesh have suggested that drowning, particularly in children, is preventable by implementing context-specific preventative measures. For example, day-care for young children and survival swimming skills lessons for older children have both shown positive outcomes.

The findings of BHIS 2016 suggested that the Barishal Division had the highest rates of child drowning in Bangladesh. The Centre for Injury Prevention and Research, Bangladesh (CIPRB) a leading injury prevention organisation, and the Royal National Lifeboat Institution (RNLI) decided to investigate the drowning situation in the Barishal Division further. Working in collaboration with the George Institute for Global Health (TGI), the partners committed to exploring the drowning situation in the Barishal Division and implementing a response to the high rates of drowning among children.

Three factors were considered during the design of the project

(a) A high burden of both fatal and non-fatal drowning in children aged 10 and under in the Barishal Division.

(b) An absence of mainstream drowning prevention activity in the Barishal Division and Bangladesh.

(c) The availability of context-specific interventions, shown to be effective in other areas of Bangladesh.

The Barishal Division was confirmed as a pilot site for the implementation of a comprehensive community-based child drowning prevention project. The project was named 'Bhasa', a Bangla word meaning, 'afloat'.

Objectives

- To explore the drowning situation, particularly for children, in the Barishal Division.
- To design, implement and evaluate community-based child drowning prevention interventions in the Barishal Division.
- To engage policy makers and decision makers to increase awareness, co-ordination, and resource mobilisation to prevent child drowning in the Barishal Division.

Components of Project Bhasa

I. Drowning context analysis for the Barishal Division (September 2016 to February 2017)

A cross-sectional survey in the Barishal Division was carried out to determine the magnitude and risk-factors for drowning, complemented by a qualitative study to provide an in-depth understanding of the factors that contribute to drowning in the area. The context analysis was used as the baseline for Project Bhasa.

II. Designing a context-specific drowning prevention intervention package

While designing the drowning prevention intervention package, three factors were considered. These were the findings of the drowning context analysis in the Barishal Division, the availability of relevant interventions previously shown to be effective in Bangladesh, and interest from the community. A realistic scale was agreed to ensure future viability.

III. Piloting of the intervention package (2017-2019)

Community-based child drowning prevention interventions were implemented in three upazilas of the Barishal Division. An upazila is the third largest administrative unit in Bangladesh, after division and district. The three upazilas were made up of 26 unions, or rural councils, and represented a combined population of 427,123.

As well as the 26 unions identified for intervention, there were 22 further unions randomly selected from the rest of the Barishal Division for comparison. None of these unions had existing drowning prevention measures in place.

IV. National and divisional stakeholder engagement (2016-2020)

To efficiently advocate for the project at national and divisional level, and to mobilise and coordinate resources, two committees were formed, the National Drowning Prevention Steering Committee, and the Divisional Drowning Prevention Steering Committee for the Barishal Division.

The findings from the baseline survey, information on planned interventions and the progress of the project were shared in these forums. Securing support from the relevant stakeholders was important to the long-term plan for scaling up suitable interventions.

V. Evaluation of the interventions (December 2019 – February 2020)

The project was evaluated, using the following methods.

A phased **process evaluation** was conducted to evaluate the project reach, quality, successes and challenges, using data from project monitoring and qualitative research.

After 3 years, an **impact evaluation** was conducted to measure the effectiveness of the project. At the end of three years of intervention, an end-line survey was conducted in both the intervention areas and the comparison areas, and the results were compared with the baseline (context analysis).

VI. Ongoing monitoring and learning during the implementation period (2016-2020)

Project monitoring data was collected, analysed, and reported throughout the project period, using standardised monitoring forms completed by field staff on handheld tablets. The information collected included participant demographics, attendance, graduation and dropout rates.

A mid-term learning review was conducted between July and September 2018. A Bangladesh-based consultancy was commissioned to undertake the review, which looked at the status of the project and the progress towards its objectives. Much of the focus was on the 'partnership'- the collaborative processes among the partners, the partnership's strengths and weaknesses and the present and future challenges. The review used several different methods to collect and analyse data. A thorough desk review, interviews (in person and remotely), focus group discussions and field visits allowed the triangulation of the findings.

3

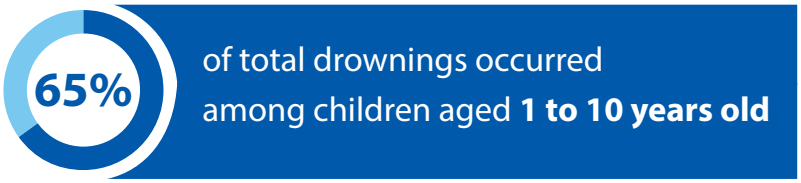
Exploring the drowning situation in the Barishal Division

Project Bhasa used both quantitative and qualitative methods to explore the burden and context of drowning in the Barishal Division. A cross-sectional household survey was conducted to assess the magnitude of drowning in the area. The survey was conducted between September 2016 and February 2017 in 39 upazilas of all six districts (Barguna, Barishal, Bhola, Jhalokathi, Patuakhali and Pirojpur) of the division. The survey covered 95,063 households comprising a population of 386,016 in the selected upazilas.

Qualitative methods were used to understand current practices, identify barriers to water safety in high exposure populations and engage with a range of stakeholders to understand their roles, beliefs and behaviour that influence water safety practices.

Findings

Drowning accounted for 6.6% of deaths across all age groups. However, among children aged 1 to 5 years, drowning was the cause of more than one-third of all deaths. This equates to 3,144 people each year.



The highest fatal drowning rates were in children aged 1 to 5 years, followed by infants under 1 year, then children aged 6 to 10 years. In adolescence (11 to 20 years), fatal drowning rates decreased, and further decreased again in adulthood (21 years and above) (see Table 1).

Age group	Rate of male/ 100000	Rate of female/100000	Rate of all persons/ 100000
<1	142.9	34.8	88.6
1 to 5	308.2	187.7	247.6
6 to 10	35.1	42.9	39.0
11 to 15	10.5	11.9	11.2
16 to 20	15.3	5.5	10.3
21 +	12.8	3.6	8.1
Total	48.2	28.0	37.9

Table 1: Distribution of fatal drowning in Barishal Division by age and sex

The data showed that most drowning in young children occurred between 9am and 3pm, which is typically when parents are busy working, and are more likely to leave their children unsupervised. The older children who drowned lacked swimming skills, and, because in Bangladesh, most water bodies are unfenced, were able to easily access open water bodies. About two-thirds of drowning incidents that happened to children aged ten and under happened around their homes, in unrestricted, open water bodies – mostly in ponds.

The qualitative analysis also confirmed the fact that communities were not aware of the extent of drowning hazards and may undertake harmful practices to resuscitate drowning cases.

Project Bhasa interventions

Informed by robust data and evidence for effective, tangible solutions, the partner organisations came to the consensus that the drowning prevention interventions should focus on children aged 1 to 10 years of age as they represented almost two thirds of total drownings.

The context analysis suggested that a divisional-level drowning prevention plan would be important to secure ownership from authorities and the scale-up of effective drowning prevention activities across the Barishal Division. To encourage the preparation of a divisional plan, evidence was required to show the feasibility of implementing effective interventions for drowning prevention in the context of Barishal.

Using evidence from the context analysis and drawing upon other research on the effectiveness of drowning prevention interventions in Bangladesh, Project Bhasa focused on two approaches. The first was direct community-based child drowning prevention, and the second was policy interventions designed to engage policy makers and decision makers, to increase awareness, co-ordination and resource mobilisation to prevent child drowning in the Barishal Division (see Figure 4).

Three core interventions were implemented

Anchals community day-care centres for children aged **1 to 5**

SwimSafe survival swimming lessons for children aged **6 to 10**

Community First Response first aid skills for **community volunteers**

They were supported by

Community awareness and engagement activity to encourage and support the uptake of the core interventions such as village committees, union committees, interactive popular theatre, video shows, social autopsies, and courtyard meetings.

Stakeholder Engagement aimed at engaging key government, NGO, and development partners to support and help with the scale up of the project.

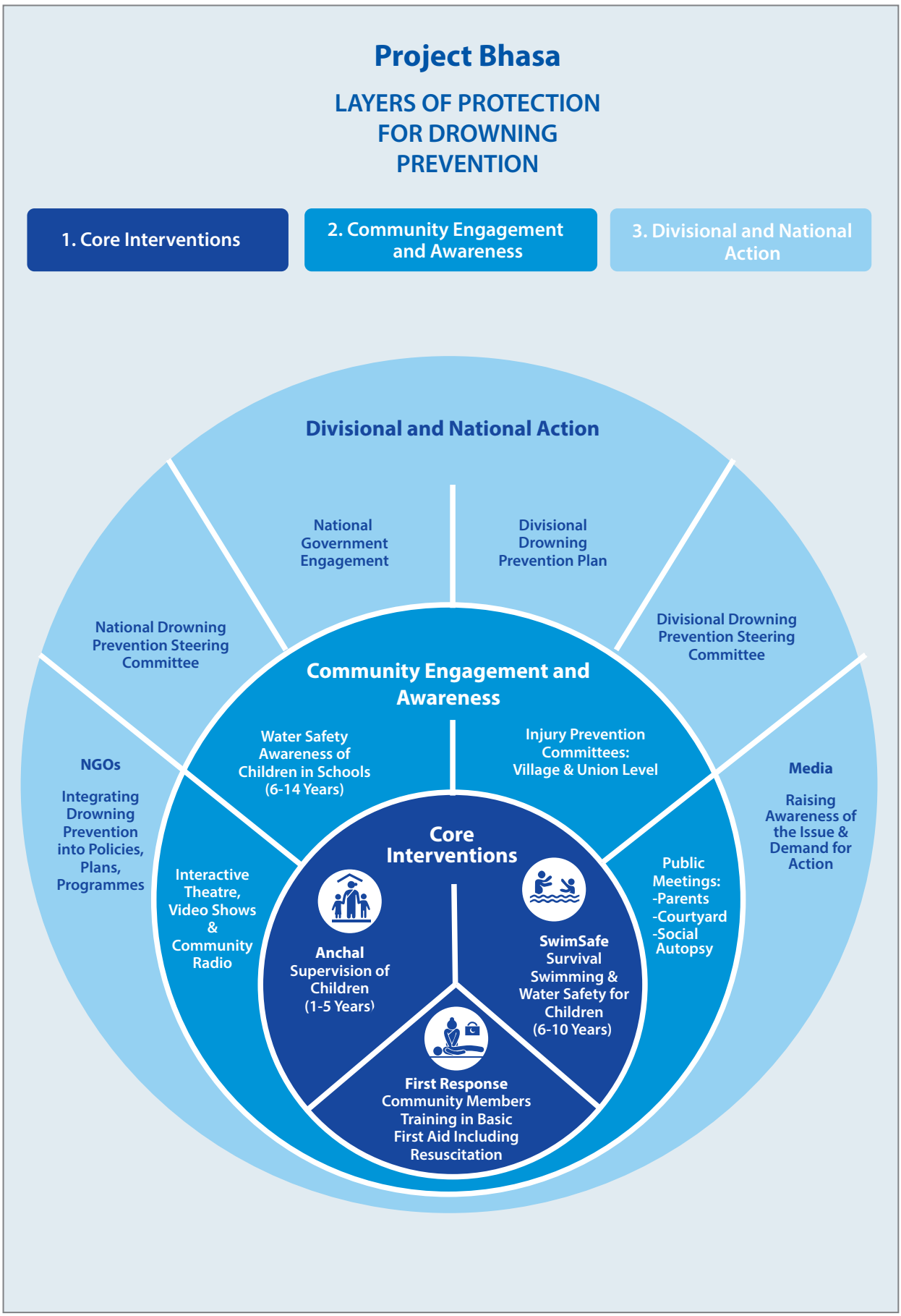


Figure 4. Layers of protection for drowning prevention

Intervention areas

Based on feasibility and guided by local partners, three upazilas of the Barishal Division were selected for interventions (see Figure 5). They each had different geographical characteristics:

- **Kalapara:** (Coastal) Kalapara Upazila is 492 sq. kilometres. The population of Kalapara is 237,831. There are two municipalities, 12 unions, 108 wards, 247 villages and six rivers in the sub-district.
- **Betagi:** (Inland) Betagi Upazila is 167 sq. kilometres. The population of Betagi is 121,751. There is one municipality, seven unions, 63 wards and 73 villages in the sub-district.
- **Taltali:** (Riverine) Taltali Upazila is 259 sq. kilometres. The population of Taltali is 88,004, and it has seven unions.

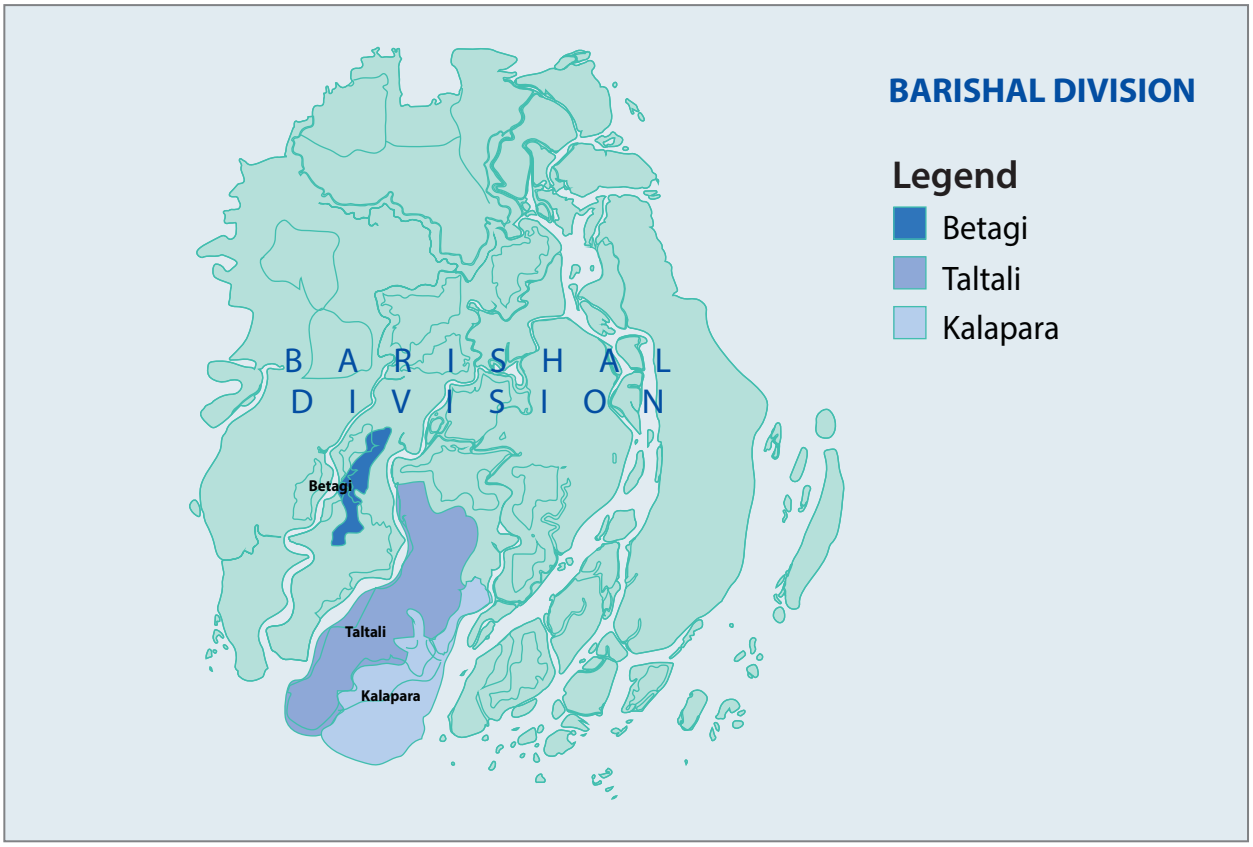


Figure 5. Map of intervention areas in Barishal Division

Community risk mapping

In each of the three upazilas, a community-based risk mapping exercise was conducted. Risk mapping helped to identify potential drowning hazards and rate their severity and likely mitigation through intervention. The risk mapping involved the community, so that the most vulnerable to drowning and the most familiar with the local hazards were able to participate.

Each upazila was divided into smaller areas known as unions (each union usually represents 9 wards, or villages). Following the risk-mapping exercise, each area was categorised as high, medium or low drowning risk. In total there were **102 high risk areas, 67 medium risk areas and 65 low risk areas among all the 26 unions**. This information was then used to determine which interventions were selected, e.g. **Anchal** and **SwimSafe** were only implemented in high and medium-risk areas.

4

Implementation of Project Bhasa interventions

Community-based child drowning prevention consisted of three core interventions

Anchals -- community day-care centres for children aged 1 to 5

SwimSafe -- survival swimming lessons for children aged 6 to 10

Community First Response -- first aid skills for community volunteers

Community engagement was a key factor to ensure that the core interventions were successfully implemented. It would be highly unlikely that, without an awareness of drowning being a leading cause of child mortality, coupled with the knowledge that effective solutions existed, targeted community members would ensure their children used the available interventions. A range of proven awareness and engagement activities were deployed as part of Project Bhasa to ensure the community was fully engaged in the interventions available. These included village and union community committees, village theatre, video shows, courtyard meetings and social autopsy. These activities were highly targeted in areas where the three core interventions were available.

Three core intervention targets

Based on data from the baseline survey from the Barishal Division, core interventions were targeted at children aged 1 to 10 years, as they were at the highest risk of drowning. The Anchal and SwimSafe interventions were delivered for children aged 1 to 5 years old, and 6 to 10 years old, respectively.

Targets were set to reach 25% of all children aged 1 to 5, and 70% of all children aged 6 to 10 years living in the intervention areas, based on resource availability and a realistic scale to which interventions could be expanded in the future. Project Bhasa had a target to deliver first responder training to 3,000 people over the project duration.

Anchals: community day-care centres for children aged 1 to 5

Project Bhasa aimed to deliver the Anchal intervention to 10,000 children aged 1 to 5 years old, and provide equal access to children from all socio-economic and demographic backgrounds in the project areas.

Over the project period (three years), a total of 17,651 children were enrolled in Anchals.

Anchal is a Bangla word meaning 'mother protecting her child'. The Anchal model is a low-cost intervention for community-based day-care – also sometimes known as a crèche – providing supervision for young children regardless of their gender, race, disability and social status.

Each Anchal is run by a trained Anchal Maa (caregiver) and Anchal Assistant (caregiver's assistant) who supervise 20–25 children from 9am to 1pm, six days a week. This is the most vulnerable time for child drowning in Bangladesh, because during that time parents are busy working and doing household chores. During their time in an Anchal, children are involved in early childhood development (ECD) activities aimed at stimulating their physical, intellectual, linguistic, social and emotional development.

Children aged 1 to 5 years old are eligible to attend. Anchals are often housed in a suitable room in the Anchal Maa's home, which is equipped with educational materials for children, as well as barriers to create an enclosed space. Anchal Maas and Assistants receive training and a stipend each month. CIPRB supervisors monitored Anchal activities, and effectively identified and addressed potential issues, which they in turn reported to their supervisors.

To ensure the effectiveness of the Anchal intervention, several supporting activities were undertaken:

- **Engaging parents and communities**

The project supported a range of activities to engage communities to improve initial awareness and enrolment for Anchals, including holding courtyard and parents' meetings. Once selected, Anchal Maas conducted door-to-door visits to engage parents and enrol children. Village Injury Prevention Committees (VIPCs) acted as liaisons between project staff and communities. Many VIPC members were actively involved in encouraging parents to send their children to Anchals. In some communities, VIPC members organised cultural events to showcase Anchal activities.

- **Engaging children with disabilities**

> *"Despite a lack of formal training, Anchal Maas were able to care for some children with disabilities. "When a girl first came to Anchal, she could not say anything but, after staying here for eight or nine months, she learnt to say Maa (mother). She started moving her hands and legs like the other children."*
>
> – Supervisory staff

No Anchal had been specifically adapted to children with disabilities, and children with severe disabilities were excluded due to the additional caring responsibility. Anchals were unable to accommodate more than one or two children with disabilities, as such children often required specialist attention.

"But, if we had three or five disabled children here, then it wouldn't work. In that case, if we took special care of those children, the other children would be deprived from attention and facilities."

- Supervisory staff

- **Cluster meetings to support Anchal Maas and improve their performance**

Regular cluster meetings, covering 15 Anchals, were arranged by the local project team. These cluster meetings were used to train Anchal Maas and provide ongoing support. The majority of the eligible Anchal Maas were present at each of the cluster meetings. Anchal Maas shared learnings with each other relating to activities and strategies that work well with the children.

"In cluster meeting, we highlight which Anchal is the best and why it is the best. We do counselling of those Anchal Maas who cannot perform properly. We provide suggestions to improve their performance. Other Anchal Maas are encouraged by this. We try to organise cluster meeting in the best performing Anchals to encourage other Anchal Maas to follow it."

– CIPRB project staff

- **Parents' engagement in parents' meetings**

Monthly parent meetings were held at Anchals and were attended by more than half of parents. During the meetings, the Anchal Maa shared updates on the children's progress, and parents also provided feedback on the Anchal activities.

Anchal Maas introduced topics including early childhood development, injury and drowning prevention, health and hygiene, child protection and safeguarding, and other matters in the Anchal manual. A total of 9,284 parents' meetings were held in the three intervention areas during the project period, with more women attending (79.2 %) overall, than men (20.8%)

> *"In the monthly parent meetings, they tell us about drowning events, they tell us to cover the pond with a net or fence. They made us aware of the problem, so that children don't fall into the water."*
>
> – Enrolled child's parent

Implementation Successes

- **Positive community feedback**

Parents and broader communities were broadly satisfied with the Anchals and the management of the project. They were particularly happy that the intervention was free and accessible to everyone. Parents would often encourage their friends to send their children to an Anchal, and the project staff were well respected.

Overall, children at the centres showed a real interest in ECD activities, and enjoyed the songs, dances and rhymes taught. They shared this learning with their parents at home. Parents and Anchal Maas found the intervention contributed to children learning some basic literacy and numeracy skills. Additionally, participants said children learned about social values and formal language, which they said would help them to become better citizens.

- **Early Childhood Development (ECD) outcomes**

Anchals were introduced with the principle objective of supervising young children to prevent drowning and other injuries. However, they were also designed to help improve early childhood development outcomes. For four hours a day, six days a week the Anchal Maas used ECD techniques to support children's physical, cognitive, and socio-emotional development.

After a period of implementation, CIPRB sought to understand the ECD benefits to children attending the Anchals. A nested Randomized Control Trial was used to assess children's ECD outcomes and a caregiver tool was used to learn about the home environment. The International Developmental and Early Learning Assessment (IDELA) tool focuses on five ECD domains: gross and fine motors skills, early emergent literacy, emergent numeracy, and socio-emotional development. The instrument was translated into Bangla language, and the assessments were administrated by trained data enumerator.

CIPRB assessed 53 children and their caregivers from intervention areas at baseline and 55 at end-line. Similarly, 51 children and their caregivers from the control group were assessed at baseline and 57 at end-line. The results indicated that children in Anchals had significant progression in all the ECD domains, compared to those in the control group who were not in Anchals, or other ECD programmes. The increase on the ECD domain score of the intervention group was significantly higher (23%) than children in the control group (6%) (see Table 2).

The overall domain scores implied that the children from the intervention group were more competent than the children in the control group on all ECD development domains. Therefore, the evidence indicated a significant improvement in ECD outcomes of children who were under supervision and ECD care at the Anchals. Besides reducing child drowning risks, the Anchal intervention appears to be effective in improving children ECD outcomes.

IDELA domains	Intervention (%)			Control (%)		
	Baseline	End line	Mean diff./ Gains	Baseline	End line	Mean diff./ Gains
Emergent literacy	20.7	48.3	27.5	19.4	25.2	5.7
Emergent numeracy	24.7	46.1	21.5	19.9	26.8	6.9
Socio-emotional Development	13.8	37.2	23.4	10.6	18.1	7.4
Motor development	34.5	55.3	21.0	28.7	33.6	4.9
Total IDELA	23.3	46.7	23.4	19.6	25.9	6.3

Table 2: Total IDELA domain scores by interventions

- **Benefits to Anchal Maas and their assistants**

Anchal Maas and their assistants benefitted from the Anchals. Some women had been unable to take up employment previously, restricted by social and cultural barriers. Anchals provided an opportunity for women to use their education, as the nature of the job – working in their own homes with children of the village – was culturally acceptable.

The involvement of village women in the Anchal changed commonly-held conservative perceptions about women's participation in social activities. Anchal Mentoring Officers reported that communities became more accepting of women working and earning money for themselves. The community accepted that singing and dancing by Anchal Maas was a part of the children's learning and development. Gradually, women also became more involved in community decision-making.

"Now parents encouraged their daughter to work for Anchal, but in the past they did not allow the grown-up girls to go outside. Now they themselves want that their daughter to work."

- Anchal Mentoring Officer

Sensitization on child development and safety

Several public pre-primary schools, private Madrasas (religious school) and pre-schools run by NGOs existed in the three intervention areas prior to the start of Project Bhasa. Many of these were open for two hours a day, between 8-10am or 9-11am, with a focus on religious teaching or providing basic literacy. Teachers in these other schools actively valued the Anchal activities, and expressed a wish to collaborate, suggesting that children could attend both settings. Some children participated in pre-school in the early morning and then spent time at the Anchal afterwards.

- **Gender**

Project Bhasa engaged both men and women in drowning prevention activities to build their knowledge of drowning prevention. The project actively aimed for gender equality among the children being enrolled and also engaged both men and women from the community. Each VIPC had two women representatives as a minimum. High attendance of women in courtyard meetings, parents' meetings and social autopsy gatherings ensured women's participation and engagement in the project, although in VIPC and UIPC meetings, male attendance was higher.

Implementation challenges

- **Physical and social barriers to access**

It was particularly difficult for children to walk on muddy roads to and from their Anchal during the rainy season, when roads were often inundated with flood water. In winter, children did not want to travel in cold weather. Some Anchal Maas and their assistants picked up the children from home on the way to the Anchals. Some centres did not have floor mats to cover the full floor space, and children felt cold in winter. CIPRB staff also noted that rooms often became very hot during summer. A lack of electricity in some areas meant that although fans were provided, many did not work. These factors contributed to reduced attendance of children.

> *"The attendance of children become poor during winter. Then they do not want to sit on the cold floor."*
>
> - CIPRB field staff

The Anchals did not provide food; children brought their food from home. Some poor parents were not able to provide snacks to their children, which also caused children not to attend.

> *"Some mothers cannot provide food to children. But other children bring their food. Some do not understand that they have to bring their own food. One child wants to eat the food from another child and makes a fuss and tries to take others food."*
>
> - Anchal assistant

- **Providing day-care for mixed age groups**

The age of enrolment in the Anchal was between 1 and 5 years old, but a considerable number of parents were unwilling to send very young children aged below two years old. Parents were concerned that young children could not talk or engage in games and other activities. Many felt unsure about leaving their child outside their home, and said younger children were more likely to experience separation anxiety from parents and siblings. Mothers were more likely to pick younger children up by noon, so they could take them home to breastfeed.

The Anchal staff faced a challenge engaging children from a range of age groups in one space. Toys for younger children were often not available, and activities tailored to them were not taught to Anchal Maas.

> *"No, I did not give my child to Anchal because he has not yet learnt to speak properly, and he is not yet two years old. We don't think it will be useful for him to attend before he turns two years old."*
>
> - Un-enrolled parent, Anchal assistant

Anchal Maas and assistants were not initially trained to address behavioural issues, although strategies for managing children's behaviour were later shared and discussed between Anchal Maas in the monthly cluster meetings.

- **Retention of Anchal Maas and assistants**

Anchal Maas and assistants sometimes dropped out due to the demands of their roles as wives and mothers – including moving away for marriage, restrictions on working after marriage, pregnancy, and migration with family.

Communities preferred Anchal Maas to be under 40 years old, believing them to be more physically energetic and able to handle young children. However, younger women were more likely to drop out due to pregnancy or other family commitments. Other Anchal Maas and assistants dropped out to attend higher education, or to find better job opportunities, though the stipend paid to Anchal Maas was similar to that of other similar opportunities in communities.

- **Challenges in sustaining engagement of local committee members**

Union Injury Prevention Committee (UIPC) members were difficult to contact at times, and meetings were often postponed because the chairperson was busy. Members were also hesitant to attend if they were not compensated for travel. Project staff felt it was sometimes difficult to engage community-level stakeholders, because UIPC meetings were only held twice a year. If the chairperson and other members were absent, it was difficult to share the progress and challenges of the project with the committee, or to get their support.

SwimSafe: Survival swimming teaching for children

Over three years, Project Bhasa aimed to have 30,000 children graduate from SwimSafe, which was 70% of children aged between 6 and 10 years old living in the intervention areas. To reach this target, 35,422 children were enrolled, with a pass rate of 84.7%. A total of 30,002 children graduated from SwimSafe during the project period.

SwimSafe provided children aged 6-10 with a 21-step swimming course aimed at teaching basic swimming and rescue skills. Each course ran for an hour every day for approximately 12-15 days.
Classes were provided by approximately 100 trained Community Swimming Instructors (CSIs) in modified ponds. Community Swimming Instructors received 120 taka for each child who graduated from their class (approx. £1.14).

Lessons took place in local ponds that were specifically identified in collaboration with the local community and modified with bamboo platforms. Children attended the classes until they had reached the required competencies, including swimming 25 metres unaided, floating in water for 30 seconds, and land-based rescue techniques.

Each class was taught in groups of five by one CSI while remaining children watched from a safe distance. SwimSafe classes were held during the summer months, from April to October. New sites were located each year to ensure accessibility for all eligible children living in the intervention areas.

SwimSafe sites and community engagement were coordinated by the Village Injury Prevention Committees (VIPC), who were involved in selecting ponds, recruiting Community Swimming Instructors (CSIs), enrolling children, and advocating for the intervention with parents and community stakeholders. Instructors often organised local swimming competitions for SwimSafe graduates.

Enabling factors that ensured the effectiveness of the SwimSafe intervention included:

- **Acceptance by the community, and parents**

Parents and the local community believed SwimSafe was beneficial for their children, equipping them with survival and lifesaving skills. Parents said children were exposed to water bodies on their way to and from school, and they felt relieved that their children were able to swim, rescue others and gain life skills. Parents trusted the instructors and felt that the modified ponds and bamboo structures to teach swimming were safe. Many community members also believed that swimming skills could help children survive during a flood or a cyclone.

> *"We like the swimming training and the techniques they provide to train, the fact that you started this SwimSafe programme. We are being able to learn many things through it. Our children are learning many things: swimming, floating, rescues."*
>
> - Enrolled child's parents

- **Training delivered as per Standard Operating Procedure**

Project supervisors ensured that the standard operating procedure (SOP) was followed when SwimSafe ponds and CSIs were being selected. Supervisors conducted monitoring visits during swimming teaching sessions to make sure instructors followed the session routine, including teaching swim skills in 21 steps, as described in the trainer's manual; using kickboards; recording swim participants' attendance, and other protocols. During most visits, supervisors found that the water condition of the ponds was suitable for teaching. To ensure safety during the rainy season – when ponds' water levels rise – the bamboo platform structures used for teaching were raised by instructors, to maintain a safe water depth for teaching preliminary skills to children.

- **Appropriateness of the swimming training for instructors**

The CSIs and their trainers reported that the SwimSafe syllabus was at an appropriate level for children. Trainers also felt confident that instructors were capable of teaching children swimming according to the session plans. The CSIs received first responder training, and said they were confident providing first response to a child if he or she was in danger or difficulty during a lesson, and also during any community emergencies.

Implementation successes

- **Children's confidence**

After completing the course, SwimSafe graduates said they were confident enough to swim, without a fear of water. They also mentioned that they enjoyed learning swimming with their friends. Some children said they were self-motivated to attend the sessions. The children expressed joy and pride at graduating, including receiving a t-shirt to mark this. Opportunities to participate in competitions also encouraged SwimSafe graduates to continue practising swimming.

- **Engaging schools to teach swimming**

Some project staff, area coordinators and supervisors were able to engage schoolteachers. Teachers encouraged their students to learn swimming through SwimSafe when ponds were situated near the school. The CSIs adjusted their swim teaching times to allow teachers to support the intervention. Teachers also provided support by providing classrooms to conduct training of CSIs.

> *"We talked to many schools. In some schools it was noticed that they have made training arrangements and provided a classroom for CSI training. There are some teachers who took the children to the pond to attend swimming session and brought back to school."*
>
> – CIPRB project staff

- **Benefits to CSIs**

This was the first employment experience for many of the young men and women who became CSIs. The role provided an opportunity to work with the community, particularly for the female CSIs, and they were accepted by the community. Culturally, women's mobility is restricted in Bangladesh' rural communities. However, female CSIs had to move around a lot to enrol and teach children swimming, which the communities accepted.

The CSIs received a stipend for their work, to compensate them for their time. Many CSIs, especially women, used the money to continue their education, or to pay for their children's education. They also contributed the money to family members or businesses. The CSIs reported that their role helped them to participate in community development as a whole.

> *"Interviewer: After doing this job, has your relationship changed with community people? Respondent: Yes, it gets better and nicer. Our relationship became more cordial. I became a very well-known face."*
>
> – CSI

Implementation challenges

- **Limited availability of swimming attire and changing rooms**

The CSIs asked children to wear comfortable, appropriate clothing for swimming, as families could not afford to buy swimming costumes. Many children attending lessons wore normal clothing, not suitable for swimming. This was a particular problem for girls, and there was no provision of culturally-acceptable swimming attire for them. CSIs reported that changing after swimming near the village pond was a challenge for the girls. Some arranged a private space in their home or installed a makeshift curtain to mitigate community concerns about girls walking home in wet clothing.

> *"Community people cannot buy a swimming costume. Some come from poor family who (girls) wear loose trousers (pyjama). I asked them not to wear it. But they cannot buy an appropriate dress. Better to provide separate dress to girls – leggings and good quality t-shirt."*
>
> - CSI

- **CSI drop-out**

Some CSIs were unable to find work during the off-season when SwimSafe did not operate, and so they found other work, or moved away for marriage or studying during this time. Some CSIs dropped out during or after training if they were not willing to work in the water. Lastly, some CSIs were not happy with the stipend rate, and others dropped out due to poor physical fitness.

- **Management of menstruation hygiene**

Female CSIs found menstruation a challenge while teaching the course. They reported that on the first day of menstruation, they were asked not to go into the water during swimming teaching. Some taught children from the bank of the pond; others sought help from their co-worker. Some female CSIs cancelled their course sessions on the first day and/or second day of their period.

> Interviewer: *"What has been told in your training about this, any instruction was given?"*
>
> Respondent: *"No, nothing was told about this, only said that don't get into water on the first day."*
>
> -Female CSI

- **Age and gender of children enrolled**

Some inequalities in children's age and gender of children arose during enrolment in the SwimSafe activity. Parents were more likely to send older children after understanding why swimming lessons increased their safety. Many parents were afraid of enrolling younger children, worried that they could get sick, or be bullied. Younger children also had to be picked up from home, and dropped off again, and many parents did not have time to do this every day. Younger children were also afraid of the water and took longer to graduate. It was noted that the CSIs were enrolling fewer younger children – perhaps because incentives were offered to CSIs for teaching a child to swim, so by teaching older children, the CSIs could earn more in a shorter time.

> *"It has to be made compulsory that you have to take half girls and half small ones. You can't take only older ones to teach swimming."*
>
> – CIPRB Field Staff

Fewer girls were enrolled overall in SwimSafe than boys. Cultural concerns around girls' clothing and interaction with boys might have prevented some parents from allowing girls to have swimming lessons. Parents were more comfortable sending their daughters to female CSIs, due to cultural perceptions around appropriate gender contact. Girls also felt shy in front of male CSIs.

Parents were unwilling to send their older daughters aged over 9 to be taught by male CSIs. Girls also felt shy if the pond was near a road, or near a public place. Though ponds were not usually near main roads, curious community members often came to observe swimming classes.

- **Seasonal accessibility**

During the rainy season, ponds became inaccessible due to high water levels or the presence of leeches. If this happened, classes were suspended. Additionally, flooding during rainy seasons sometimes made the pathways to the ponds inaccessible, and children were not willing to travel to class. In these cases, children stopped attending.

> *"Girls are afraid of the leeches , so their guardians do not want to allow them (in rainy season)."*
>
> – CSI

- **Scheduling clash with school lessons**

Many children failed to enrol due to clashes with private tuition classes or school timetables, especially when SwimSafe classes were held in the morning or early afternoon. Some CSIs tried to overcome the issue by taking sessions in the morning and the afternoon, allowing children to choose the best-suited session. However, finding time to suit everyone was challenging.

Community First Response: equipping local people with first aid skills

Project Bhasa had a target to deliver first responder training to 3,000 people over the project period. These included Anchal Maas and their assistants, CSIs and other project-related stakeholders such as VIPC members, and staff of some local NGOs. In total, 2,842 participants received training.

First responder training equips community members with first aid skills to treat injured or unwell people until they receive professional medical treatment, allowing community members to minimise the consequences of serious injury, including drowning.

These skills include assessing a casualty's response, airway, breathing and circulation, and providing Basic Life Support (including cardiopulmonary resuscitation, or CPR). The training also promotes evidence-based treatment of drowning and aims to discourage harmful traditional practices such as spinning the casualty above the head or massaging with hot oil.

Implementation Successes

- **Feasibility**

The training sessions were organised and conducted with support from CIPRB field staff. Trainees were assessed before and after the training to understand their knowledge and skills of first response, and all the trainees were scored for theory and practice. The average post-test score was found to be higher than the pre-test score. Almost all participants completed the first response training successfully, with a pass rate of 95.6%.

> *"When I saw that my child has fallen into the water for some time, I just called Anchal Maa and shout her to provide first response. She is my neighbour and I know that she has training on first aid service. Only she can help my child now I believe."*
>
> – First Aid receiver

- **Reducing traditional harmful practices**

After the training took place it was found that harmful traditional first aid practices were reduced.

> *"My father was an "ojha" (traditional healer). But after receiving this training, I was able to make my father understand that these are not very much helpful and scientific. If any people come to my father, we now tell them, go to hospital. My father does not practice it anymore."*
>
> – Anchal Maa

> *"Though our intention was not negative, we practised the wrong things. Now we know the right things – what to do to treat a wounded person, and we do it. If anyone needs first aid after an injury or if anyone become senseless or falls into water, we call them to help us."*
>
> – First response training participant

VIPC members were actively involved in engaging the community with information on first response and sharing their knowledge to prevent injury. The involvement of women in the first responder training changed conservative perceptions, giving women dignity and respect from the community.

Implementation Challenges

- **Timing, logistics and ongoing training**

Trainers had difficulties travelling to temporary training venues, which lacked adequate seating and suitable spaces for conducting practical sessions. In the rainy season, trainers faced difficulties reaching remote areas to conduct training. Sometimes participants felt awkward when practical sessions were arranged for men and women together, and participants did not want to stay in training sessions for the whole day, between 9am and 4pm.

> *"As village people are busy with various chores, they are not willing to stay from 9am to 4pm. If required, they will attend three or four classes from 9 am to pm rather than two whole days. It is a very big challenge for us to keep their concentrations in such situations."*
>
> – Master Trainer, First Response

Sometimes trainers struggled to manage trainees who believed in traditional healing practices. In some sessions, trainees did not get adequate opportunities to practise CPR, due to a shortage of mannequins, or damaged mannequins.

As the trainees did not receive any refresher training, the majority of them had skill fade after six to 24 months of receiving training. Participants stated that they needed refresher training every six to 12 months, to boost their knowledge. In addition, trainers themselves asked for refresher training to ensure their knowledge of the latest developments and first aid techniques.

> *"It is very much needed to give the trainees refresher training. After the training they showed much enthusiasm to work. But after six months it decreases. That's why they need something where they will be able to recall their training so they will get back their energy to work."*
>
> – Supervisory staff

- **Gender issues**

Some participants said that Anchal Maas and their Assistants who received first responder training couldn't go outside the home to give first aid, as there were cultural barriers from their community and family. Men got more priority than women in decision making, and women (particularly daughters-in-law) first responders were not allowed to go outside the home to provide first response.

> *"We are daughters in law in this area. If we go outside home, my in-laws get angry with us. If we go outside from home people will pass bad comments to us. As we are women, people do not want to take our opinions seriously, if any men tell anything they listen to them."*
>
> – Anchal Maa

- **Elderly and low literacy participants**

Elderly and uneducated trainees required more time to learn, and the trainer had to allocate more time and attention to them. To obtain the training certificate, poor performers had to repeat the tests two or three times to obtain the minimum credit required. Elderly and uneducated trainees were less confident providing first response, and a few were too shy to provide first aid. As a result, some of them were unwilling to provide first response in the community when required. Though they provided first response to victims, some first responders did not fill in the post-event information form.

> *"I do not go out from home much, that's why I cannot tell others and provide first response."*
>
> – Anchal Maa

Community engagement

Community leaders were approached to form committees with the aim of engaging community members in the various interventions available, and to raise awareness of drowning, because in rural Bangladeshi culture, people accept and value suggestions by community leaders.

The committees were tasked with supporting and monitoring the interventions, motivating villagers to participate, and encouraging parents to ensure their children participated.

There were two types of committees – one at village level – known as the Village Injury Prevention Committee (VIPC) – and the other at union level, known as the Union Injury Prevention Committee (UIPC).

- **Village Injury Prevention Committee (VIPC)**

3,217 VIPC meetings were organised over the project period, with 151 VIPCs created. Meeting attendance was 53.4% male and 46.6% female.

CIPRB helped establish Village Injury Prevention Committees (VIPC) in each community where interventions were introduced. These committees comprised of local formal and informal leaders, influential persons, and parents of children from the local community. The committee worked to advocate for the project at the local level and played an important role in building community acceptance for the different components of Project Bhasa.

The VIPCs held a meeting once in a month to discuss project interventions, problems with implementation and good practice. The CIPRB area coordinator attended the meeting, along with supervisors. Members of the committee also provided feedback and comments regarding the quality of interventions in their areas.

The VIPCs played an important role in the recruitment of Anchal Maas, their assistants, and the selection of ponds for swimming teaching, and also secured rooms from government primary schools and social clubs to establish Anchals in the community. They also provided blankets at the Anchals in winter, and clothes to marginalised Anchal children.

In some intervention areas, VIPC members rebuilt the roads and pathways to make the Anchal accessible for community children. VIPC members were also represented in the Union Injury Prevention Committee (UIPC) to link village and union activity. VIPC members secured additional structures, which could be used temporarily if an Anchal was damaged during a storm or floods.

In terms of challenges, there was not enough time to establish all the VIPCs required at the beginning of the project, as it took a lot of resources and effort to set up, form and establish each Anchal. At the beginning there was not an SOP for VIPCs, so much of the planning was done through previous experience. This meant there was not always a consistent and standard approach used.

- **Union Injury Prevention Committee (UIPC)**

123 UIPC meetings were held in 26 UIPCs. More men (81.4%) than women (18.6%) attended.

The Union Injury Prevention Committee (UIPC) was formed from the existing Union Parishad (council). The Chairman of the Union Parishad acted as the president of the UIPC, and nine ward members became committee members. The chairman and all the UIPC members were public representatives, and most of the ward members were also presidents of the VIPC. There was one UIPC in each of the 26 intervention unions.

Each UIPC organised a biannual meeting at the Union Parishad office to discuss project progress. The UIPC helped to identify the most vulnerable unions to drowning, using risk mapping processes before the implementation of the project. The committee also introduced the project to the local administration and cooperated with the local community to implement the planned activities. The CIPRB deputy team leader and area coordinator attended the meetings to share progress, and also discussed any problems identified by the UIPC.

UIPC members also helped to acquire spare equipment from other NGOs, and installed tube wells and toilets at the Anchals. The committees provided blankets for all the Anchals in wintertime. They also helped marginalised Anchal Maas to acquire a government vulnerable group feeding (VGF) card that supplied food in disaster-prone areas.

The committee supported and attended the yearly Anchal and SwimSafe events at union and upazila level, and also provided updates to the upazila chairman, executive officer, and other local leaders. As a result, the authorities at upazila level focused more on drowning issues, and local media reported fatal drowning incidents.

In terms of challenges, meetings only took place twice a year, and members were often busy with other work, and unable to attend meetings or project visits. There was no representation of VIPC members in the UIPC committee, and a lack of proper coordination between the UIPC and VIPC was also identified.

- **Courtyard meetings**

1,058 courtyard meetings were attended by 29,722 people; 66% were women and 34% men

Courtyard meetings were regular events facilitated by CIPRB field staff to engage local community members about the risks of drowning, promote the availability of local interventions (SwimSafe and Anchal) and to understand any concerns members of the community may have.

Each courtyard meeting was attended by 40 to 50 local community residents. A CIPRB supervisor facilitated the session, described the magnitude and risk factors of the drowning problem, and suggested possible prevention measures. At the end, the audience asked questions.

Male attendance was low, as the meetings were held during the day. Engaging participants in the meetings was a challenge, as project supervisors were not experienced at arranging such gatherings.

- **Social Autopsy Meeting**

During the project period there were 73 social autopsies conducted in response to child drowning deaths in the three intervention areas, involving around 3,500 people, with 37.6% men and 62.4% women.

A social autopsy is a method of understanding the context surrounding a person's death, not only the cause. Social autopsies are suitable for areas where mortality data is limited or poor quality, and where members of a population are easily accessible. Outcomes from social autopsies can be useful in targeting or refining interventions to prevent drowning.

As part of Project Bhasa, social autopsy meetings were held after staff were made aware of a drowning death within intervention areas, and involved the family of the deceased, their neighbours, and local leaders. A trained staff member led the process using a structured, standardised analysis of the incident. The dialogue served to identify factors which contributed to the drowning death, and to identify appropriate and achievable measures that could be implemented to prevent further drowning deaths.

The community was aware that Project Bhasa was the only project tackling drowning, and in the case of fatal drowning incidents, they communicated with project staff. However, some family members did not want to participate, as they felt guilty, while women were reluctant to share their views with men present. Sometimes, the parents of a deceased child became emotional, and it was difficult to continue the meeting.

Some of the positive actions taken after social autopsies were held included neighbours fencing their ponds or even getting rid of ponds next to houses. Some parents reported installing door barriers to prevent their children drowning.

Community awareness

Community awareness activities included raising awareness in schools, interactive popular theatre shows, and community radio.

- **Water safety awareness for school children**

167 schools participated in the scheme, with 448 sessions conducted for 19,038 students. Over 10,000 girls and approximately 9,000 boys took part.

This activity was designed to increase water safety knowledge amongst school-age children in the intervention areas. One of Project Bhasa's objectives was to engage other potential stakeholders to implement drowning prevention interventions. CIPRB worked with the Bangladesh Fire Service and Civil Defence (BFSCD) to implement the school awareness sessions. Trained by CIPRB, staff from the Fire Service and Civil Defence conducted sessions of 45 to 60 minutes on water safety for school classes one to eight (boys and girls aged 6 to 14). They also demonstrated a land-based rescue, and throw rescue techniques, plus how to wear a personal flotation device.

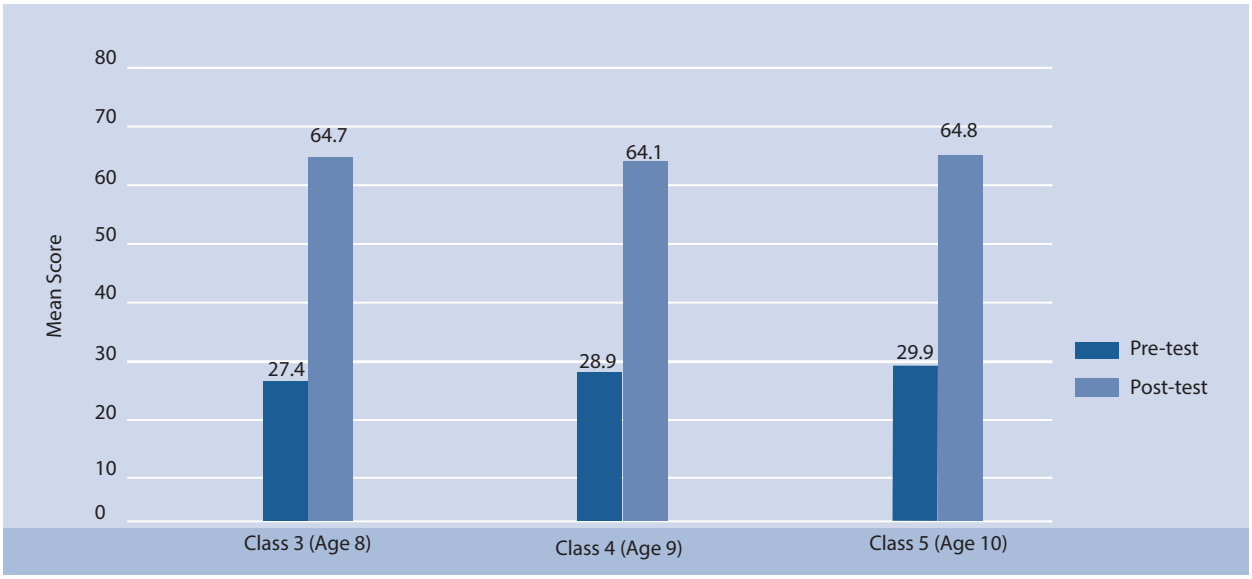


Figure 6: Mean score of the students in pre and post-test by class

To assess the school awareness project, 10% of participating students were tested before and after the sessions. The results showed that the older students of classes three, four and five (aged 8, 9 and 10) who attended the sessions increased their knowledge of water safety (see Figure 6).

- **Interactive Popular Theatre (IPT)**

117 shows were organised in three intervention areas, reaching 39,313 people, 49% of the audience was male, and 51% female.

Interactive popular theatre (IPT) is a well-accepted way of disseminating information in Bangladesh's rural communities. A group of local theatre performers were selected and trained to write and develop a script for a show focusing on child drowning and how it can be prevented. They worked with an expert consultant, who was responsible for designing and developing a script that would increase communities' awareness of drowning and suggest ways of preventing drowning.

Theatre shows were announced in the community, and took place in school grounds or open spaces, with an audience of around 300 people. After each show, the audience took part in an interactive question and answer session.

The rainy season was the main challenge to arranging such shows. Sometimes a member of the theatre group was absent, and it was difficult to arrange a replacement. Three intervention areas were covered by two theatre groups, costing more travelling time and money.

- **Video Shows**

109 shows were organised and reached 28,169 people, 61% percent of the audiences were male and almost 40% were female.

Community video shows were organised during the evening in popular meeting places, such as local shopping areas or close to busy outdoor tea stalls. They predominantly targeted men, as men attended the other community awareness interventions in low numbers. During Project Bhasa an updated drowning prevention drama film, approximately 30 minutes in length, was developed to ensure the messages were up-to-date and the content was compelling enough to keep the audience engaged for its full duration.

At the end of the video showing, local CIPRB project staff ran an interactive session with audience members to better understand what they had learned from the film, and ensure they knew the availability of local interventions which their children could attend, such as Anchal and SwimSafe.

- **Community radio**

The child drowning prevention public service announcement (PSA) was heard by communities across the intervention areas of Kalapara and Taltali.

Krishi Radio, a rural community radio station, is the only government community radio station in Bangladesh. It was established under the Ministry of Agriculture's Community Rural Radio Project, assisted by the United Nation's Food and Agricultural Organization.

The radio broadcasts information on agriculture, trade, education, health and society, women's rights, rural development, environment, weather and culture, and covers Patuakhali and Barguna districts, where Project Bhasa was located.

Krishi Radio agreed to broadcast information about child drowning and its prevention measures as a public service announcement (PSA) in early 2019, to make communities in the catchment area more aware of the issue. The PSA was broadcast four days a week throughout that year. Krishi Radio reaches 250,000 people in Patuakhali and Barguna, though the service does not reach Betagi.

Stakeholder engagement

Multiple approaches were taken to engage policy makers and decision implementers to increase awareness, co-ordination, and resource mobilisation to prevent child drowning in the Barishal Division. In Bangladesh's policy context, if the relevant government agencies are not engaged during the implementation stage, it becomes difficult to sustain any development activity once a funded project ends. In order to secure buy-in from stakeholders, multiple government and non-government entities were engaged from the design phase of the project.

- **Engaging National Government**

Drowning has historically been regarded as a health issue within Bangladesh, although many of the interventions and approaches to prevent drowning are not within the remit of the health sector. It was therefore important to engage the Ministry of Health and Family Welfare from the beginning of Project Bhasa, but also to ensure that other government ministries were engaged and encouraged to consider drowning prevention as relevant to their own portfolios.

One of the earliest activities with government was to engage them through the formation of a National Steering Committee. This was formed to guide the activities of Project Bhasa, as well as to increase awareness of the scale of drowning deaths in Barishal and ensure inputs from all concerned stakeholders. Due to a history of strong engagement, CIPRB managed to secure a senior leader from the Directorate General of Health Services, Ministry of Health and Family Welfare to chair the National Steering Committee. Representatives from other relevant government agencies and development partners, including UN agencies and NGOS, were also members of the Steering Committee.

Government endorsement of the findings from the baseline survey was sought and secured from Professor A.H.M. Enayet Hussain, Additional Director General, Planning & Development, DGHS, and chair of the National Steering Committee for Project Bhasa, to write the foreword of the published context analysis report. This helped to secure endorsement by DGHS and acceptance by other government stakeholders. Findings from the Project Bhasa context analysis were shared both at the national and divisional level during early 2018. The dissemination workshops were attended by government and non-government representatives, UN agencies and institutions.

- **Engaging Divisional Government**

Multiple stakeholders were engaged at division, district and upazila level throughout the project. Project Bhasa staff organised four divisional meetings, two district level meeting and six upazila level meetings with a sole focus on drowning prevention, to raise awareness and secure support. A Divisional Steering Committee was formed following the suggestions from the stakeholders, including the Director (Health) Barishal, who emphasised the need for increased coordination and cooperation to implement drowning prevention activities and support Project Bhasa.

The development of a divisional drowning prevention plan, and its approval by government, is critical in order to scale up and sustain the drowning prevention interventions in Barishal. On the recommendation of the Divisional Steering Committee, CIPRB took a coordinating role in drafting a divisional drowning prevention plan. Stakeholders were consulted through a workshop, and the participants provided feedback and recommendations. The plan was revised and was due to be approved by the Divisional Steering Committee in early 2020. However, delays due to the Covid-19 pandemic stalled the final review and approval. This should be considered as a priority action within the next phase of Project Bhasa.

- **Engaging the media**

Two briefing events, which were well attended by journalists from print, electronic and online media, were organised at divisional and national level. Following this, a visit to the Project Bhasa intervention areas was organised for eight journalists from seven media outlets, covering print, electronic and online news portals.

Journalists who had been briefed and attended Project Bhasa events interviewed key government officials from various ministries responsible for health, women and children, as well as drowning prevention experts from CIPRB. There has subsequently been an increase in features and news reporting on drowning, including tv coverage and talk shows.

- **Engaging other stakeholders**

UN agencies including the World Health Organization, UNICEF and the World Food Programme were engaged throughout Project Bhasa, including as members of the national and divisional steering committees. These agencies were identified as priorities for engagement, due to their focus on children and health, their partnerships with government, and their potential to integrate on drowning prevention within their own programmes.

NGOs were also active members of the steering committees, though not all were aware of the scale of child drowning in Bangladesh or Barishal when they were first approached as part of Project Bhasa. There was a specific effort made to engage NGOs with a focus on children, including those members of the Bangladesh ECD Network (BEN). Members of BEN shared experiences and models of their ECD projects and together lobbied the government for increased access to ECD services for Bangladeshi children, including the preparation of a draft Child Day-care Centre Act.

Challenges

Competing priorities and issues made it difficult to secure the time and attention of some stakeholders, such as Members of Parliament. Those stakeholders who were engaged and supportive of Project Bhasa activities, including members of the national and divisional committees, were often replaced due to changes in personnel over the project time period. This resulted in new relationships having to be established and new champions identified, which had implications for the project's objectives.

5

Results

The results of Project Bhasa presented in this report are based on an analysis of monitoring data, a number of commissioned learning reviews, and an evaluation to understand the implementation and effectiveness of Project Bhasa's drowning prevention interventions in the Barishal division.

Evaluation methods

The methods used to evaluate the project included both quantitative and qualitative methods. To evaluate the project reach, quality, successes and challenges, a Process Evaluation was conducted using a mixed-method approach. To evaluate the effectiveness of the interventions, an Impact Evaluation was conducted using baseline and end-line surveys.

1. **Process evaluation:** Quantitative data were obtained from the project monitoring system, and qualitative data were gathered by using various qualitative techniques.

2. **Impact evaluation:** Impact evaluation was conducted to measure the effectiveness of the intervention package. Prior to implementing the intervention package, a baseline survey was conducted. After three years, an end-line survey was conducted to compare the drowning rates with the baseline. The baseline and end-line surveys also included a comparison area where no interventions were implemented.

Results from Project Bhasa's baseline and end-line studies

The findings from the baseline and end-line results are promising, but inconclusive. Large reductions in both fatal and non-fatal drowning were observed in the intervention area, however we are unable to say with confidence that these reductions differed significantly to the comparison area.

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After three years of Project Bhasa, the fatal drowning rate in the intervention upazilas for children aged 1 to 10 years reduced by 53.7%, from 152.2 to 70.4 per 100,000 population per year.

In the comparison area, rates of fatal drowning in these age-groups reduced by 37.5%.

In the intervention upazilas, rates of drowning in children aged between 1 and 5 years, and children aged 6 to 10 years reduced by 54.9% and 48.9% respectively. In the comparison area, rates of fatal drowning in these age groups reduced by 36.5% and 39.7% (see Table 3).

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Age	Area	Study Phase	Male Rate (95% CI)	Female Rate (95% CI)	Person Rate (95% CI)
1-5 years	Comparison Area	Baseline	266.3 (122.1 – 410.6)	131.2 (66.9 – 195.5)	197.8 (123.5 – 272.2)
		Follow-up	146.8 (105.3 – 188.2)	104.1 (68.8 – 139.5)	125.7 (97.7 – 153.6)
	Intervention Area	Baseline	269.7 (182.5 – 356.8)	299.7 (195.1 – 404.3)	285.0 (210.1 – 359.8)
		Follow-up	150.4 (110.3 – 190.5)	106.2 (72.8 – 139.7)	128.5 (102.1 – 155.0)
6-10 years	Comparison Area	Baseline	37.8 (0.0 – 86.4)	55.8 (10.8 – 100.7)	46.8 (10.2 – 83.4)
		Follow-up	43.6 (18.6 – 68.6)	12.4 (0.0 – 25.2)	28.2 (13.6 – 42.9)
	Intervention Area	Baseline	31.4 (1.5 – 61.2)	30.5 (0.6 – 60.5)	30.9 (8.2 – 53.6)
		Follow-up	22.5 (4.4 – 40.7)	8.9 (0.0 – 17.7)	15.8 (5.7 – 26.0)
1-10 years	Comparison Area	Baseline	148.9 (77.0 – 220.8)	92.7 (55.6 – 129.8)	120.5 (79.7 – 161.4)
		Follow-up	93.3 (70.2 – 116.5)	56.8 (38.4 – 75.1)	75.3 (59.9 – 90.7)
	Intervention Area	Baseline	144.5 (103.1 – 185.8)	159.6 (108.8 – 210.5)	152.2 (114.6 – 189.7)
		Follow-up	84.2 (62.9 – 105.5)	56.2 (39.0 – 73.4)	70.4 (56.7 – 84.0)

Table 3: Fatal drowning rates (per 100,000 population/yr.) in intervention area by study phase, age and sex (population weighted)

The non-fatal drowning rate in the intervention upazilas for children aged 1 to 10 years reduced by 67.0%, from 6356.2 to 2096.1 per 100,000 people per year.

In the comparison area, rates of non-fatal drowning in these age-groups reduced by 56.2%.

In the intervention upazilas, rates of non-fatal drowning in children aged between 1 and 5 years, and children aged 6 to 10 years reduced by 66.8% and 70.0% respectively. In the comparison area, rates of non-fatal drowning in these age groups reduced by 58.0% and 47.5% (see Table 4).

Age	Area	Study Phase	Male Rate (95% CI)	Female Rate (95% CI)	Person Rate (95% CI)
1-5 years	Comparison Area	Baseline	10672.4 (7535.1 – 13809.7)	10014.9 (7671.6 – 12358.2)	10338.7 (7713.2 – 12964.2)
		Follow-up	4691.1 (3564.4 – 5817.8)	3984.5 (2976.3 – 4992.7)	4341.7 (3305.4 – 5378.0)
	Intervention Area	Baseline	11159.6 (9791.9 – 12527.2)	11012.9 (9996.4 – 12029.5)	11084.8 (10028.0- 12141.6)
		Follow-up	3938.5 (3367.8 – 4509.1	3407.5 (2901.6 – 3913.4)	3675.1 (3176.1 – 4174.2)
6-10 years	Comparison Area	Baseline	2600.2 (1934.2 – 3266.2)	2146.4 (1429.3 – 2863.5)	2371.9 (1766.0 – 2977.9)
		Follow-up	1231.6 (841.5 – 1621.6)	1231.6 (841.5 – 1621.6)	1245.3 (836.2 – 1654.5)
	Intervention Area	Baseline	1761.3 (1359.4 – 2163.1)	2354.6 (1847.1 – 2862.1)	2060.8 (1651.3 – 2470.3
		Follow-up	596.3 (453.5 – 739.1)	640.0 (468.5 – 811.5)	617.8 (483.3 – 752.4)
1-10 years	Comparison Area	Baseline	6515.2 (4699.1 – 8331.3)	5997.7 (4646.2 – 7349.2)	6253.8 (4725.9 – 7781.6)
		Follow-up	2897.0 (2188.7 – 3605.2)	2577.2 (1881.7 – 3272.6)	2739.2 (2052.8 – 3425.6)
	Intervention Area	Baseline	6210.9 (5502.1 – 6919.7)	6497.3 (5853.1 – 7141.6)	6356.2 (5754.5 – 6957.8)
		Follow-up	2205.6 (1888.2 – 2522.9)	1983.8 (1694.8 – 2272.8)	2096.1 (1808.7 – 2383.4)

Table 4: Non-Fatal drowning rates (per 100,000 population/yr.) in intervention area by study phase, age and sex (population weighted)

Results from core interventions

Anchals:

Project Bhasa aimed to have 10,000 children enrolled in the Anchal intervention, representing 29.3% of all children aged 1 to 5 years living in the intervention areas. This required the provision of 400 Anchal centres: 120 in Betagi, 200 in Kalapara and 80 in Taltali. Based on evidence of effectiveness from previous projects, the target was for each child to attend 80% of the Anchal sessions.

558 Anchals were set up over the three years of implementation, and a total of 17,651 children were enrolled (50.5% boys, 49.5% girls). 158 of the Anchals closed, primarily due to Anchal Maas and Assistants dropping out to move away for marriage, restrictions placed on them by family members, and having children of their own. The number of children enrolled in the Anchals is higher than the target for a number of reasons – children who reached the age of 6 graduated from an Anchal (3,881 children), and some children dropped out (5,579 children).

If a child was absent from the Anchal continuously for three months, the project assumed that the child had dropped out. Some children were forced to drop out due to Anchal closure, where it was not possible for an alternative Anchal to be found or established. The monitoring data showed that the percentage of dropouts was higher (over 30%) among older children aged 4 to 5 years old (see Table 5). One of the main reasons that older children dropped out was to attend religious schools and kindergartens when they turned four. In Bangladesh, 5 year olds can also start attending pre-primary schools operated by the government.

Status	All Upazilas		
	Boys n(%)	Girls n(%)	Both n(%)
Graduated	1,921(22.0)	1,960(22.0)	3,881(22.0)
Attending at December 2019	3,992(45.7)	4,199(47.1)	8,191(46.4)
Dropped-out	2,828(32.3)	2,751(30.9)	5,579(31.6)
All children	8,741(100.0)	8,910(100.0)	17,651(100.0)

Table 5. Distribution of Anchal children by status and gender

The majority (81.3%) of the children enrolled in all the intervention areas were between aged between 12 months and 4 years, though a small number of children were also enrolled who were below 12 months of age and above four years.

During the project period, the average days that children spent in attendance at Anchals was tracked. Monitoring data found that the average number of days of attendance was 16.5 days. The project anticipated that children would attend an Anchal for 22 days every month, to keep them safe from drowning and other injuries, and to also benefit from early childhood development. The highest average days of attendance was in Kalapara, while the lowest was in Taltali. The study showed that the average days of attendance fell to below 14 days during Ramadan, religious festivals, continuous heavy rain, and disasters.

Anchal staff faced particular challenges around the attendance and engagement of younger children, those under 2.5 years old. They reported that these children were likely spend less time at the Anchal, as parents would take them home for breastfeeding or sleep. Parents expressed concern that their young children may be bullied by older children, had a lack of belief that they could engage with ECD activities, and were unwilling to leave them outside of the home. Additionally, Anchal Maas had only learned a small number of activities that could be tailored to the capabilities of this age group. Toys that stimulate younger children were also not available.

Project Bhasa showed that it is possible to improve ECD provision and outcomes for children through the Anchal model. Children aged between 3.5 and 5 years old who attended Anchals for at least one year were assessed through an internationally recognised tool called IDELA. It was found that the children's average score increased by 23.4%. In the comparison areas, the children's average score increased by 6.3%.

SwimSafe

Over three years, Project Bhasa aimed to graduate 30,000 children, which was 70% of children aged between 6 and 10 living in the intervention areas. At the end of the project period SwimSafe enrolled 35,422 children from Kalapara, Betagi and Taltali.

Overall, 84.7% of children who had enrolled graduated (87.1% of enrolled boys and 81.4% of enrolled girls), 3.6% children failed, and 11.7% children dropped out or were absent on assessment day.

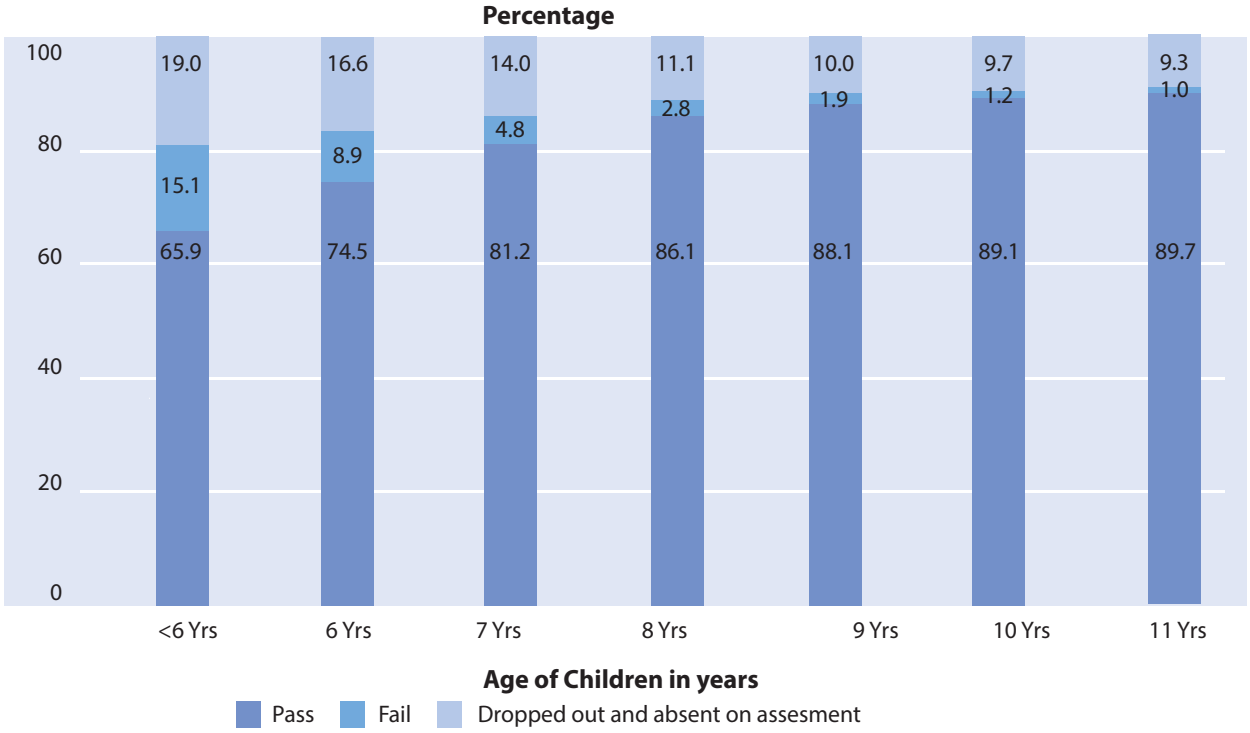

Figure 7: Comparison of pass rates following assessment in SwimSafe, by age

Failure and drop out was higher amongst younger children (see Figure 7). The highest percentage of failure and dropped-out children was among those who were 6 years old and below. The percentage of passes was higher for those children aged 10 years and above. Data showed that a total of 1404 children were re-enrolled in the SwimSafe project following dropout or failure. Of them, 54.1% were boys, and 45.9% were girls.

Age at enrolment	All Upazilas		
	Boys n(%)	Girls n(%)	Both n(%)
<6 years	1013 (4.9)	759 (5.1)	1772 (5.0)
6 years	2265 (11.0)	1679 (11.4)	3944 (11.1)
7 years	2723 (13.2)	2093 (14.2)	4816 (13.6)
8 years	3141 (15.2)	2361 (16.0)	5502 (15.5)
9 years	3542 (17.2)	2542 (17.2)	6084 (17.2)
10 years	4165 (20.2)	2958 (20.0)	7123 (20.1)
11 years	3788 (18.4)	2393 (16.2)	6181 (17.4)
and above	20637 (100.0)	14785 (100.0)	35422 (100.0)

Table 6: Distribution of enrolled children by age and sex

Overall, there was a higher enrolment of boys (58.3%) than girls (41.7%) in the SwimSafe project.

Mothers of older girls were often unwilling to send them to male CSIs, and girls were also reluctant to learn swimming in an open pond next to the main road. As this was a new intervention for the community, people came to observe the swimming sessions – which made the girl participants uncomfortable. To address the issue, the project recruited more female CSIs, and by the end of the project, 85.0% of the CSIs were female.

22% of participants who graduated from the project were above or below the recommended age for enrolment in the project. CSIs enrolled older children due to community pressure, and because older children were more likely to graduate (CSIs were paid on graduation). As a result, a proportion of targeted children who were supposed to attend did not get the opportunity to learn to swim.

Community First Response

Project Bhasa had a target to deliver first responder training to 3,000 people over the project period. These included Anchal Maas and their assistants, CSIs and other project-related stakeholders such as VIPC members and staff of some local NGOs. Training was also provided to members of Ansar-VDP, a national volunteer community programme, which falls under the responsibility of the Ministry of Home Affairs.

In total, 2,842 participants received training during the project period. This was 573 (20.8%) Anchal Maas, 485 Anchal assistants (14%), 305 (11.1%) community swimming instructors (CSI), 812 (29.5%) VIPC members, 542 (19.7%) Ansar-VDP members and 134 (4.9%) other stakeholders were trained in the three intervention areas.

First responders who completed the training course were awarded a certificate stating they were competent in assisting an injured person until help arrives, including wound management and resuscitation.

During the project period, trained first responders carried out 4,002 first aid actions in the community for various types of injures and other emergencies, not limited to drowning. The majority of non-fatal drowning cases (71%) required the recovery position as first response, while 11% of drowning cases received CPR. The majority of road traffic injuries, falls, cuts and machine-injury cases required bandages. For other emergencies, 36.3% required keeping the victim in recovery position, while 40% of cases needed their legs elevating to help reduce shock.

6

Key findings and recommendations

Key findings

Project Bhasa interventions covered approximately 25% of children aged 1 to 5 years in the 3 intervention areas and 70% of those aged 6 to 10 years. The three core interventions (Anchal, SwimSafe and Community First Response) were found to be successful in reaching delivery targets, and largely followed intended operating procedures. Communities also reported being satisfied with the interventions. Both Anchal and SwimSafe interventions were used by families of different ethnicities (Bengali and Rakhine) and all religions and were accessible to families of all socio-economic status as there were no fees.

Large reductions in fatal and non-fatal drownings were recorded in the both the intervention and comparison areas for children aged 1 to 10 years. However, there was no significant difference between intervention and comparison areas, so it is not possible to say that the reduction in drowning in the intervention area is a direct result of the Project Bhasa interventions. However, there was a statistically significant difference identified in non-fatal drownings for children aged 6 to 10 years in the intervention areas.

Project Bhasa was not designed to measure the effectiveness of individual interventions. The scale of interventions was based on availability of resources, so it may be that the scale of the interventions was not large enough to measure a significant effect. Without further information on drowning deaths in the comparison area, it is difficult to draw conclusions.

The set up and inclusion of Union Injury Prevention Committees (UIPCs) and Village Injury Prevention Committees (VIPCs) in the project was found to be a successful method for enabling community ownership of the interventions. Although the committees' engagement varied between sites, overall, they provided a powerful tool to involve community members in the implementation of the project. Additionally, the range of community engagement activities such as parent meetings, courtyard meetings, video shows, CIPRB staff visits, SwimSafe graduations and VIPC-run events all ensured that the interventions remained visible and credible to community members.

There are opportunities for collaboration with other projects and interventions running in the Barishal division. These include pre-primary schools, Madrasas and pre-schools run by NGOs. These are mostly open for two hours each day, such as 8-10am or 9-11am. Although these projects have different objectives, with a focus on religious teaching or basic literacy, there may be some willingness at a community level to work together to help children attend both activities.

Through the ongoing monitoring and the project evaluation, several areas for improvement were identified that would better enable the core interventions to be implemented more effectively. Consistent attendance and drop out of children were found to be a challenge, especially relating to younger children. In SwimSafe, attendance of girls was lower than of boys due to cultural barriers. Neither Anchal nor SwimSafe had specific strategies to support access for children with disabilities. These factors limited the ability of the interventions to protect all children from drowning and highlighted an equity gap.

There was a high turnover of key government personnel, at divisional and national level in particular, throughout the project period. Significant time and resources were taken up by briefing and building relationships with new representatives, which disrupted the momentum of steering committees and the development of drowning prevention plans.

There is a significant challenge of positioning drowning as an issue requiring action beyond the scope of the health sector. Some progress has been made, for example with the Ministry of Women's and Children's Affairs, who are exploring government support for a package of interventions for women and children that would include community day-care, and the provision of survival swimming training for children.

Recommendations

Following the completion of Project Bhasa phase one, a number of recommendations have been identified. There are two types of recommendations; those that will be taken forward as part of the second phase of Project Bhasa, and others which need consideration and potential action, but which sit outside the parameters of Project Bhasa.

Recommendations for Project Bhasa phase two:

General:

- Co-design strategies to ensure enrolment, attendance and engagement of children in the interventions, particularly for younger (high risk) children, children with disabilities, and girls
- Strengthen the monitoring systems and processes for all interventions to ensure improvements and decisions can be made using up-to-date and accurate information
- Support divisional authorities to finalise the draft divisional drowning prevention plan
- Continue and develop the national and divisional stakeholder forums to ensure ongoing support for activities in the Barishal Division
- Work with other implementing organisations to integrate/include drowning prevention activities in their policies and programmes

For Anchals:

- Better understand the drownings which occur outside the times of 9am-1pm. Look at options to adapt existing interventions to ensure they are appropriately targeting the main risk periods
- Look at ways to improve attendance rates and reduce drop out. E.g. different/additional ECD activities, more interaction and less repetition. Learn from Anchals with high attendance and low dropout rates
- Change opening times to 10am – 2pm for the winter months, in communities where children find it difficult to attend on cold mornings
- Pilot alternative approaches to ensure children aged two and under are attending Anchals for the whole period (e.g. 9am to 1pm) and attend regularly

For SwimSafe:

- Explore options to ensure younger children (6 to 7 years old) attend and graduate SwimSafe. These children are the most vulnerable within the target age range (6 to 10 year-olds)
- Implement strategies to follow up children who stop attending, either due to mid-session drop out or failure, and work with families to encourage the child to return to classes
- Consider options for a more inclusive approach regarding female swimming instructors and challenges during menstruation, including by better consulting them
- Continue to train female swimming instructors to encourage high levels of enrolment by girls

For Community First Response:

- Develop and strengthen partnerships with community-based delivery organisations for scale-up of first responder training

For Community Engagement:

- Ensure that a range of community engagement and awareness-raising activities form part of the support activities, in order to improve the take-up and efficiencies of the core interventions
- Identify suitable incentives for VIPC members (e.g. community status) and explore opportunities to increase local 'ownership'

Recommendations for work outside Project Bhasa phase two:

- Pilot alternative interventions to mitigate the risk of drowning for children under two
- Investigate other solutions to mitigate the risks of drowning during times when children are less likely to attend formal supervision. E.g. rainy season, Ramadan, during the afternoons
- Explore options for other entities to teach SwimSafe. E.g. schoolteachers or NGOs to help expand reach

Looking ahead – implementing the recommendations

Phase two of Project Bhasa, which started in January 2021, is designed to build on the foundations secured in phase one and implement the relevant recommendations identified. A transition period to reflect on the findings from phase one had always been intended but was longer than anticipated due to the impact of the Covid-19 pandemic, which required the drowning prevention interventions to be suspended or pivoted.

Phase two of Project Bhasa seeks to sustain and expand drowning prevention activity across the Barishal Division. This will require adjustments, targeted improvements, and the engagement of a much wider group of stakeholders. A core element is to ensure that relevant government ministries, development partners, and NGOs (international, national, and local) work together to integrate core drowning prevention interventions, such as child supervision, survival swimming and first responder training, into their relevant activities. These interventions are needed throughout the Barishal Division to address the significant burden of drowning deaths in children under the age of 10.

Phase two will also aim to secure the endorsement and implementation of the draft divisional drowning prevention plan for Barishal, to ensure increased government ownership of the response to the problem, and effective coordination of activity by a wider range of partners.

Conclusion

The first phase of Project Bhasa was designed to better understand and respond to the burden of drowning in selected communities of the Barishal Division, and to encourage decision-makers to play their part in the urgent effort of protecting children from this leading killer.

The results of the survey carried out at the start of the project in the Barishal Division confirmed that children made up most of the drowning deaths and helped shape the efforts of the project to respond to the burden. The child-focused drowning prevention activities were welcomed by the communities they served, with delivery targets for the core activities met or exceeded.

The project provided opportunities for women's empowerment, particularly increasing women's access to resources and skill development. There is also some evidence to suggest that the interventions are changing perceptions around the social status of women in communities where the project was active. Several academic articles and related publications on various aspects of Project Bhasa, including gender, have been produced, to add to the growing evidence base on the implementation of drowning prevention interventions in high burden, low resource settings.

Over the project period, drowning rates reduced substantially. Although there was an overall reduction in drowning rates in the project intervention areas, there was also a reduction in the comparison areas, so it was not possible to say with certainty that the reduction in drowning was a direct result of the Project Bhasa interventions. Project Bhasa was not designed to measure the effectiveness of individual interventions, but to consider the acceptability and uptake of a package of measures for drowning prevention.

Project monitoring and evaluation have highlighted areas for improvement in the implementation of interventions, particularly related to inconsistent attendance or drop out, both of which negatively impact the effectiveness of the interventions. Data showed which children were missing from the interventions, often the youngest age groups and girls.

The findings of Project Bhasa suggest that out-of-home childcare may not be the most suitable solution for children aged two and under, who are most vulnerable to drowning. Other ways of protecting younger children need to be carefully considered and tested.

Phase two will also aim to secure the endorsement and implementation of the draft divisional drowning prevention plan for Barishal, to ensure increased government ownership of the response to the problem, and effective coordination of activity by a wider range of partners.

The findings from phase one of Project Bhasa, as well as the ongoing implementation of phase two, can help inform and enhance overall efforts to prevent drowning within Bangladesh. Ultimately, sustained action on drowning prevention requires government leadership and long-term investment.

Ultimately, sustained action on drowning prevention requires government leadership and long-term investment. The Government of Bangladesh has shown global leadership on drowning prevention, including through their efforts to secure a first-ever UN Resolution on global drowning prevention in April 2021. The new UN Resolution sets out the actions that every country should take to prevent drowning, establishing a framework for Bangladesh's domestic drowning prevention ambition, and an expectation that the long-awaited national drowning prevention strategy will be finalised and launched by the end of 2021.

Project Bhasa Related Publications:

Published Journal articles:

1. Implementing a creche-based community drowning programme in rural Bangladesh: a process evaluation *Gupta M, Rahman A, Dutta NC, Saha AK, Zwi A, Ivers RQ, Jagnoor J.Inj* Prev 2021

2. Impact of a rural drowning reduction programme in Bangladesh on gender equity, norms and behaviour: a mixed-method analysis *Gupta M, Rahman A, Dutta NC, Hossain MS, Nambiar D, Parveen S, Ivers R, Jagnoor J.BMJ* Open 2020

3. Opportunities for gender transformative approaches in a community-based drowning reduction program in Bangladesh *Gupta M, Rahman A, Dutta NC, Nambiar D, Ivers R, Jagnoor J.Int J Equity Health* 2020

4. Context of water transport related drownings in Bangladesh: a qualitative study *Jagnoor J, Lukaszyk C, Baset KU, Ivers R, Easmin S, Rahman A.BMC Public Health* 2019

5. Vulnerability to fatal drowning among the population in Southern Bangladesh: findings from a cross-sectional household survey *Rahman A, Jagnoor J, Baset KU, Ryan D, Ahmed T, Rogers K, Hossain MJ, Ivers R, Rahman AKMF. BMJ* Open 2019

6. Exploring the impact, response and preparedness to water-related natural disasters in the Barishal division of Bangladesh: a mixed methods study *Jagnoor J, Rahman A, Cullen P, Chowdhury FK, Lukaszyk C, Baset KU, Ivers R.BMJ* Open 2019

7. Complexity in Implementing Community Drowning Reduction Programs in Southern Bangladesh: A Process Evaluation Protocol *Gupta M, Rahman A, Ul Baset K, Ivers R, Zwi AB, Hossain S, Rahman F, Jagnoor J.Int J Environ Res Public Health* 2019

8. The association between water, sanitation and hygiene (WASH) conditions and drowning in Bangladesh *Jagnoor J, Gupta M, Ul Baset K, Ryan D, Ivers R, Rahman A.J Water Health* 2019

Published reports:

Anchal ECD Intervention Impact Assessment Report *Parveen R, Rahman A* 2020

Project Bhasa: Ending the drowning epidemic in the Barishal division, Bangladesh.

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[vii] Fazlur Rahman, Saideep Bose, Michael Linnan, Aminur Rahman, Saidur Mashreky, Benjamin Haaland, Eric Finkelstein (2012) 'Cost-effectiveness of an injury and drowning prevention program in Bangladesh' Paediatrics

[viii] Olakunle Alonge, David Bishai, Shirin Wadhwaniya, Priyanka Agrawal, Aminur Rahman, Emdad Md. Dewan Hoque, Kamran Ul Baset, Shumona Sharmin Salam, Al-Amin Bhuiyan, Md Irteja Islam, Abu Talab, Qazi Sadeq-ur Rahman, Fazlur Rahman, Shams El-Arifeen & Adnan A. Hyder (2020) 'Large-scale evaluation of interventions designed to reduce childhood Drownings in rural Bangladesh: a before and after cohort study' Injury Epidemiology'

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