Swiss Red Cross

A level up.

Review of the disaster risk management programme and needs assessment in Gaibandha district, Bangladesh

Acronyms

ARC	American Red Cross
BDRCS	Bangladesh Red Crescent Society
BDT	Bangladesh Taka
BFA	Basic First Aid
BL	Baseline
CEA	Community engagement & accountability
CHF	Swiss Franc
CIP	Common investment plan
CPP	Cyclone Preparedness Programme
DMC	Disaster Management Committee
DREF	Disaster Relief and Emergency Fund
DRM	Disaster risk management
DRR	Disaster risk reduction
EL	Endline
ERT	Emergency response team
EWS	Early warning system
FbF	Forecast-based financing
FfW	Food for Work
FGD	Focus group discussion
HH	Household
HWI	Hand-washing index
IFRC	International Federation of Red Cross and Red Crescent Societies
JMT	Joint monitoring team
KII	Key informant interview
LGI	Local government institution
NGO	Non-government organisation
NRM	Natural resource management
NRP	NGO Resilience Platform
PGI	Protection, gender and inclusion
PNS	Partner National Society
PPS	Probability proportional to size
P2P	Peer-to-peer
RC/RC	Red Cross/Red Crescent
RCY	Red Crescent Youth
RRAP	Risk reduction action plan
SAR	Search and Rescue
SDC	Swiss Development Council
SNBI	Safety Net Beneficiary Index
SOD	Standing Order on Disasters
SOP	Standard operation procedures
SRC	Swiss Red Cross
SRW	Staff reflection workshop
ToR	Terms of Reference
UDMC	Union Disaster Management Committee
UP	Union Parishad
UzDMC	Upazilla Disaster Management Committee
V2R	Vulnerability to Resilience
VDMC	Village Disaster Management Committee
WASH	Water, sanitation and hygiene

A level up. Review of the Disaster Risk Management Programme and needs assessment in Gaibandha district of Bangladesh.

Swiss Red Cross, April 2021

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KEY FINDINGS & RECOMMENDATIONS

This review of a four-year disaster risk management programme in Bangladesh's north-western district of Gaibandha demonstrates that flood-prone communities moved 'a level up'. On the resilience radar, the overall resilience score increased from a medium-level 0.57 in 2017 to a high-level of 0.75 in 2021.* Major improvements were recorded in disaster preparedness (+86.8%), water & sanitation (+43.8%) and connectedness (+34.5).

Looking to future programming, the assessment of needs in Sundarganj upazilla highlights extreme vulnerability (the resilience score here is 0.42), showing that efforts to raise resilience would be highly relevant.

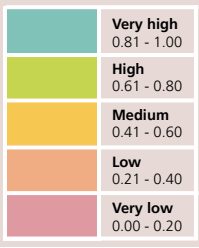
The report concludes with strategic options for concerted action towards deeper and wider resilience programming in the country's flood-prone north-west.

'A level up' reviews the Disaster Risk Management (DRM) programme that Bangladesh Red Crescent (BDRCS) and Swiss Red Cross (SRC) have been pursuing since July 2017. The report is based on mixed-method field research (January 2021) that included a resilience radar survey in the programme area of Fulchari as well as the possible expansion area of Sundarganj, ten resilience star exercises in selected communities, a staff reflection workshop and numerous key informant interviews. Fulchari survey results have been compared with those of the 2017 baseline. Findings of the review and recommendations for future programming are summarised below.

RELEVANCE

The programme succeeded in delivering well-targeted and highly relevant interventions. Strong community engagement is seen as a defining feature. Processes were participatory and local concerns addressed. The team maintained close relationships and frequent contact with communities (twice as regular as in the previous phase in nearby upazillas) and aligned actions with local NGOs and government agencies.

*** Resilience scores**
In this report, we refer to resilience scores that range from a minimum of 0.00 to a maximum of 1.00 (see levels to the right). These scores are based on the resilience radar survey and have been calculated for each resilience dimension as well as the average. See figure 8 on page 12 for further details.



EFFECTIVENESS

Resilience scores improved for all nine assessed dimensions; the increases were statistically significant for seven of these. Overall resilience **scores increased by 31.2%**. Particularly strong improvements were identified in those dimensions that the programme had focussed on.

Although the impact goal of a 40% increase on at least five resilience dimensions was missed (this benchmark was reached on three), the overall advance is a substantial improvement that is largely attributed to the programme (e.g. +90% attribution to the programme for disaster preparedness and latrine availability).

In **disaster preparedness** as well as **water & sanitation**, key aspects became virtually universal: 97.5% now receive early warning messages (2017: 61.1%). 99.2% now have a latrine (2017: 50.0%). The score for access to water from improved sources increased from 0.68 to 0.95. In each of these focus dimensions of the programme, communities moved up two levels on the resilience radar's five-level system. Improvements in hand-washing practices were minor (from 0.63 to 0.68).

Other major advances included a strong shift towards more **gender**-equitable decision-making, and a stronger recognition and standing of persons with **disabilities**. With regard to **livelihoods**, households reported more diversified income sources and reduced reliance on agriculture. Despite this generally positive trend, an increased share struggled with food insecurity.

Greater **connectedness** (from 0.56 to 0.75) of communities is seen as another strong achievement of the programme. Communities are better linked to the sub-national DRM structure. Involvement in ward shavas and open budget sessions as well as utilisation of social safety nets tripled. The score for service access almost doubled (from 0.58 to 0.96).

EFFICIENCY

With programme costs of CHF 42.11 per household, a cost-effective set-up and in recognition of the enormous benefits the programme is likely to yield over time (avoided hazard damages, direct benefits), the programme is seen as efficient. The leverage of donor funds was increased through the required 20% contribution from councils and communities.

SUSTAINABILITY

Overall sustainability of programme outcomes is high, based on the assessment of the three key aspects (willingness and capacity of local owners, enabling environment). 81.8% of survey respondents say key outputs will be sustained for at least five years.

SUNDARGANJ NEEDS ASSESSMENT

The assessment in the potential target area of the next phase indicates high vulnerability (with food insecurity being a particular concern). The scores of all resilience dimensions are lower than they had been in Fulchari in 2017. Operating in Sundarganj may be seen as high-risk and high-reward: needs are great and could be addressed by major advances (reward). Logistical and security challenges are likely; social factors that are often the foundation of community-based work (trust, collective action) are relatively weak (risk).

RECOMMENDATIONS

Based on the results of the DRM programme review and the needs assessment in nearby Sundarganj, the following recommendations are made.

A. CRUCIAL

A.1 Elevate resilience programming in flood-prone areas through concerted action and joint resourcing.

As challenges rise, so must the solutions. With floods in the country's north-west becoming more frequent and severe, a more holistic and joint effort is needed to avert the worst. A gear change is needed; BDRCS and partners should establish a joint scheme administered by a regional hub (see p. 27-28).

A.2 Support capacity-strengthening of BDRCS district units to enable a stronger role as connectors.

The move for 'localisation' is welcome and needed not only to advance overall capacity and effectiveness of BDRCS across the country, but also to enable a recommended shift from service delivery to facilitation. This would be aligned with BDRCS' auxiliary role and is geared to extend the coverage of resilience programming (see p. 27-28).

A.3 Substantially enhance progress monitoring and embed resilience measurement.

All projects should feature robust monitoring systems to enable adaptive management ('monitor to manage'). Develop joint core indicators and ensure measurement of inputs, outputs and outcomes. Assign a monitoring team and allocate around 5% of budgets to monitoring and evaluation. A regional hub may feature a system/team to cater for multiple programmes. Consider the systematic use of IFRC's Resilience Radar and Zurich Flood Resilience Measurement Tool (p.22, 28).

B. IMPORTANT

B.1 Conduct resilience programming in Sundarganj with great care of preconditions and adjusted modality.

Assessed conditions warrant a programme of deep engagement similar to that in Fulchari. Be aware of vastly different and less favourable ground conditions and adjust modality and staffing levels. Consider 'quick wins' to build trust (p.25-26).

B.2 Further investigate food insecurity and explore means to achieve year-round food security.

Food insecurity was identified in Fulchari and especially in Sundarganj. Explore this issue more conclusively and consider partnering with specialised agencies. If warranted, aim for enhanced food security, especially during the flood period. Consider food preservation techniques, food banks, and safe food storage (p. 24, 26).

B.3 Promote and support systematic testing of water sources.

While the programme tested refurbished tube wells for arsenic, there is no systematic testing regime that would control for other pollutants. Water must be tested at source at least annually and results shown at the well. If found unsafe, advice must be given to treat water. The water from the programme-supported tube wells is not in line with SPHERE standards for safe water. Work with relevant government agencies to provide consistent water testing (p.16).

C. DESIRABLE

C.1 Embed a consolidation & advancement phase for previously supported areas into the new programme.

To further consolidate entities such as disaster management committees at village, union and upazilla levels, provide limited follow-up support (monitoring, coaching, refresher training). Consider competitions, exchanges, small grant schemes but refrain from other direct action. Include Fulchari and possibly Shaghata and Gaibandha Sadar upazillas, the former DRM programme areas (2013-2017).

Consider supporting the roll out of new schemes in these areas (e.g. Google-supported enhanced early warning, local DREF/FbF institutionalisation; p.27-28).

C.2 Develop innovative means to extend and improve access to services in rural areas.

With internet access greatly improved, explore new ways to reach rural communities with electronic messaging on issues around household preparedness, hygiene, alternative livelihoods, and access to government services. Consider developing such channels as a joint scheme (see recommendation A.1 and p. 22).

C.3 Promote means for more sustainable management of natural resources.

Although environmental awareness is increasing, so is the use of pesticides, chemical fertilisers and use of groundwater for irrigation. Use of natural resources is poorly regulated. Promoting sustainable use may help avoid problems in the future and the mistakes made in many other emerging economies (p.17). Nature-based solutions for erosion control could be explored.

Introduction

A level up: the title of this report comes with three connotations. **First**, there is the obvious and tangible. As floods hit communities along the banks of the mighty Jamuna river and on the mid-stream islands (chars) ever more often, the raising of house-plinths is a formidable way to reduce hazard exposure. The disaster risk management (DRM) programme that Bangladesh Red Crescent Society (BDRCS) and Swiss Red Cross (SRC) have been implementing since 2017 in Bangladesh's northern district of Gaibandha supported such measures. Elevated homes translate to reduced sensitivity and hazard impact.

Second, the evaluation of this programme shows that communities and systems are a level up from where they used to be. The evidence of improvements is robust, as this report incorporates the results of a global first: the resilience radar and resilience star, two tools that were first applied in tandem during the 2017 baseline and re-applied as part of this review, show that the level of resilience amongst target communities has increased considerably.

Better prepared, organised and connected communities, coupled with advances in water, sanitation and hygiene (WASH), livelihood and other aspects of daily life can be summed up in more resilient communities. On the average score of the resilience radar, the target communities moved up from a 'medium' level of 0.57 to a 'high' level of 0.75 (the score ranges from 0.00 to 1.00).

Third, the report title represents a call to action: what should future programming aim for? The mandate of this review included both the assessment of what was achieved (what difference did the programme make?) as well as the identification of needs and strategic priorities. In essence, 'a level up' embodies the main task ahead: moving up to reaching even more systemic linkages and networks. While such networks bear the potential of raising resilience on a much broader scale, the pathway to that end can only be travelled with far greater coordination and joint planning.

Resilience stands at the heart of the DRM programme. Whereas the 'ability to anticipate, reduce the impact of, cope with and recover from the effects of adversity' is a concept that has been used ubiquitously in project titles and policy frameworks, this notion often remains too abstract in practice. Ultimately, it can be viewed from two angles.

From the **outcome angle**, resilience means that a community experiences a comparatively short and shallow downturn after having been affected by a hazard or stressor: damages and losses may be minimal, and the community recovers swiftly (contrast this picture with another community that experiences a deep and prolonged downturn).

From the **functional angle**, we can ask: what features does a community need to display that lead to these reduced downturns and to faster recoveries? There has been a lot of discussion in this regard; the initial model by the International Federation of Red Cross and Red Crescent Societies (IFRC) that included six 'characteristics' has been updated several times.

In this review, we used nine relevant **dimensions** for the survey-based resilience radar (those that could be used for the longitudinal comparison between baseline and endline). For the resilience star (which is based on focus group discussions), we applied the full set of eleven dimensions that are part of current IFRC guidance.

The review is based on a mixed-method approach, capable of demonstrating the numerous advances achieved in communities, and of collating strategic priorities and needs.

The report is structured in three sections.

Section A provides the background of the programme and summarises the evaluation approach.

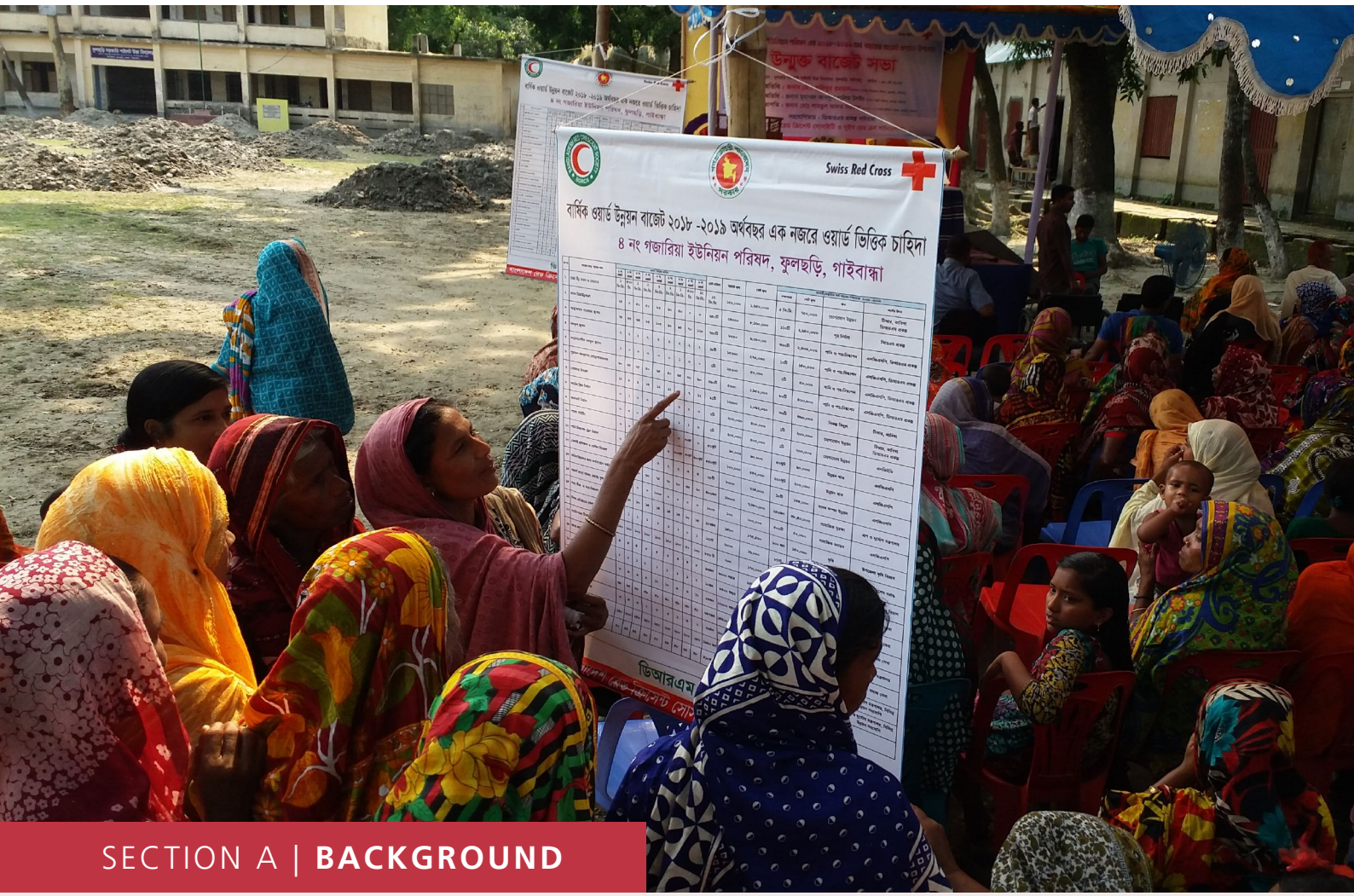
Section B presents the findings, which are structured along key evaluation criteria of relevance, effectiveness, efficiency, and sustainability.

Section C looks into the future: it presents lessons that can be learnt and applied from the experiences so far, and weaves in the analysis of local needs and strategic priorities.

While we kept the main report succinct and to the point, the extensive **appendix** (available here) includes further resources such as raw data and the detailed data analysis, as well as the local results for each assessed community and entity.

Despite the challenges of conducting research during the Covid-19 pandemic, it should be noted that the results of this study are nevertheless robust.

Thanks to the excellent preparation of the SRC/BDRCS project team, the local BDRCS unit, and the efforts by the local lead researcher, enumerators and facilitators, the review proceeded without any significant limitations in terms of research results.



SECTION A | **BACKGROUND**

1. Programme overview

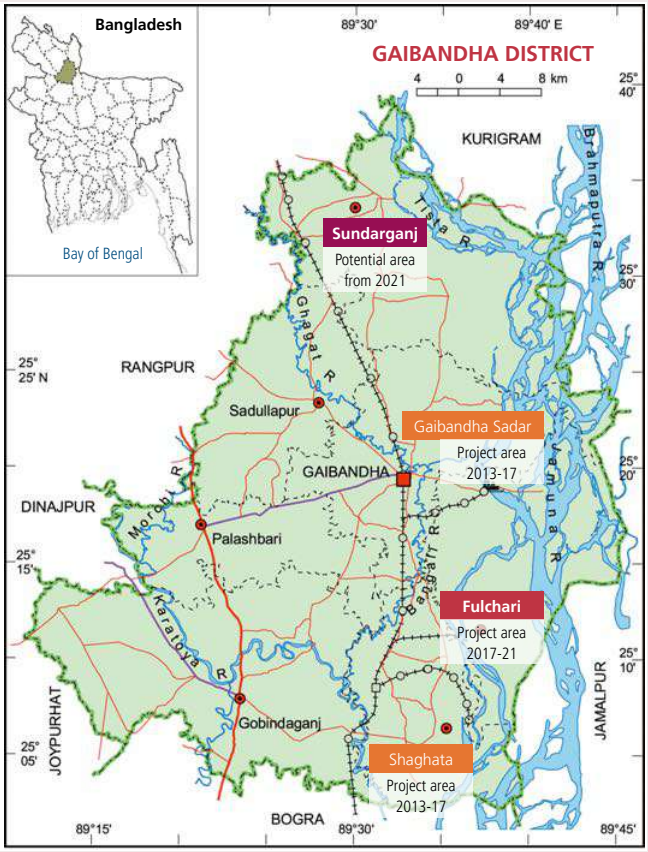
Home to 164 million people, Bangladesh is one of the world's most densely populated countries (1,265 people per km^2). Socio-economic vulnerability (e.g. high poverty rates) combine with high hazard exposure in the low-lying country. It is a key hotspot in terms of climate change. Main hazards are cyclones in the south and floods in the north and north-east.

Gaibandha district is located 250km north-west of Dhaka and part of a region that is especially flood-prone. For many of its 2.4 million people, lives and livelihoods are shaped by the Jamuna.[1] The river gives and takes: it is rich in fish and carries organic sediments from the Himalayan watersheds, rendering adjacent fields fertile and productive. The river's strong currents and frequent floods also take away the land; fighting river bank erosion is a continuous struggle. Nowhere is the river's role more powerful than on the chars - islands formed from the deposit of sediments. Going out past fishing boats, a short boat ride takes the visitor away from dense towns and villages on the mainland to the open grassy plans of the chars. Jute fields, grazing cows, boats and fishing nets come into view - and communities of people who made the chars their home.

It is here and in nearby mainland villages along the river banks that Swiss Red Cross and Bangladesh Red Crescent work. Following a previous programme phase (2013-17) in the upazillas (sub-districts) of Gaibandha Sadar and Shaghata, the current programme phase (that is the subject of this review) started in July 2017 and focussed on the upazilla of Fulchari.

Here, the programme targeted the 105,500 residents (22,300 households) of 44 communities across four unions (Gazaria, Fulchari, Erendabari and Fazlupur). With components in disaster risk management (DRM), water, sanitation and hygiene (WASH), conflict prevention and management, and efforts to better link communities to critical actors, the programme aimed for 'strengthened resilience of target communities [that would be] sustained by BDRCS and the sub-

1. At Gaibandha's northern border, the Brahmaputra merges with the Tista river and is called Jamuna further downstream (see map overleaf).



national DRM system'. In addition to the direct support across Fulchari, the programme also provided limited follow-up support to communities from the previous phase, especially to community health clinics.

As the logframe overview below illustrates, the programme featured longer-term risk reduction measures (outputs 1.1 and 1.2), efforts to enhance early warning and response (outputs 1.3 and 1.4), and measures to better connect communities to sub-national DRM structures (through union and upazilla-level Disaster Management Committees (UDMC, UzDMC). The programme featured a broad overarching frame that was further complemented by locally designed risk reduction action plans (RRAP). Following participatory assessments of vulnerabilities, capacities and needs, these plans laid out the detailed portfolios of activities.

Key activities at the community level included:

- Formation or capacity-strengthening of village disaster management committees (VDMC) and emergency response teams (ERT). This included training and equipment.
- Raising of house plinths for vulnerable households;
- Community-level mitigation measures (wooden bridge construction, raising of roads, bazar and school compounds above the flood level);
- Construction of flood-resilient tube wells;
- Construction or upgrading of hygienic household latrines to achieve universal sanitation coverage in the four upazillas;
- Hygiene promotion at communities and schools;
- Strengthening of early warning systems (EWS) and support to forecast-based financing (FbF) initiatives;
- Measures to enhance the management of social conflicts;
- the promotion of institutional linkages between communities, the sub-national DRM structures and other development organisations; and
- efforts to improve effective access to social safety nets.

Throughout the implementation period, numerous flood events occurred that proved the relevance of disaster risk reduction (DRR) but also represented practical challenges. Despite these challenges, as well as the hurdles and restrictions associated with Covid-19, the programme team was able to implement most activities as planned.

Fig. 1 | **Programme logframe**

Goal: Strengthened resilience of target communities is sustained through support from BDRCS and the sub-national DRM system

Outcome 1: Target communities are better protected and prepared against climate, natural hazards and health risks

Output 1.1
Risk reduction action plans (RRAP) developed and implemented

Output 1.2
Improved access to water, sanitation, hygiene, and basic health care services

Output 1.3
Disaster response plans developed or improved and effectively applied

Output 1.4
Early warning systems established and functioning, informing cash transfers to support preparedness actions

Output 1.5
Community resilience is further reinforced through improved connectedness with well-functioning sub-national DMCs and improved access to social safety net programmes

Note: In addition to the components listed in this chart, the programme featured two additional outcomes. These were outside the scope of the present review.

2. Review objectives & approach

As laid out in the terms of reference (ToR), this review was commissioned for two reasons. **First**, it was to measure changes in the resilience patterns of target communities thus far, and to assess the role of the programme therein. **Second**, it was to identify lessons learnt, evidence and gaps that would support the design of a new programme phase.

The ToR furthermore include a set of detailed research questions that relate to a broader assessment of the programme in terms of relevance, effectiveness, efficiency, and sustainability. The assessment was to focus on aspects related to outcome 1 (see figure 1).

2.1 Research tools

Whereas the use of resilience radar and resilience star was stipulated by the ToR, the strong focus on learning meant that the analytical toolset had to be expanded (see figure 2).

A. Resilience radar

This tool is based on a household survey and was used to measure community resilience. It consists of a standard questionnaire that covers multiple dimensions of resilience and converts survey responses to index scores.

Ultimately, this reduces complexity and culminates in the generation of a resilience pattern with just nine index scores. This pattern can then be compared between two datasets and visualised in the resilience radar chart (see fig. 8 on page 12).

To ensure comparability with the baseline data, all questions and index formulae were left unaltered. However, the endline **questionnaire** differed from the baseline in three ways:

- **Deleted questions:** the questions in the shelter section were deleted, as they were not deemed relevant to the programme context. As a result, the shelter dimension was removed from the radar.
- **Additional questions - Covid-19:** several questions were added to capture the role of Covid-19. Questions on household debt and food security were asked twice, referring to the situation 12 months ago (pre-Covid) and the present. The pre-Covid-data were used to calculate the radar score on livelihood.
- **Additional questions - programme area:** Furthermore, questions on community engagement, sustainability of outcomes, as well as on change and attribution were added. These were applied in programme areas but not in the potential expansion area of Sundarganj.

In terms of **sampling**, the survey was applied in two strata: strata 1 covered the current programme area of Fulchari and strata 2 the potential expansion area of Sundarganj.

The two strata had different analytical roles: strata 1 served as an endline whose results could be juxtaposed with those of the 2017 baseline as part of a longitudinal comparison. As such, a high level of precision was required. Strata 1 included 394 respondents, representing a confidence level of 95% and a margin of error of 5% (same as in the baseline).

Fig. 2 | **Overview of research tools**

Primarily geared to assess **change & effectiveness** ⟷ Primarily geared to identify **needs, lessons & priorities**

Resilience radar
- Survey-based tool, covers 9 dimensions of resilience.
- Applied amongst two strata - **Fulchari** (target area, 394 respondents) and **Sundarganj** (expansion area, 196 respondents)
- Longitudinal comparison base/endline Fulchari

Resilience star
- Tool based on focus group discussions, covering 11 dimensions of resilience
- Applied in 10 communities (6 Fulchari, 4 Sundarganj)
- Allowed for exploration of trends and issues
- Limited comparability with baseline stars in Fulchari

Capacity assessments
- Assessments of Fazlupur and Gazaria **UDMCs** and Fulchari **UzDMC** based on Octagon tool
- Assessments of six **VDMCs** based on Swiss Red Cross monitoring tool

Staff reflection workshop
- Conducted at start of the review to engage programme team in the review
- Elicited reflections on all review aspects (success factors, challenges, lessons)

Key informant interviews
- Selected SRC staff
- BDRCS management and key departments
- IFRC and Partner National Society (PNS) representatives (American, British, German, Swedish RC)
- Focussed on future strategy and coordination

Document review
- Study of progress reports and other key programme documents, work papers, strategic plans, reports from PNS

Fig. 3 | **Sampled communities**

Code	Community	Union	# of HHs	**Resilience radar** sample size actual (planned)	**Resilience star** participants total (male/female)	Remarks
Strata 1 | Fulchari (programme area) Total resilience radar sample size 394 (planned:384, representing a confidence level of **95%,** and margin of error of **5%**)						
C.4.1	Katlamari	Gazaria	1,732	65 (64)	20 (12/8)	VDMC assessment conducted here. This community was also included in the baseline.
C.5.1	Fulchari	Fulchari	450	71 (64)	21 (8/13)	VDMC assessment conducted here
C.5.9	Gabgachi	Fulchari	1,048	64 (64)	20 (8/12)	
C.6.3	Algar Char	Erendabari	784	55 (64)	27 (12/15)	
C.6.8	Shannachir Char	Erendabari	941	69 (64)	22 (10/12)	
C.7.10	Khatiamari	Fazlupur	2,883	70 (64)	20 (8/12)	This community was also included in the baseline.
Strata 2 | Sundarganj (future expansion area) Total resilience radar sample size 196 (planned:196, representing a confidence level of **95%**, and margin of error of **7%**)						
D.1.3	Caritabari	Haripur	821	49 (49)	22 (12/10)	
D.1.7	Char Madaripara	Haripur	837	55 (49)	22 (12/10)	
D.2.3	Paschim Lalchamar	Kapasia	450	50 (49)	20 (10/10)	
D.2.7	Ujan Burail	Kapasia	350	42 (49)	30 (20/10)	

Strata 2 meanwhile was geared to be part of a needs assessment, and could possibly serve as a baseline for a new programme phase. Following discussions with Swiss Red Cross and in light of time limitations, it was agreed to accept a margin of error of 7% (i.e. less precise). As a result, only 196 respondents were required for strata 2.

For both strata, communities were sampled by using the Probability-Proportional-to-Size (PPS) technique. A total of 10 communities were selected for the survey — six in Fulchari and four in Sundarganj (see figure 3 above).

B. Resilience star

In addition to the quantitative resilience radar, the qualitative sister tool was applied in these ten communities. First developed by IFRC in 2016 as part of the 'Roadmap to Community Resilience', the resilience star has been progressively enhanced since.

In the 2017 baseline, it had been applied with seven dimensions. While the tool proved extremely useful, it had been challenging back then to convert narratives into numbers: we merely counted the numbers of capacity and vulnerability cards for each dimension, with the proportion being used as a score. Despite qualitative insights being useful, the baseline scores must be seen as having limited validity or accuracy.

A new and improved version of the star (developed by IFRC in 2019) was therefore used as part of this review.

The new version is structured along eleven resilience dimensions that are slightly different to those of the radar (see comparison in fig.4). It was agreed with SRC that the new version should be used, considering that this version is being rolled out globally and that it may therefore be applied consistently in the future (thus enabling neat longitudinal comparisons between resilience stars and better use of the star as a community-based monitoring tool).

Notably, the new version of the resilience star comes with facilitation sheets that address the earlier challenge: narratives can be turned into numbers through a system of standard indicators. See appendix B for details.

While both the radar and the star are geared to measure community resilience, it is important to understand their **different logic**: resilience radars are generated for larger areas (in this case, one for each strata) by aggregating and interpreting the responses of all those surveyed. By contrast, resilience stars are created for each assessed community; each star reflects the results of a specific focus group discussion.

C. Capacity assessments

As described in chapter 1, the DRM programme aimed to better connect communities to sub-national DRM structures. Disaster Management Committees at village (VDMC), union (UDMC), and upazilla (UzDMC) levels took a key role in this regard. Assessing their capacity was therefore critical. For higher-level DMCs (union, upazilla), the Octagon organisa-

Fig. 4 | **Resilience radar and star compared**

Resilience radar (2017)	**Resilience star** (2019)
1. Community capacity	n.a.[1]
2. Social capital	Social cohesion
3. Inclusiveness	Inclusion
4. Connectedness	Connectedness
5. Disaster risk management	Risk management
6. Safe shelter	Shelter
7. Livelihoods	Economic opportunities
8. Natural resource management	Natural resource management
9. Health	Health
10. Water & sanitation	Water & sanitation
n.a.[2]	Food & nutrition security
n.a.[3]	Infrastructure & services

Comparison of the dimensions of resilience radar (in the 2017 version that was also applied for the endline, in the interest of comparability) **and the resilience star** (2019 version).

[1] No direct equivalent in the star (and 2019 radar)
[2] Food security is included under the livelihood in the 2017 radar
[3] No direct equivalent in the 2017 radar.

tional self-assessment tool was tool was adjusted, reviewing the strengths and weaknesses in terms of eight functional aspects, as well as gaps that may need to be addressed for further strengthening. The eight functional aspects are:

- Disaster risk reduction
- Disaster response
- Internal organisation
- Connections with government & external actors
- Community outreach & engagement
- Resource development
- Financial management & reporting

Two assessments were conducted along these lines at the union level (Fazlupur, Gazaria) and one at the upazilla level (Fulchari). At the village level, volunteers conducted assessments using an SRC monitoring tool.

D. Staff reflection workshop (SRW)

This workshop aimed a) to harness the experience of the programme team for the review process, and b) to identify influencing factors and lessons learnt.

This tool pays tribute to the fact that the programme team knows the programme best; tapping into and incorporating this knowledge is therefore sensible - especially considering the review's strong focus on learning. The national consultant led the workshop ahead of field research.

Over the course of a full day, four main areas were covered:

a) quick reflections (what worked well, what not? why?)
b) engagement (internal flows, interactions with communities and stakeholders);
c) impact (dimensions of resilience, and the difference the programme made); and
d) lessons (summarising lessons for future programming).

This workshop was widely appreciated by participants. A common feedback was that a second day would have been needed to capture all lessons.

E. Key informant interviews (KII)

Numerous key informants were interviewed as part of this review. These included team members and local stakeholders in Gaibandha, BDRCS leadership and senior management, as well as the country representatives of SRC, IFRC, and Partner National Societies (Swiss Red Cross, American Red Cross, British Red Cross, German Red Cross, Swedish Red Cross).

Gaibandha-based interviews were conducted by the national consultant and the DRM manager of Swiss Red Cross. Key informant interviews were carried out by the international consultant via Zoom. All interviews were semi-structured and followed a set of previously identified questions. Most Dhaka-level interviews focussed on strategic priorities and needs for the planned future phase.

2.2 Research process

Whereas the baseline study had been conducted by an international consultant, current travel restrictions necessitated a different model. All tools were developed by the same international consultant who had been in charge of the baseline (thus ensuring consistency of the study design). A national consultant then led the research in Gaibandha, which included enumerator training and extensive data collection in January 2021. Volunteers of the Gaibandha unit collected survey data. Findings were documented in standard templates and incorporated into this report by the international consultant. Survey data were processed by a statistical analyst.

In spite of the prevailing restrictions, this set-up worked reasonably well, thanks in great part to the national consultant and the team of enumerators. No significant limitations of the research findings were identified. It should be noted though that baseline and endline (this review) were carried out at different times of the year (baseline: June, endline: January), and that the endline was conducted six months ahead of the end of the programme (meaning that some objectives may still be reached; see chapter 4).

SECTION B | **FINDINGS**

3. Relevance

The question of an intervention's relevance is more important than often acknowledged, given that relevance is interlinked with effectiveness, impact, and sustainability. Figure 5 opposite shows how these aspects are related to each other. For instance, an activity that is based on needs of the target group stands a higher chance of being effective and sustainable (and thus to generate impact) than one that is not.

Let us assess the extent to which the DRM programme was relevant by answering four questions: a) were activities needs-based, b) were the communities and stakeholders meaningfully engaged in planning, implementation and monitoring, c) were activities aligned with priorities of local governments, and d) to what extent was gender, diversity and conflict-sensitive project management (CSPM) mainstreamed?

3.1 Needs-based interventions

At the outset of the DRM programme, needs had been identified through a baseline survey as well as resilience star exercises in selected communities, and through comprehensive dialogue with government partners and other stakeholders. Having previously operated in the adjacent upazillas of Gaibandha Sadar and Shaghata, the team had also gained expertise on the broader context (e.g. the particular situation found on the chars).

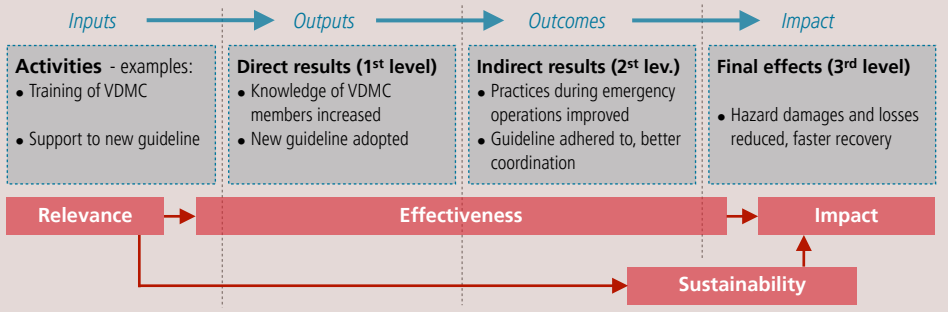
This information shaped the overarching programme design and ensured that both the interventions themselves (towards greater disaster preparedness, improved water and hygiene, enhanced connectedness) as well as the modality of programming were highly relevant to and appropriate for local conditions. Village-specific needs were assessed with strong engagement of respective communities.

3.2 Process ownership

The local-level assessments were instrumental to ensuring a strong sense of ownership. The willingness of communities to raise issues and to contribute ideas to identifying local solutions was particularly strong. The programme manager reflected: "People really valued what we provided and how we provided it. They took ideas on; some VDMCs started their own initiatives. There has been lots of enthusiasm and lots of ownership."

The overall process of assessment, planning, implementation and monitoring was indeed 'owned' to a large extent by communities and stakeholders.

Fig. 5 | **How different aspects relate to the logical chain**



The programme team developed relationships of trust and was responsive to local concerns. The programme team noted that compared to the previous programme, people gave more input. "People were very curious, interested, engaged" explained a team member. "We always took them seriously and adjusted points based on their inputs. The process of selecting beneficiaries had clearly communicated criteria; community members provided inputs and agreed with the selection."

The team furthermore conducted resilience star exercises as part of community-based monitoring. It maintained frequent contact with communities (two-thirds of survey respondents said they had been in touch with BDRCS at least three times over the past six months alone), and provided strong and regular support to DMCs.

Overall, four aspects stood out as success factors for strong community engagement:

- Embedding staff and the project office in the field: this galvanised two-way communication and trust between project and people;
- Establishing a strong cadre of community volunteers was useful to reach the wider communities and to create links with external bodies;
- Forming a joint monitoring team (JMT) with government agencies and community representatives: the JMT monitored outcomes of DRR and WASH activities and provided quality assurance; and
- Integrating the legally ordained democratic spaces of ward shavas and open budget sessions into the programme: people were encouraged to participate in these forums where union parishad (UP) plans and budgets are decided.

The fact that both communities/beneficiaries and UPs contributed funding (and often labour) to hardware items such as tube wells, latrines and plinths is perhaps the strongest sign of ownership and relevance. Few would invest money in something if they did not see the relevance and potential benefit. In fact, some 397 families raised their home plinths entirely at their own expense, inspired by the experiences of other households. Further adoption (and maintenance) of such measures can be reasonably expected in the future.

3.3 Aligned actions

The close coordination with government entities and NGOs led to actions that were aligned with existing plans and priorities. Several activities were carried out in partnership with NGOs (GUK, SKS, ASOD, RDRS, Friendship, Islamic Relief) and the Department for Public Health Engineering (DPHE). In 2019, the NGO Resilience Platform (NRP) was formed to align actions even more closely. Somewhat curtailed by Covid-19 restrictions in 2020, the platform became more active towards the end of the year and has been working on a Common Investment Plan (CIP) to further enhance coordinated action in future programming.

3.4 Inclusion and conflict management

In terms of gender inclusion, the programme empowered women and offered a platform to 'speak up'. Throughout implementation, the programme team stated that the role of women had been very strong and effective. Survey results (see fig. 10 on page 13) indeed confirm that this was the case: the balance of power in public meetings, where decision-making had been a male-dominated in 2017, shifted significantly towards a greater gender balance. This is seen as the result of a) obtaining gender-disaggregated data, b) ensuring women's participation in VDMCs (60% of members are female) and volunteer cadres, c) consideration of gender-centred vulnerability criteria in beneficiary selection (i.e. a high number of female beneficiaries received unconditional cash transfers), and d) targeted involvement of women in livelihood diversification. Similarly, the programme was able to facilitate greater inclusion of persons with disabilities - see more details in chapter 7.

Commendably, the programme added activities on conflict management and resolution to its portfolio. A total of 74 conflicts related to illegal land occupancy, social issues and domestic violence were recorded in the conflict register and resolved with the support of VDMCs. Out of 85 survey respondents who said they were involved in or familiar with a conflict, 81 said the conflict had been successfully resolved.

4. Effectiveness

What difference did the DRM programme make to target communities? In this chapter, let us look at the extent to which progress was achieved along the line of logframe indicators (part 4.1), at the longitudinal comparison between baseline and endline resilience patterns (part 4.2), and the extent to which institutional capacity of sub-national DRM structures were strengthened (part 4.3).

It should be noted that although survey data were disaggregated by **gender**, the report does not provide these breakdowns. This is because the response patterns of women and men are almost identical and differences statistically insignificant (this had also been the case in the 2017 baseline).

Gender-specific resilience patterns can be viewed in appendix A.3 both for the programme area of Fulchari (sheet D) and the potential expansion area of Sundarganj (sheet E). The absence of significant differences in response patterns suggests roughly equal effects of the programme, and similar perceptions, amongst women and men.

Survey data were not disaggregated on the basis of **disability** status (which would have required a different and more demanding sampling approach). However, it was observed that persons with disabilities appear to be better included and valued as contributors to the community than they had been in 2017. Fulchari's disability inclusiveness sub-index increased from 0.70 at baseline to 0.96 at endline, and stands far higher than in Sundarganj (0.54).

All scores and results in this chapter refer to the programme area of Fulchari (Sundarganj results are occasionally listed for comparison). Further Sundarganj results can be found in chapter 8 and in appendix A.3

4.1 Indicator tracking

Figure 6 below and opposite collates information on baseline, target and endline values, as well as the level of achievement.

Fig. 6 | **Logframe indicators and level of achievement**

Code	Logic	Baseline value	Target value	Endline value	Observations
Impact	Strengthened resilience of target communities is sustained through support from NS and sub-national DRM system				
IM1	# of formal collaboration between project, LGIs and other development actors	no data	no data	no data	**Not measured.** This indicator neither measures impact, nor is it specific enough to be measured or meaningful.
IM2	Index values of at least 5 of the 10 resilience radar dimensions have increased by 40%	Average score of 9 dimensions: **0.571**	Increase of BL scores by 40% - see figure 6	Average score of 9 dimensions: **0.749**	**Partially achieved.** The 40% increase was achieved for three (not five) dimensions. Significant increase in 7 of 9 dimensions; average increase **31.2%.** See figure 6 for full details.
Outcome 1	Target communities are better protected and prepared against climate, natural hazard and health risks				
OC1.1	% of targeted communities with a functional disaster management committee	**0.0%** with functional VDMCs	**100.0%** with functional VDMCs	**0.0%** amongst the five sampled VDMCs	**Major progress, but target missed.** The 2020 progress report says 44 VDMCs are functional. However, all five assessed VDMCs met 4 of 5 criteria of a 'functional' VDMC but missed training benchmarks.
OC1.2	% population with access to basic health care services at all times (normal & during emergencies)	**56.3%**	**100%**	**73.6%**	**Major progress, but target missed.** Source: survey question I.8
OC1.3	% of households (HH) using and maintaining clean latrines	**41.9%**	No target	**88.3%**	**No target set, major progress.** This indicator was removed from the latest LF version. % of HHs with a latrine: 56.1% at BL and 99.2% at EL (question J.6). The % of HHs who have a latrine and clean it at least weekly is 41.9% at BL and 88.3% at EL. (J.7)
OC1.4	Incidences of conflicts and tensions at community level recognised and addressed	No data	No target	**74**	**No target set, major progress.** These conflicts related to illegal land occupancy, social issues and domestic violence. All have been addressed by VDMCs. Source: progress reports.
Output 1.1	Risk reduction action plans developed and implemented				
OP1.1.1	% HHs familiar with RRAPs and seeing it as beneficial to them	**16.0%**	**90.0%**	**79.2%**	**Major progress, but target missed.** At BL, 13.2% and 2.8% said they were 'somewhat' and 'very familiar' with RRAPs (16.0% combined). At EL, the respective figures are 72.8% (somewhat) and 12.9% (very familiar) - 79.2% combined. The survey did not elicit whether RRAPs were seen as beneficial - however, resilience star results indicate that they were widely endorsed.
OP1.1.2	# of mitigation options built through 10% co-funding from communities	Not applicable	**294**	**622** incl. 37 HH plinths, 5 school yard, 1 road repair	**Achieved.** The cumulative number of such measures was more than twice the target (project progress data)

Fig. 6 | **Logframe indicators and level of achievement** (continued)

Code	Logic	Baseline value	Target value	Endline value	Observations
Output 1.2	Improved access to water, sanitation, hygiene, and basic health care services				
OP1.2.1	# of HHs with hygienic latrines that are used and maintained	**3,998** hygienic latrines identified by programme (max. 56.1%)	**7,992**	**9,201** 89.6% based on EL survey results	**Achieved.** At BL, 56.1% had a latrine; the conformity with hygiene standards was not assessed at BL. At EL, 89.6% of all HHs had a latrine that was assessed as meeting government standards of a hygienic latrine (questions J.9/J.9a). Based on LF progress report, latrine construction numbers were exceeded.
OP1.2.2	# of disaster resilient water points installed and sustainably managed	**28**	**664**	**1,200**	**Achieved.** Source: 2020 progress report. In addition, the survey results show that 100.0% have tube wells, protected wells, or bottled water as their primary source for drinking water (question J.1).
OP1.2.3	% population washing hand at all critical times	Hand-washing index (HWI): **0.550**	**80.0%**	Hand-washing index (HWI): **0.632**	**Major progress, but target missed.** Hand-washing practices have been aggregated to the HWI to render them comparable. This is based on questions J.4/J5. See text for further details.
OP1.2.4	# of children aware and practice appropriate hygiene behaviour	No data	**6,120**	**7,578**	**Achieved.** Source: 2020 progress report. 408 WASH sessions provided across 75 primary schools, plus 90 further sessions in 9 Madrasha (with 1,458 students).
OP1.2.5	# of patients that receive services at community clinics (CC)	No data. None of the CCs provided services as mandated.	Not set.	**30,726**	**No target set.** These patients received free health care services from three community clinics. Source: 2020 progress report - cumulative figures.
Output 1.3	Disaster response plans developed or improved in target communities and effectively applied				
OP1.3.1	% of communities with trained Emergency Response Teams (ERTs) in First aid and Search And Rescue skills	**0.0%**	**100.0%**	**100.0%**	**Achieved.** All communities have ERTs that have been trained in Basic First Aid (BFA) and Search and Rescue (SAR). Source: 2020 progress report.
OP1.3.2	# of VDMCs with their own emergency funds that is used for first response	**0**	**44**	**44**	**Achieved**. 44 VDMCs have their own funds. 15 VDMCs spent a total of BDT 111,117 for first response (CHF 1,100). Source: 2020 progress report.
Output 1.4	Early warning systems established and functioning and inform cash transfers to support preparedness actions				
OP1.4.1	# of communities with functioning and effective EWS	No breakdown by community; ***61.1% reached**	44 communities	44 communities ***97.5% reached**	**Achieved**. The % refer to the share of survey respondents saying that they would be warned ahead of a big flood (question E.13). At EL, 92.4% said they have received an actual warning message ahead of an incoming flood (E.16).
OP1.4.2	# of ERTs trained in early warning (EW) messaging and operating EWS hardware	**0** No ERTs in place	**88** 362 members of UDMC, VDMC and ERTs trained	**88**	**Achieved.** Members of 88 ERTs trained. (0 UDMC members oriented on EWS. 74 ERTs disseminated early warning messages and are operating in 37 char villages. Source: 2020 progress report.
OP1.4.3	# of families receive timely cash transfer following FbF	**0** No FbF in place	**1,500**	**1,467**	**Almost achieved.** 1,467 families timely received cash transfers, following triggering of FbF. Source: 2020 progress report.
Output 1.5	Resilience is further reinforced through improved connectedness with well-functioning sub-national DMCs and improved access to social safety net programmes				
OP1.5.1	# of UDMC members trained in operationalisation of integrated disaster response plans	No data; BL survey respondents not familiar with response plans	**84** UDMC members	**86** UDMC members	**Achieved**. 86 UDMC members oriented on SOD. All four UDMCs updated contingency plans. 12 project staff participated in the response readiness workshop. A common investment plan (CIP) of NRP was developed and shared with UzDMC and UDMCs. Source: 2020 progress report.
OP1.5.2	# of risk mitigation measures funded by LGIs through their own resources	not applicable	**3,323**	**2,088** include HH latrines, disaster-resilient houses for extremely poor families, drainage system, solar electricity systems	**Major progress, but target missed.** All items listed were funded by LGIs. Source: 2020 progress report (cumulative figures).
OP1.5.3	% of population participating in ward shavas and open budget sessions	Ward shavas **22.2%** Budget sess. **7.8%**	No direct target for indicator. 36 ward shavas and 4 budget sessions were to be held.	Ward shavas **55.3%** Budget sess. **20.5%**	**No target set, major progress.** Progress report: 325 people participated in ward shavas. Survey: based on questions D.4a and D.6a. Note that in light of Covid-19 restrictions, the reference timeframe in the question was extended from 12 to 24 months.
OP1.5.4	# of people with increased awareness and knowledge on social safety net programmes and scheme criteria	***0.089** SNBI. 3.6% received food for work (FfW), 21.2% mat. ben.	[# of people 25,504]	[# of people 21,120] ***0.217** SNBI. 51.0% received FfW, 47.5% mat. ben.	**Major progress, but target missed.** Awareness was not measured in the survey - rather, the extent to which respondents actually received any benefits (question G.7b). Responses were aggregated to the Safety Net Beneficiary Index (SNBI). See details in the text.

In a nutshell, the table shows that the DRM programme proved highly successful and effective. In many cases, major progress was achieved, even if the respective target was not fully attained.

The most significant example is the **impact** indicator (IM2). This had aimed for a 40% increase in the value of at least five resilience dimension scores. As figure 7 below illustrates, this ambitious increase was indeed reached for three, but not five, dimensions (disaster preparedness, livelihood, and water & sanitation).

Nevertheless, the overall improvement is substantial. The average score of all nine dimensions has increased by 31.2%; in terms of the five bands of resilience (that range from 'very low' to 'very high'), target communities moved one level up from a 'medium' to 'high' level of resilience. Improvements were observed on all nine dimensions. The massive improvement of 86.8% in disaster preparedness is in line with the programme's logic and represents a very strong sign of its success. The slight increases in social capital and natural resource management are statistically insignificant.

Other examples of indicators that saw major improvements but missed (often rather ambitious) targets include

- **OC1.1** on functional VDMCs: communities went from having no VDMCs at all to strong entities. However, one benchmark of training levels was missed;
- **OP1.1.1** on RRAP knowledge: went from 16.0% to 79.2%. Despite the five-fold increase, the 90% target was missed;
- **OP1.2.3** on hand-washing: the hand-washing index (HWI) that aggregates the responses from survey questions scored 0.632 over the baseline's 0.550. The indicator target of 80% of people washing hands at all critical times remained elusive however.

Overall, the analysis of the 22 indicators shows that:

- **Nine** indicator targets were achieved;
- **Eight** indicator targets missed but saw significant improvements;
- **Four** indicators had no targets (with improvements recorded however); and
- **One** indicator could not be measured.

What does this rather abstract analysis mean in practice? Let us turn to patterns of community resilience to find out.

4.2 Community resilience

The analysis of resilience patterns rests primarily on the resilience radar surveys in Fulchari target communities. The patterns are visualised in figure 8 overleaf. In the discussion below, we will go through each dimension and compare detailed base/endline results. The findings from Fulchari resilience star exercises are used to complement the analysis. Note that results from Sundarganj (both resilience radar and star) are discussed separately in chapter 8 (local needs).

Dimension 1 | **Community capacity**

Baseline 0.67 (high) | Endline 0.89 (very high)

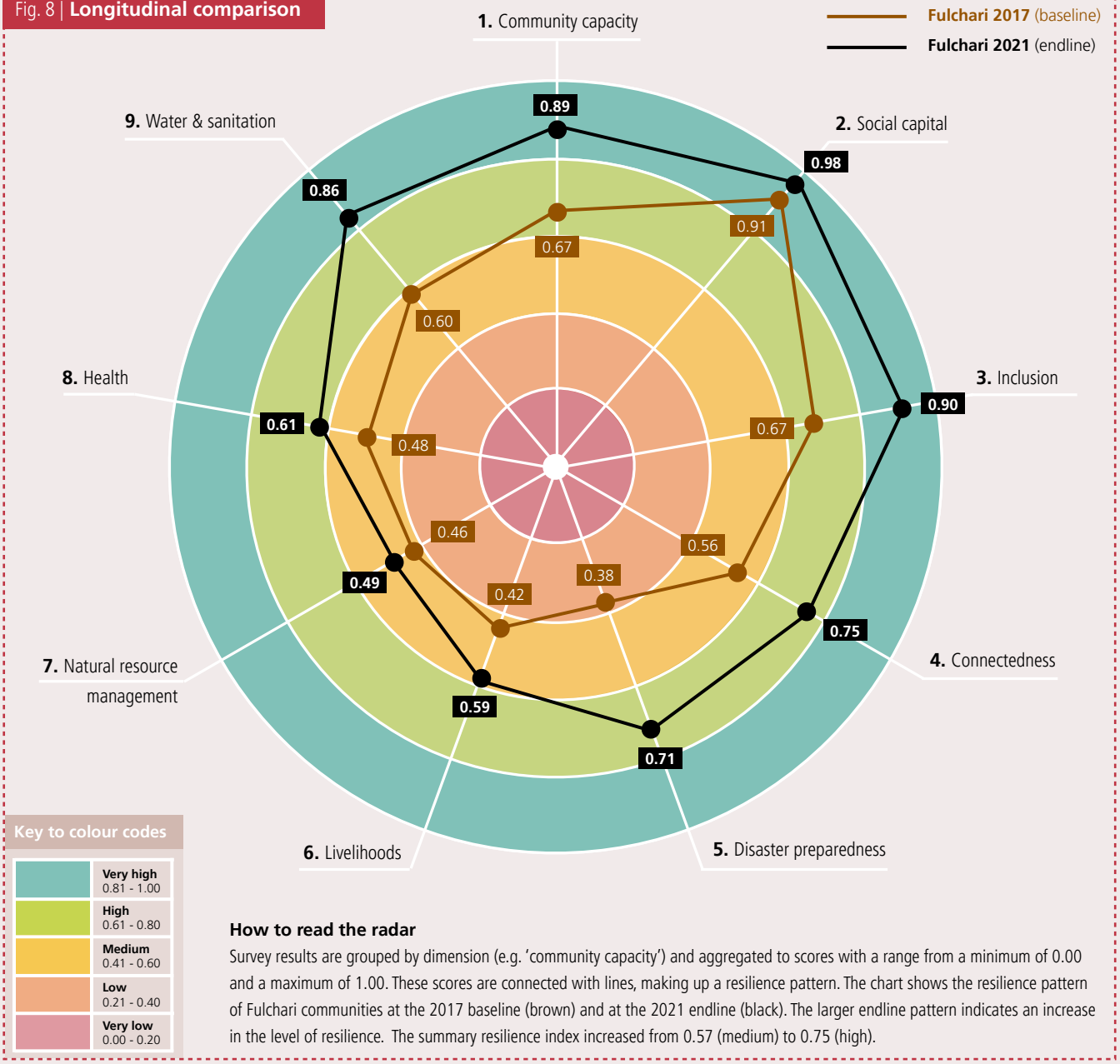
This index is based on questions A.1-A.13 and includes aspects such as leadership, trust in public officials, availability of general services, resources, the ability to reflect on past performance and set priorities, collective action, and access to information.

At **baseline**, the question scores ranged from 0.54 (resource availability, question A.2) to 0.82 (collective action, A.7). At **endline**, all scores were in the 'very high' band, with scores of at least 0.93. On the resilience star, there is no neat

Fig. 7 | **Longitudinal comparison: Fulchari resilience scores**

Dimension	Baseline (2017)	Endline (2021)	Variation (EL-BL)	Change (%)	Remarks	
Community capacity	0.670	0.889	0.219	**32.6%**	Possibly achieved*	* Since both BL and EL results come with a margin of error (5.0% in each case), it cannot be ruled out that the recorded increases on these dimension scores in fact were at or above the 40% target.
Social capital	0.908	0.979	0.071	**7.8%**	Not achieved; difference insignificant	
Inclusiveness	0.667	0.904	0.237	**35.6%**	Possibly achieved*	
Connectedness	0.559	0.752	0.193	**34.5%**	Possibly achieved*	
Disaster preparedness	0.381	0.712	0.331	**86.8%**	**Achieved**	
Livelihoods	0.419	0.593	0.174	**41.5%**	**Achieved**	
Natural resource management	0.455	0.492	0.037	**8.1%**	Not achieved, difference insignificant	
Health	0.484	0.610	0.126	**26.0%**	Not achieved	
Water & sanitation	0.596	0.857	0.261	**43.8%**	**Achieved**	
Average score	**0.571**	**0.749**	**0.178**	**31.2%**		

Fig. 8 | **Longitudinal comparison**



How to read the radar

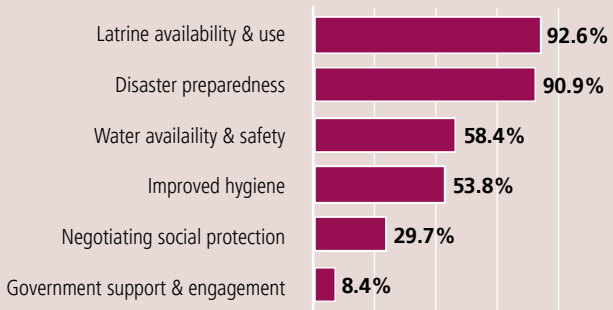
Survey results are grouped by dimension (e.g. 'community capacity') and aggregated to scores with a range from a minimum of 0.00 and a maximum of 1.00. These scores are connected with lines, making up a resilience pattern. The chart shows the resilience pattern of Fulchari communities at the 2017 baseline (brown) and at the 2021 endline (black). The larger endline pattern indicates an increase in the level of resilience. The summary resilience index increased from 0.57 (medium) to 0.75 (high).

equivalent for this dimension. However, it was noted that 'infrastructure and services', which is an aspect covered under this radar dimension, scored 0.88. Several aspects listed as capacities in the star exercises referred to the results of project-related activities (e.g. solar panels; better services).

Under this section of the radar questionnaire, two questions were added to elicit the role of the DRM programme on community capacity (note that this question was excluded from the score calculation). All respondents agreed (10.4%) or strongly agreed (89.6%) with the statement 'the project contributed to increased community capacity' (question A.14). The detailed roles (based on question A.15) are shown in fig 9.

Fig. 9 | **Programme impact**

In which areas did the project contribute to increased community capacity? [multiple answers, question A.15]



Dimension 2 | **Social capital**

Baseline 0.91 (very high) | Endline 0.98 (very high)

This index is based on questions B.1-B.6a and covers aspects such as sense of belonging, mutual support, commitment to the community, aspirations and conflict resolution. Note that one of the baseline question (B.5, 'I have friends in my community') was deleted in the endline; the BL score has been adjusted to render the scores comparable.

At **baseline**, the question scores ranged at 0.86 or above ('very high'). At **endline**, all question scores were at 0.96 or higher. The dimension score of 0.98 is the highest of all dimensions, and the highest ever recorded in any known resilience radar analysis.

The score matches perfectly with the average score for social cohesion as identified through the six **resilience star** exercises conducted in Fulchari (0.98).

Under this dimension, the endline questionnaire featured questions on **conflict management** (that had not been included in the baseline and were not counted for the dimension score). One in five respondents (21.6%) said they had been involved in, or were familiar with, a conflict that had emerged in the past three years. Amongst these respondents, 67.1% said that conflict management support had been offered by the community or programme. Almost all conflict cases were resolved and grievances addressed (95.3%).

Dimension 3 | **Inclusiveness**

Baseline 0.67 (high) | Endline 0.90 (very high)

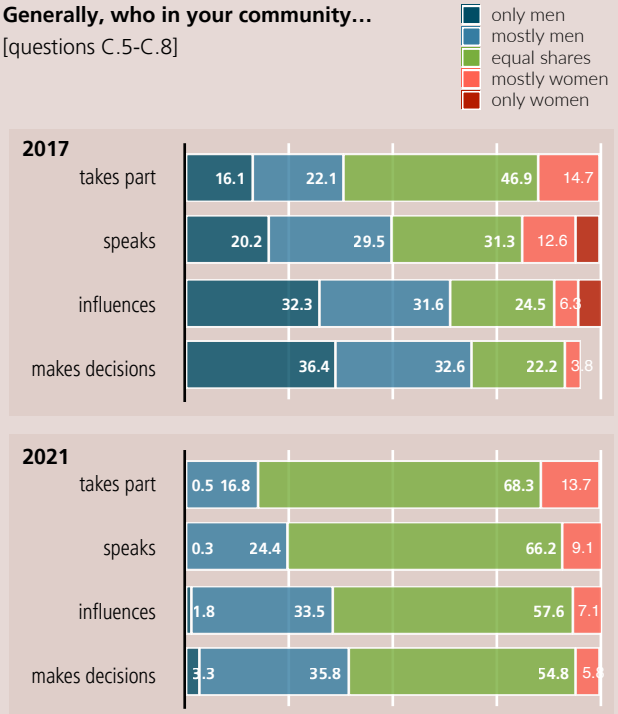
This index is based on questions C.1-C.8 and includes three aspects or sub-indices: general, disability and gender inclusiveness.

In terms of **general inclusiveness** (absence of discrimination and of conflicts/tensions based on personal attributes/backgrounds), the sub-index score increased from 0.80 at baseline to 0.95 at endline.

Regarding **disability inclusiveness** (equal access for persons with disabilities and equal standing of them as valued contributors), the score increased from 0.70 to 0.96.

Concerning **gender inclusiveness**, the radar survey focused on the extent to which men and women are involved in community-level decision making. The score increased substantially from 0.50 to 0.80. Figure 10 demonstrates how dramatically the gender pattern in community-level decision-making has shifted in favour of women.

Fig. 10 | **Gender: balance and power**



The **resilience star** exercises (which featured a gender balance among participants) showed similarly high scores for inclusiveness (at 0.78, these were slightly lower than the respective radar score). In Katlamari community, participants explained that women had the main say on decisions about social issues, and that equal weight was considered on family and other issues.

Dimension 4 | **Connectedness**

Baseline 0.56 (medium) | Endline 0.75 (high)

The connectedness index assesses the links between communities and next-tier agencies and actors. It is based on questions D.1-D.3 (general links) as well as D.4a - D.5a (participation in and perceived effectiveness of ward shavas) and D.6a-D.7a (budget sessions - participation and effectiveness).

The key results are illustrated in fig. 11. Notably, the various aspects of connectedness have improved: Communities are seen as reaching out more to authorities to seek support (D.2), government agencies are more responsive (D.3), and there are generally closer relationships with external actors. Community participation in ward shavas and open budget sessions has more than doubled (note however that the time reference at endline was extended from 12 to 24 months to

Fig. 11 | **Well-connected**

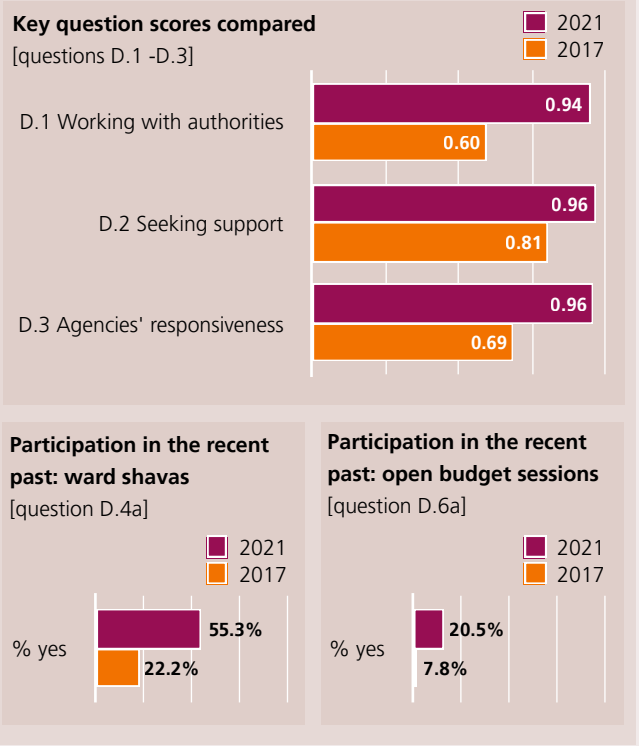
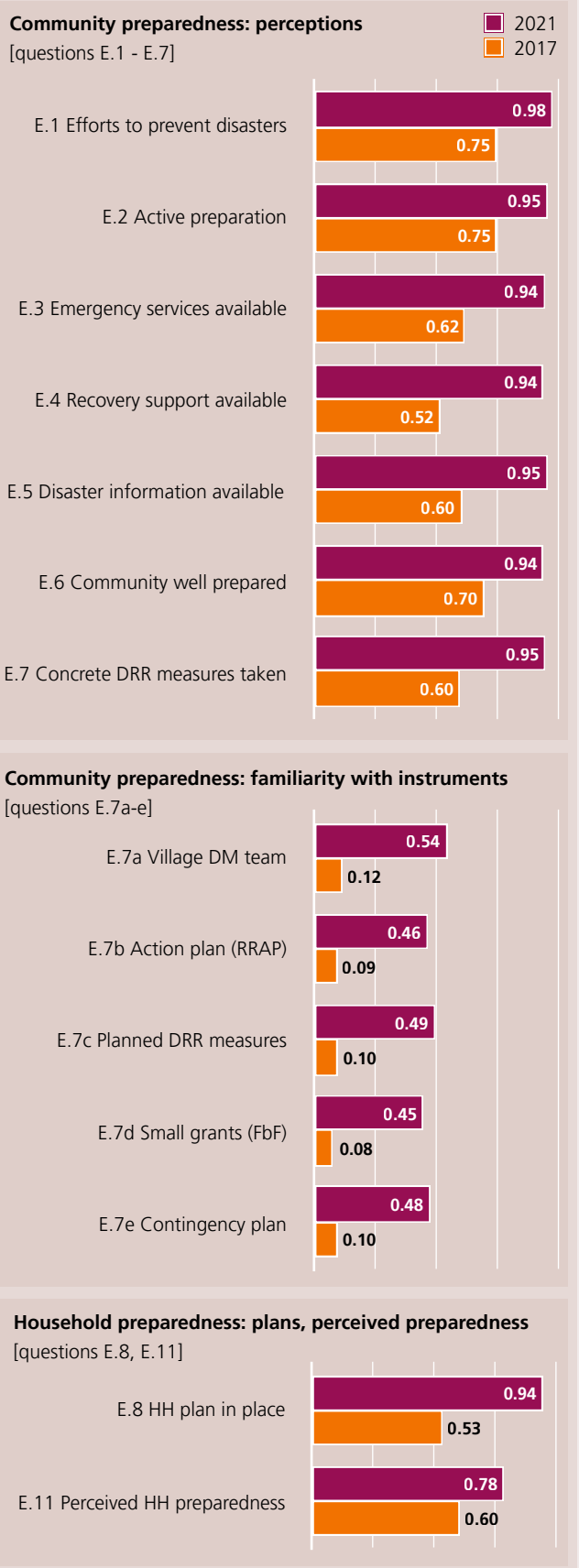


Fig. 12 | **Preparedness: two levels up**



account for the fact that Covid-19 restrictions may have rendered participation in the past 12 months impossible).

Amongst those who participated in these events, there were also more favourable views regarding the effectiveness of shavas and sessions. At endline, a new question was added (not counted for the radar): 92.4% said that their community had received support from a higher LGI level (e.g. union parishad).

The **resilience star** discussions echoed the positive views of well-connected communities. The system of assessment was slightly different and also included access to information. The respective connectedness score amongst Fulchari communities was 0.95.

Dimension 5 | **Disaster preparedness**

Baseline 0.38 (low) | Endline 0.71 (high)

This index is based on a total of 20 questions (E.1 - E.17) that are grouped under the two sub-indices of community and household-level preparedness. The overall dimension score has seen the greatest increase of all 9 indices. At 86.8%, the substantial improvement shows that the multi-faceted efforts of the programme in DRR have benefitted the wider communities.

As the comparison in figure 12 illustrates, the level of **community-level preparedness** is widely seen as substantially higher than at baseline. This includes both perceptions as well as familiarity with instruments (it should be noted that many of these instruments were not common at baseline and were only created with programme support). The sub-index has increased from 0.42 to 0.76.

In terms of **household-level preparedness**, it is noted that almost all respondents now have a HH plan in place, compared to just over half at baseline. The sub-index has increased from 0.34 to 0.67. The share of respondents who knows any measures a household can take to be prepared has increased from 64.8% to 94.2%. The share who has participated in a recent drill has grown from 11.5% to 58.6%.

Another major advance is that **early warning systems** now have almost universal reach in target communities (see fig.13 below). Thanks to increased awareness and knowledge, the share of respondents who could describe appropriate early action more than doubled (E.14a score increase from 0.31 to 0.73).

At endline, a question was added about actual early warning messages over the past three years. Most respondents (92.4%) said they had received at least one such message. In two-thirds of all cases (69.7%), these had a lead time of 12 hours or more.

In all six **resilience star** exercises held in Fulchari, participants agreed on the maximum score of 1.00 for the 'risk management' dimension.

Fig. 13 | **Early warning, early action**

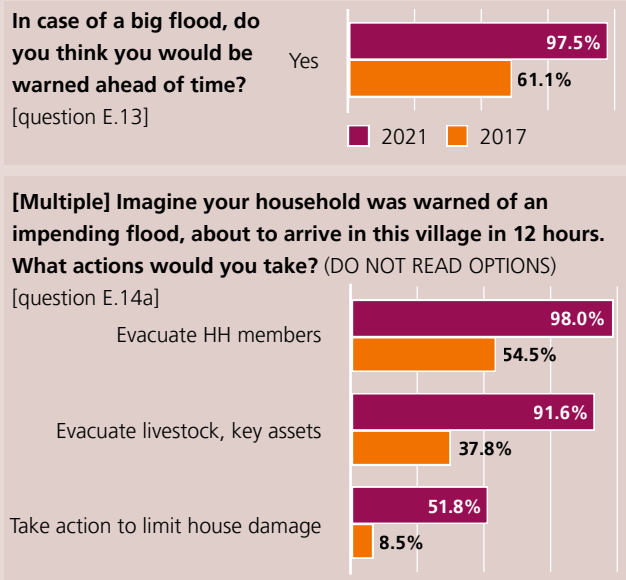


Fig. 14 | **Sowing resilience**

Dimension 6 | **Livelihoods**

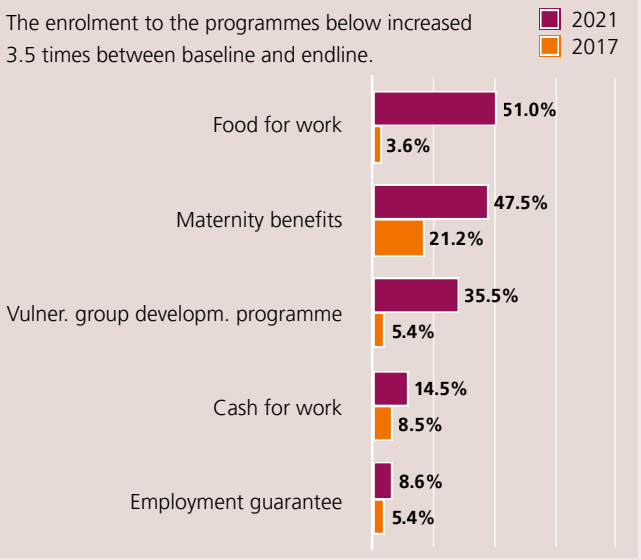
Baseline 0.42 (medium) | Endline 0.59 (medium)

Consisting of five sub-indices (see fig.14), the livelihood index is the radar's most complex.

On all but one sub-index, scores increased from base- to endline. This is despite the lack of direct livelihood support by the programme. Several observations are made:

- Households have diversified livelihood sources (Type A score increased from 0.51 to 0.77; type B score from 0.26 to 0.52). Type A refers to sources based on natural resources (e.g. agriculture), Type B on others (e.g. wages).
- There has furthermore been a pronounced shift to Type B sources (such as non-agricultural and other income not dependent on natural resources). This is not only indicated by the proportionally higher growth of Type B sources, but also by the far greater value share of total income.
- Far fewer single-income earner households exist now than did at baseline. With household sizes remaining unchanged, the dependency ratio was reduced (i.e. there are fewer dependents per income earner). While it is unclear what caused this change, the reduced dependency rates are a positive development towards greater resilience.
- In terms of resilience measures, the membership in savings groups and access to credit improved substantially. Insurance levels doubled from a very low base (it now stands at 9.7%). Levels of household debt are now lower than they were at baseline as well as 12 months ago; the Covid-19 pandemic appears to have had no effect on debt.
- Food security has decreased slightly based on survey results. One finding is rather alarming: at endline, 34.0%

Fig. 15 | **Wider social safety nets**



of respondents said that 'none of our HH members has enough to eat for all or most of the year'. The equivalent share had been 35.5% 12 months ago but only 11.0% at baseline. Resilience star data confirm food shortages for 20-30% of households; in particular during floods. This aspect requires further exploration.

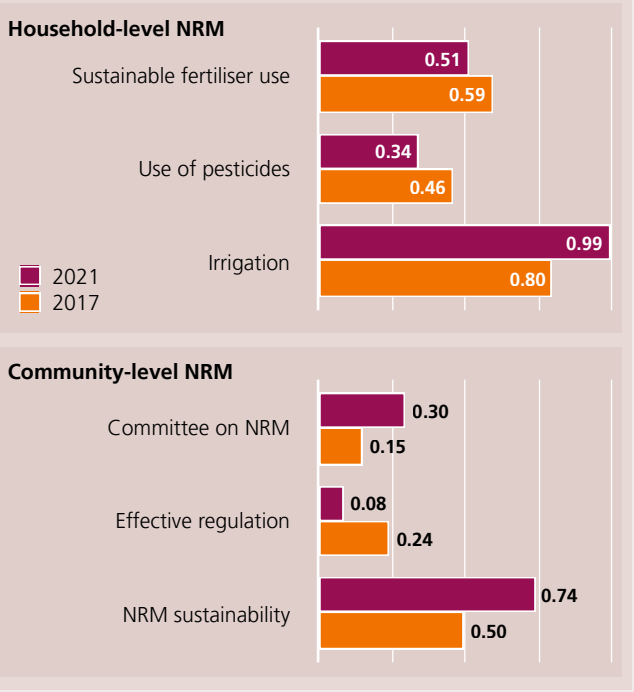
Multiple factors are conceivable for the variation in terms of livelihoods: the work of NGOs and government agencies in the area, seasonal differences (note that the endline was conducted in January but the baseline in May), market fluctuations, and general development advances.

In some resilience star discussions, participants also explained that the advances in DRR had indirect positive effects on livelihoods. On average, the average resilience star score amongst Fulchari communities was 0.75.

There is another aspect to livelihoods that was not included in the calculation of the resilience radar score: **social safety nets**. In line with the programme logic of making citizens aware of available services and benefits (under output 1.5), and likely as a result of programme activities in this regard, the number of social safety net beneficiaries increased dramatically (see figure 15). The safety net beneficiary score (SNBI; excludes vulnerable groups development programme) saw an increase from 0.09 in 2017 to 0.22 in 2021.

Dimension 7 | **Natural resource management**
Baseline 0.46 (medium) | Endline 0.49 (medium)
This index consists of two sub-indices that refer to household and community-level natural resource management (NRM).

Fig. 16 | **Natural resource management**



Note that some questions were deleted in the endline, and that baseline scores were re-calculated to ensure comparability.

While the overall NRM score has not significantly changed, a closer look reveals several changes in opposing directions. In terms of the management of agricultural fields and gardens (**household-level NRM**), more fields are now connected to irrigation systems. Farmers use slightly more fertilisers and pesticides than they did in the past.

Concerning **community-level NRM**, respondents now have a more optimistic view that based on current usage patterns, natural resources can be sustained. The regulation of the use of such resources (e.g. water, soil, land, wood) is very poor, despite more respondents saying that a committee is now in charge of overseeing NRM.

The resilience star score is a 'very high' 0.88, and results indicate indeed a growing environmental awareness and adoption of environmentally-friendly practices (e.g.use of cow dung and sticks for heating, use of bio-fertilisers).

Promoting such practices, making farmers aware of the risks associated with chemical fertilisers and pesticides, and identifying sustainable and safe practices of groundwater extraction for irrigation may help avert the worrying trends seen in many areas of middle and low-income countries.

Fig. 17 | **Health**

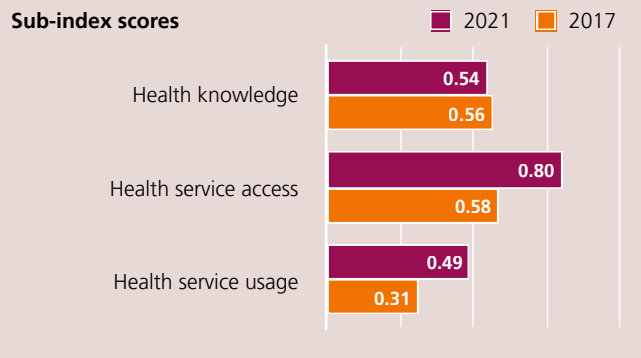
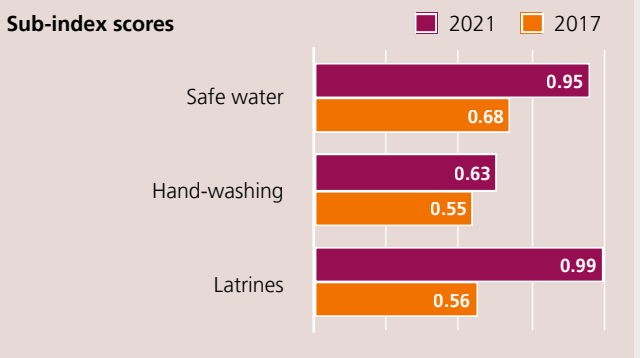


Fig. 18 | **Water & sanitation: two levels up**



Dimension 8 | **Health**

Baseline 0.48 (medium) | Endline 0.61 (high)

The health index is based on the three sub-indices of health knowledge, service access, and service usage (see fig. 17).

There was almost no change in terms of health **knowledge** (which focused on tuberculosis, which is common in the area). **Access** increased significantly: 73.6% said there was a functional health centre within 30 minutes of walking (baseline 56.3%); 81.2% were aware of a community health worker (baseline: 55.1%), and 84.9% said a pregnant woman would be able to get ante- and postnatal care through a midwife (baseline 63.6%). Regarding **usage**, respondents were more willing to use health services in the case of prolonged sickness, to give birth, and for check-ups than they used to.

Two questions on **Covid-19** were added to the endline (not counted for the radar scores): 91.4% of respondents said they were familiar with Covid-19. Amongst these, 83.9% could list at least one correct symptom.

The **resilience star** groups scored health at a 'very high' 0.97 on average. They noted proximity to community clinics and rather strong health knowledge as strengths. Common gaps included lack of some equipment as well as the difficulty to refer/transport patients from chars to mainland hospitals (lack of boats).

Dimension 9 | **Water & sanitation**

Baseline 0.60 (medium) | Endline 0.86 (very high)

The water & sanitation index is based on the three sub-indices of safe water, hand-washing, and latrines (see figure 18).

In terms of **safe water**, the addition of further tube wells led to almost universal access (99.0%) to improved water sources - a major jump from the 67.6% at baseline in 2017. As a caveat, it must be noted however that water treatment (e.g. boiling) was not considered in the analysis. Most respondents (90.4%; up from 80.3% in 2017) said they now had uninterrupted water supply from their primary source throughout the year. The same share (90.4%, up from 86.5%) said their primary water source was within a 50-meter radius from their home.

In terms of **hand-washing**, there were significant improvements in washing hands before eating, before food preparation, and before feeding children. The share of households with a fixed water point and soap increased but remains rather low (43.9%, compared to 34.9% in 2017).

Concerning **latrines**, the share of households with latrines almost doubled from 56.1% at baseline to 99.2%. For the calculation of the radar, the mere existence of HH latrines was counted (whether they met hygiene standards or not). This is because there had been no systematic assessment of the hygiene status at baseline. At endline, it was observed that 90.2% of all inspected latrines met official hygiene standards.

The **resilience star** groups scored water & sanitation at a 'very high' 0.98 on average. Groups cited the many new or upgraded tube wells, latrines and improved hygiene (including at schools) as strong capacities.

4.3 Institutional capacity

The Disaster Management Committees at village (VDMC), union (UDMC) and upazilla (UzDMC) levels assumed an important function in the programme logic — acting as vertical connectors with a focus on disaster risk management.

As part of the programme review, the capacities of these new or strengthened entities were assessed. Let us first focus on VDMCs, then turn to UDMCs and the UzDMC.

Village DMC capacity

The assessment of VDMCs was conducted by BDRCS volunteers who had been briefed on the use of the Swiss Red Cross monitoring tool. Six of the 44 VDMCs were assessed. All of them had 15 members; 40 - 60% of these members were women.

Each of the assessed VDMCs met four of the five benchmarks from the checklist of a functional DRM entity:

- they were **recognised** by the superior level DRM institution and part of the DRM system;
- they had a disaster management **plan** and standard operating **procedures** (SOP) in place;
- they were **equipped** well and had maintained their equipment; and
- they were **active**: all six VDMCs had been engaged in emergency operations in the past 12 months (between three and eight times), had taken part in emergency simulations, and had tested their disaster management plan.

The VDMCs also had been **trained** well; however, the target of having 50% of members trained in all topics was missed.

Although the VDMCs thus failed to reach the 'functional' status as defined by the monitoring tool, it is noted that this definition is rather ambitious. Based on all available data, the VDMCs are found to be very active and engaged. The numerous deployments in flood and other emergency operations as well as the availability of their own funds is also recognised in this context.

Union and Upazilla DMC capacity

The entities at higher levels were assessed by the national consultant, using a customised tool that drew from the Octagon self-assessment exercise. The Fulchari UzDMC, Gazaria UDMC and Fazlupur UDMC were selected for this assessment (Erendabari and Fulchari UDMCs were not assessed).

The assessment featured seven dimensions deemed critical to the DMC mandate (DRR, disaster response) and its sustainable operation (internal organisation, connections, community outreach, resource development, financial management).

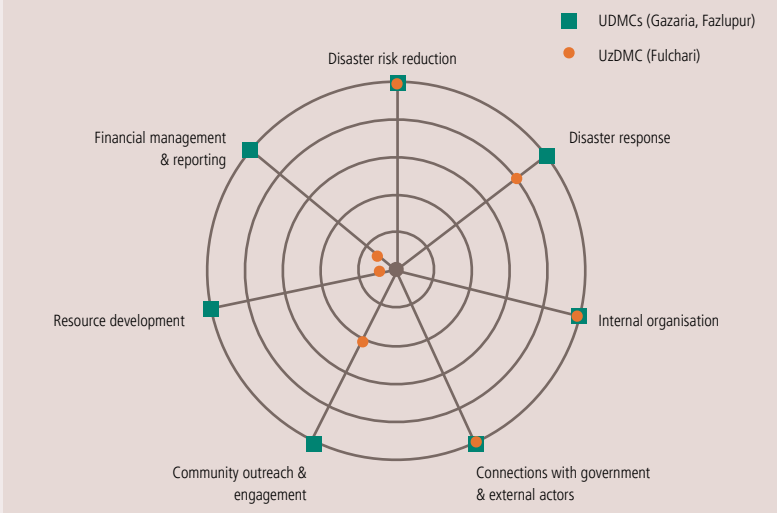
The associated checklist featured five statements for each dimension (35 in total) that DMCs could answer with yes or no. Each 'yes' earned a point; the maximum of five points equalled 'very high' capacity for that dimension. The results are illustrated in figure 19. It shows that the two UDMCs

earned top marks for all dimensions. Notably, they said that their capacity had improved on all dimensions, largely thanks to the DRM programme support.

While these results are self-assessments and could not be verified, UDMC members did explain and substantiate the high scores. They showed themselves as motivated and capable actors, rendering UDMCs sustainable entities to oversee DRM activities and act as strong connectors between VDMCs, UzDMC, and other actors. In fact, both UDMCs had action plans in place and sound ideas as to how DRM could be enhanced further (in particular, by increasing coverage).

The Fulchari UzDMC meanwhile scored lower in disaster response, community outreach, and scored zero points for resource development and financial management. It claimed that these dimensions were not relevant at all to their entity. But while this may indeed be the case for community outreach, robust resource development and financial management is critical to the sustainability of any organisational entity.

Fig. 19 | **Union and Upazilla DMC capacities**



5. Efficiency

As shown in the previous chapter, the DRM programme has been highly effective in raising resilience and achieving its targets or generating major improvement. To what extent was it efficient?

To answer this question, let us first of all look at the big picture: the actual expenditures of CHF 940,800 (up to the end of 2020) was used to benefit around 22,341 households - equating to CHF 42.11 per household. This is a very reasonable figure, especially when considering the depth of engagement and the resulting improvements that were achieved.

While this review neither featured a detailed financial analysis of programme costs nor a cost-benefit analysis (i.e. what was the ratio between ultimate benefits to overall costs), several observations can be made with regard to efficiency.

Firstly, it is noted that the programme targeted a contiguous area of communities: rather than doing a little in many places, it did a lot in a few. This deep engagement model can be associated with comparatively low transaction costs (as well as beneficial effects in terms of reach, uptake, and resilience effects).

Secondly, the team structure and allocation was found to be reasonable. No duplication was detected (although staff reflection workshop (SRW) participants pointed out that the roles of project manager and resilience coordinator had been hard to differentiate). Coordination and co-operation between SRC and BDRCS was described as strong.

Thirdly, it is recognised that the leverage of programme funds was extended through local contributions to hardware measures. Communities/beneficiaries and union parishads each contributed 10% funding to these measures.

Finally, although it is noted that the most relevant measure of efficiency - the ratio of ultimate benefits to costs - cannot be quantified in this review, it is likely to be very high. The combination of a) very frequent floods, b) high penetration of communities by programme investments (e.g. almost universal reach of EWS messaging), and c) high chances of outcomes being sustained (see next chapter), it is likely that avoided losses and other benefits indeed exceed costs multiple times.

6. Sustainability

The sustainability of an intervention's outcomes largely depends on a strong sense of local ownership - local actors' **willingness** and **capacity** to continue running or maintaining them. Neither willingness nor capacity is a fixed given (fig. 20).

Local actors' **willingness** usually is a function of

a) perceived relevance (did an activity address a community concern?),
b) the perceived benefit-cost ratio (did an activity generate tangible benefits, how much input is needed to maintain these, and do the benefits justify the costs?), and
c) process ownership (did local actors invent, steer, participate, accept or reject the underlying process?).

Similarly, local actors' **capacity** can be broken down into the following aspects:

d) funds and inputs (do beneficiaries have the time and money to sustain the outcome?),
e) skills and capabilities (do they have the required technical skills?),
f) structure and routines (do solid organisational structures underpin the outcome?), and
g) organisational resilience (will beneficiaries be able to adapt after a shock, such as the death of a local leader?).

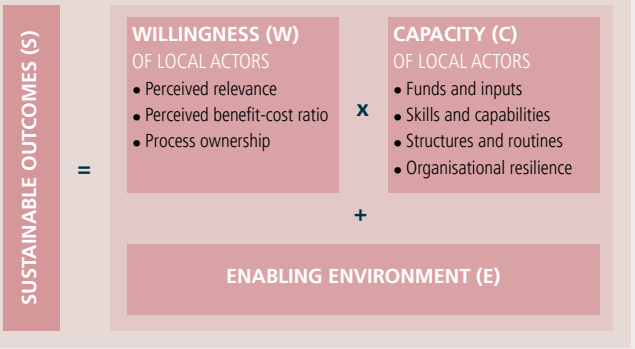
In addition to willingness and capacity, the strength of an **enabling environment** (next-tier government support, frameworks) also plays a role. Applying this analytical frame, how did the outcomes of the DRM programme fare?

In terms of **willingness**, the high level of participation is noted. Community members were involved in assessments and engaged in the planning, implementation, and monitoring of activities. The enormous frequency of floods translates to a high benefit-cost ratio, considering that risk reduction measures were found to be effective (in resilience star discussions and interviews, many therefore argued to further extend coverage of plinths and tube wells).

Furthermore, the contribution of local community funds and labour strengthened not just process ownership, but indeed the sense of ownership over the newly constructed assets. Willingness is therefore seen as very high amongst assessed communities.

Regarding **capacity**, the numerous investments in robust training of ERTs, VDMCs, UDMCs and UzDMC is recognised. In spite of the fact that VDMCs did not meet the ambitious benchmark for training levels, all assessed entities are seen as highly capable and have in fact demonstrated their skills in several flood response operations. Structures and routines are well-established, and most have sound systems in place to raise and manage funds. The only exception in this regard concerns the Fulchari UzDMC, whose members have yet to recognise the importance of these critical organisational functions. In summary, capacity is however seen as very high.

Fig. 20 | **Sustainability building blocks**



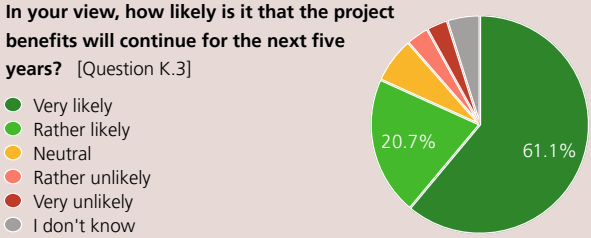
The concept of an **enabling environment** has been a strong inherent design feature of the DRM programme. The vertical linkages between VDMC, UDMC, UzDMC and other actors (including through the NGO Resilience Platform, NRP), as well as programme efforts to facilitate greater access to social safety nets, services and funds, are commendable.

The strong recognition of closer linkages by survey respondents (34.5% increase of the connectedness score) illustrates that these links are not just functional (in terms of more meetings and communication), but indeed generated a difference to ordinary community members.

The enabling environment, as well as sustainability as a whole, is therefore seen as very high. This is in line with the survey results: four in five respondents are confident that programme benefits will be sustained for at least the next five years (see figure 21).

Fig. 21 | **Positive outlook**

In your view, how likely is it that the project benefits will continue for the next five years? [Question K.3]



SECTION C | **MOVING FORWARD**

7. Lessons learnt

Learning from past experience and applying the lessons in the future is a powerful way to continuously enhance programming and to maximise impact. Understanding what worked (and why) allows replication. Knowing what did not work well (and why) provides a basis for modification.

As the previous section has shown, the DRM programme succeeded in generating strong results and raised resilience amongst target communities. What can we learn?

Success factor 1: trust and engaged communities
Communities in Fulchari have been described as interested, open and engaged throughout the programme. Its manager described the level of openness as the main success factor, and higher still than in the previous phase. While this aspect and the fact that social dynamics can indeed differ between different locations are recognised, the overall analysis of available information suggests that the programme team did well at stimulating the social dynamics in a positive way. It engaged communities closely during assessments, planning, implementation and monitoring. It listened to concerns and addressed them where possible. It showed flexibility and responsiveness, and integrated support in response to several flood events. It was a trusted partner. The financial and in-kind contributions are a reflection of the engagement and trust. See also part 3.2 on how the programme team achieved this high level of engagement.

The DRM programme featured an enormous community involvement in training courses and risk reduction actions: responses to survey question K.2 (multiple selections; what activities were you involved in over the past 12 months?) can be aggregated to a score of 0.39 (1.00 would mean that all respondents were involved in all activities). This is more than twice the respective figure of the previous programme (2013-17), which had been 0.16.

Success factor 2: tangible benefits
Pure DRR programmes tend to suffer from a dual dilemma: protective benefits materialise only when a hazard strikes

(represented by reduced losses) — and even when that happens, the benefits are often invisible. There tends to be little analysis and recognition of what would have happened without the DRR measures (counterfactuals are abstract).

The programme did not suffer from this dual dilemma. First, the high frequency of floods meant that protective benefits actually did materialise (and were recognised, to some extent). Second, the multi-faceted and comprehensive nature of the project meant that it brought numerous direct benefits that materialised irrespective of hazard events: hygienic latrines, better tube wells, greater access to social safety nets are cases in point. Thanks to close links with and better awareness of government programmes, the share of people benefitting from them increased considerably - for instance from 3.6% in 2017 to 51.0% in 2021 in the case of food for work.

Activities such as plinth raising not only facilitated flood protection but also created additional space for livelihood diversification such as livestock rearing and kitchen gardening, limiting distress sales, and augmenting health, income, and DRM benefits.

Success factor 3: stakeholder integration

All available information suggests that the level of stakeholder integration was robust throughout the project cycle. Strengthening the vertical DMC links (VDMC-UDMC-UzDMC) as well as close involvement of other key departments is seen as commendable. Financial contributions from government agencies and entities are a reflection of this integration.

Through the establishment of the NGO Resilience Platform (NRP), development partners and government authorities were brought together. The platform has a clearly defined mandate and features the government in the lead.

Success factor 4: team dedication counts.

The fourth success factor underpins the others and ought to be listed separately to illustrate its significance. It is arguably one of the strongest (but often overlooked) factors of development programmes that decides over their success: the level of professionalism, dedication and dynamism of the programme team.

This strong level of dedication was palpable during the staff reflection workshop, where team members were thoughtful when reflecting on the past and recommending ways to improve programming. It could be observed in many key informant interviews — for instance, in the description of a 'zero-tolerance policy' to low-quality products and services. It was visible in the diligent way team members conducted the household survey and resilience stars. It could even be seen in survey results: team members frequently travelled to communities and engaged deeply. Almost two-thirds of respondents (65.3%) said they had been in touch with a member of the programme team at least thrice over the past six months (despite Covid-19). The respective figure of the previous phase (that had covered different upazillas) had been 33.0%. Feedback from residents engaged in resilience star exercises was very positive throughout.

Having a strong and dynamic team and sufficient staffing levels that enable frequent exchanges therefore matters and must be taken into account as part of project planning as well as human resource management.

The power of connectedness.

The programme investments towards greater community knowledge of available services (social safety nets) as well as structures and processes (ward shavas, budget sessions) proved hugely successful, as described in chapter 4 (see fig.15).

These should be extended and replicated in future programming. Promoting connectedness is a cornerstone of resilience programming as envisaged in the IFRC road map to community resilience. There is a rich array of opportunities to facilitated greater connectedness (see box below).

Connectedness: opportunities await

Access to services in Fulchari is even greater than the share of social safety net beneficiaries suggest (these are not counted on the basis of eligibility, see chapter 4). The score for question A.4 on service access is now a stunningly high 0.96 (up from 0.58 at baseline).

Residents in Fulchari benefit from better mobile network coverage and can furthermore make use of IT centres in all unions at low cost. The ongoing vaccination roll-out across Bangladesh relies on online registration. BDRCS is already engaged in this rollout and as of February 2021, runs 995 vaccination booths as well as 349 vaccination centres.

Both electronic platforms (apps, websites) and these physical centres offer opportunities to targeted messaging. Whereas these have thus far been effective mainly in urban areas, services can be reached by many rural communities as well. Early warning, information on household preparedness, hygiene and nutrition advice: the list of possible services that could be offered is long, and could be closely integrated with existing platforms.

Sanitation: addressing both supply and demand sides
The programme achieved practically universal sanitation coverage by working both on the supply and demand sides.

On the **demand** side, a massive sensitisation campaign was mounted: besides generating awareness on WASH, a context-specific toilet design was developed that was low-cost while meeting government standards for hygienic and improved latrines.

On the **supply** side, sanitation marketing was localised through establishment of local production units. Entrepreneurs were trained and supported in running these production units (SanMark centres), creating capacity to meet demand in the programme area and beyond. These local units lowered transportation costs and permitted efficient access of people to quality building materials. Quality assurance support was rendered by the project.

The spin-off of this initiative was the establishment of diversified local livelihood opportunities and higher investments in local economy. The 15 SanMark centres were the first business facilities of their kind in the chars and also created a fair level of local employment opportunities.

Strong monitoring enables short feedback loops.
Imagine you were cooking a soup. You probably would not wait until it is ready, only to find out that it tastes terrible. You'd taste it often and to fine-tune ingredients to come up with the best-tasting soup instead. Good monitoring creates short feedback loops, similar to the way you cook a soup.

In the case of the DRM programme, the end result was undoubtedly strong (like a fine-tasting soup). Formal monitoring however was not. Arguably, the team still had a good sense of how the programme was tracking, thanks to the close relationships and exchanges with communities and stakeholders. Yet, the programme lacked a systematic way to keep track of its progress.

The team did not include personnel assigned to the monitoring of outputs and outcomes. Progress was largely collated along the lines of inputs (e.g. how many people were trained) but not systematically at output and outcome levels (i.e. whether a training was effective in passing on knowledge and whether such knowledge led to changed behaviour). Key progress data was collated and included in annual reports to the donor.

The lack of a more robust monitoring system meant that little was known about success factors (that could have been built upon during implementation), and that challenges may not have been recognised as quickly as they could have been with a better system in place.

During the staff reflection workshop, monitoring was identified as a weakness. Indeed, several points are worth noting:

- Issues of **coherence** in the logframe and **smartness** of selected indicators.
- Absence of **milestones** and, in some cases, of **targets** (which made it impossible for this review to assess whether an indicator target was achieved).
- Lack of staff, resources, and systems to systematically monitor **outputs** and **outcomes**.

Future programming should assign staff who are fully committed to the development and management of a high-quality monitoring and evaluation (M&E) framework. This includes the development of a coherent and smart logframe, a realistic M&E plan, and the consistent tracking of inputs, outputs and outcomes.

As a general rule, it is recommended practice to include systematic mid-term reviews for programmes three years or more in duration, and to allocate 5% of the budget to monitoring and evaluation. A robust monitoring system will be even more crucial in the context of Sundarganj with its less favourable basic conditions (see part 8.2).

Remotely managed evaluations have limitations.
The final lesson concerns not so much the DRM programme itself but instead reviews such as the one at hand. In light of the travel restrictions related to the Covid-19 pandemic, this review (and many others around the world) had to be managed remotely. There have been calls for a continuation of this remotely managed approach post-Covid.

In exceptional cases, such processes can be both effective and efficient, and may offer better value-for-money. This may be the case when those remote collaborators have a long-standing joint experience and shared understanding of the analytical tools deployed. Where that is not the case, remotely-managed evaluations must be seen as inferior.

Evaluations are complex processes; the risk of critical aspects being lost in translation is considerable. The transaction costs tend to be rather high for all parties involved.

In most cases, remote processes are therefore neither as efficient nor as effective as in-country studies (which also enable a more nuanced and detailed observation).

8. Local needs

In this report, we refer to local needs as any gaps and/or residual needs in the the current programme area of Fulchari as well as any needs identified in nearby Sundarganj. The information below draws from

- the qualitative analysis of all resilience star exercises, DMC assessments at various levels, and key informant interviews;
- a specific analysis of the survey results from Sundarganj;
- an analysis of gaps and 'weak points' in the Fulchari resilience pattern;
- key informant interviews in Gaibandha; and
- the inputs from the staff reflection workshop.

8.1 Fulchari

The substantially improved resilience pattern of target communities (who are now in the 'high' band of resilience with their overall score of 0.75) coupled with a very strong outlook in terms of sustainability generally indicate that the most urgent needs have been addressed. However, several aspects stand out that would warrant limited and well-targeted action as part of a new phase.

First and foremost, there is the issue of **food insecurity**. While this issue was not raised by key informants and programme staff, the evidence from resilience star and radar represents a compelling match. Only half of the respondents (51.5%) said that their household members had enough to eat at all times of the year; a staggering 34.0% said they never had enough throughout the year. In five of the six resilience stars, food insecurity was raised as an issue. Based on the stars, 20 - 30% of households do not have enough to eat during the flood season. Low incomes, as well as the limited capacity to preserve and store food resources, were seen as key factors behind these shortages.[2]

A related aspect concerns **livelihoods**. In spite of the substantial improvement by 41.5%, the endline score of 0.59 falls into the medium range. Although livelihood profiles are now more diversified, membership in savings groups (0.25) and perceived access to credit (0.39) is low. Insurance for houses and crops is almost non-existent (0.09). While 68.5% say they have no financial debts, resilience star results indicate that coping capacity is very limited: most households have limited savings to fall back on during emergencies. Even during normal times, many struggle to make ends meet.

Natural resource management may not have been a programme focus, but the medium score of 0.49 as well as resilience star results indicate that this dimension should receive more attention. The mistakes made in many other emerging countries may be avoided with targeted awareness-raising: The use of pesticides and chemical fertilisers is on the rise already; early dissemination of suitable and sustainable alternatives may do the trick to sustain groundwater and food safety for the long run. Increasing use of groundwater from very deep layers is furthermore reason for concern. While results indicate growing environmental awareness, regulation towards sustainable use of natural resources remains weak or non-existent: merely 2.8% of respondents see the use of natural resources regulated effectively.

With regard to **disaster risk management**, the successful reinforcement and extension of the sub-national DRM architecture by the programme is commendable. VDMCs, UDMCs and UzDMCs play a critical role in connecting communities to higher levels and sources of support during crises, and in raising disaster preparedness at all levels. But although assessed entities have developed robust structures and dynamism (perhaps with the exception of the Fulchari UzDMC), some ongoing support is advisable to further consolidate these structures.

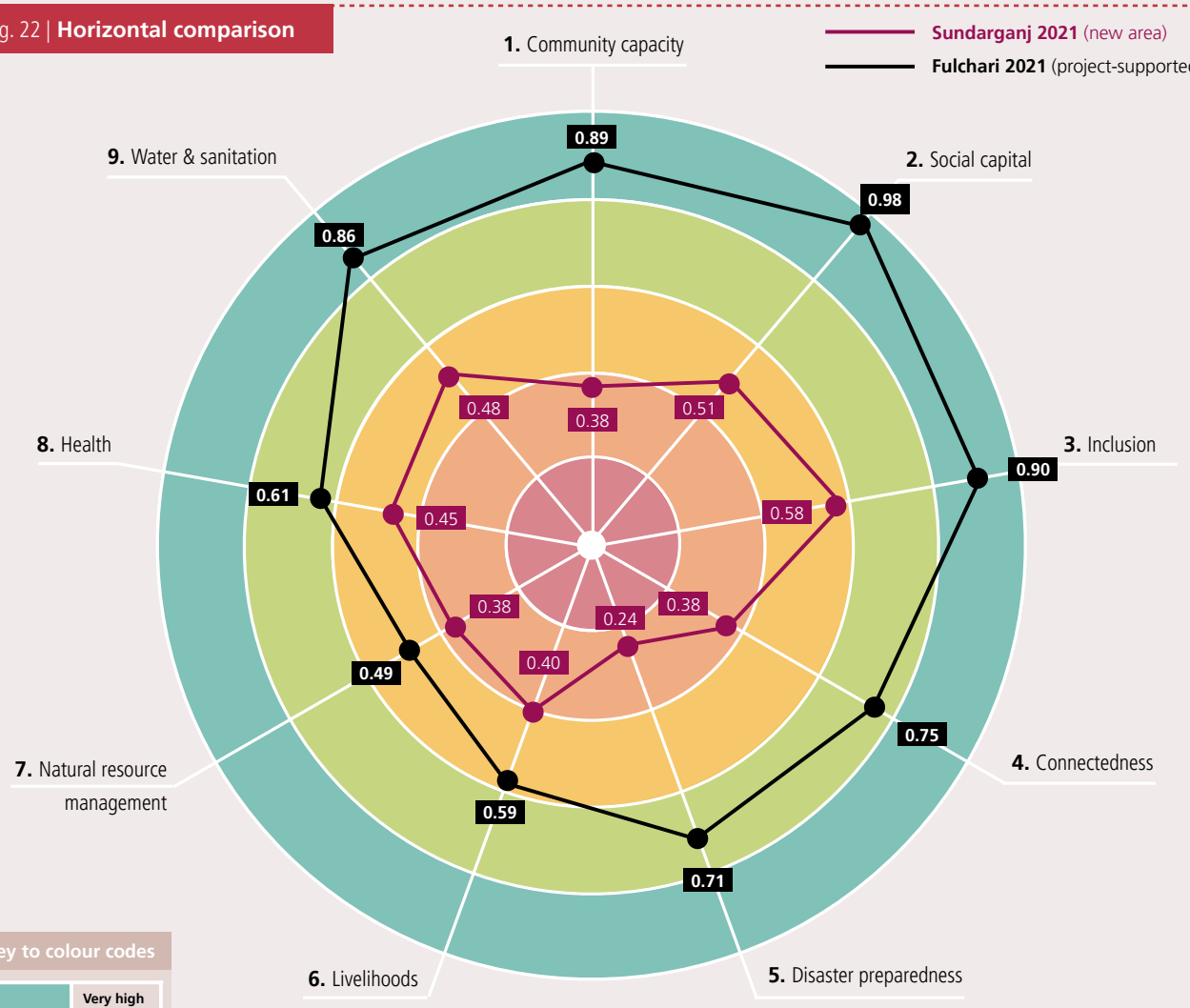
Limited refresher training and coaching of DMCs as well as performance monitoring may be especially useful when coupled with further technical advances (such as the institutionalisation of FbF and further enhanced early warning systems (see next chapter).

With regard to **water and sanitation**, several communities have called for additional tube wells (or upgrades of exisiting wells). But with almost universal coverage of such wells in target communities (96.9% use them), there appears to be very limited need. Current coverage does not warrant further investments in this regard, and additional wells should be covered by local funds.

Future programming should focus on hygiene promotion instead - both at schools and communities. The hand-washing index of 0.63 indicates that room for improvement remains. In times of Covid-19, additional advances in hygiene are particularly relevant. Furthermore, future programming should invest

2. The link between livelihoods and food insecurity is to be further explored. Prima facie, the observations of improved livelihood diversification (and other conditions) on the one hand and that of an increased share of food-insecure respondents appear to be at odds with each other. However, it is conceivable that conditions have improved for many but worsened for some. In Fulchari, the correlation between these aspects were found to be not significant. An alternative explanation was proposed by a key informant, who argued that the high share of food-insecure households may reflect a 'relief mindset' that leads respondents to present a situation worse than it is. This explanation is tenable but fails to explain why the share has increased between base- and endline. A third explanation would lie in the socio-economic impact of Covid-19, which is more limited (according to survey results) than expected.

Fig. 22 | **Horizontal comparison**



A call to action

The horizontal comparison between programme communities in Fulchari (black) and the new area of Sundarganj (purple) highlights a drastic difference in resilience patterns. The summary resilience index is 0.75 (high) in Fulchari and 0.42 (medium) for Sundarganj. This is substantially lower still than the 0.57 (medium) score that had been found in Fulchari at baseline in 2017 (see fig. 8).

in efforts to strengthen more systematic testing of water sources for *escherichia coli* bacteria and other pollutants (new and upgraded tube wells were tested for arsenic). All water sources need to be tested regularly (ideally, on an annual basis). Results ought to be displayed at each source. If water is found to be unsafe, communities must be advised that water should be boiled or otherwise treated prior to consumption.

In terms of **health**, strong advances in terms of service availability (from 0.58 in 2017 to 0.80) and use (scores increased from 0.30 to 0.49) have been recognised. Although 84.9% of respondents say that ante- and postnatal care is now available, some communities listed absent midwives and capacities for referrals to hospitals as challenges.

8.2 Sundarganj

Compared to Fulchari, the overall situation in Sundarganj is far worse, and there is a plethora of needs. Fig. 22 above shows the resilience patterns of Sundarganj (purple) and Fulchari (black). The stark difference can be easily detected; the overall resilience score in Sundarganj (0.42) is roughly half that of Fulchari (0.75). Remote, isolated, poor, and with less support from NGOs, the resilience score today is lower still than it had been in Fulchari at baseline (0.57). On all nine dimensions, Fulchari had been better off in 2017 than Sundarganj is now.

"People in my community have hopes about the future", was one of the survey's statements. Whereas 0.0% disagreed with this statement in Fulchari, 23.5% did in Sundarganj.

The overall analysis of radar and star results shows that Sundarganj would be a highly relevant target area. Comparatively very low ratings for the resilience radar's process-oriented dimensions (community capacity, social capital, inclusiveness and connectedness) also suggest that any programming here will be challenging.

The social and structural foundations that can be seen as success factors for community-based action are weak. For instance, trust, propensity to collective action, and access to services is far more limited than it had been in Fulchari back in 2017.

Programming in this area will not only need to address greater logistical challenges (compared to Fulchari), but also need to overcome challenges in mobilising and engaging communities.

During project planning, this initial building of trust and foundations will need to be accounted for in terms of budget and staff numbers as well as scheduling. Integrating quick and tangible wins that engage community members in collective action may be of strategic value to gain trust and build relationships.

Arguably the most pressing concern in Sundarganj is the high level of **food insecurity**: almost two-thirds (61.7%) of survey respondents say that 'none of our household members had enough to eat for all or most of the year'. A mere 5.1% say they have enough to eat at all times (by comparison, 51.5% in Fulchari do). In Paschim Lalchamar, resilience star discussants estimated that "50% of families cannot reserve or buy food during floods."

Livelihoods in Sundarganj (livelihood diversity score 0.55) are somewhat less diversified than in Fulchari (0.65). More importantly, they are far more exposed to extreme weather and other hazard events: only 14.9% of Sundarganj respondents say that at least half of their income is derived from Type B sources (64.9% in Fulchari).[3]

On the three resilience measures (saving groups, credit access, insurance), scores are roughly half of those in Fulchari. Lack of employment opportunities, economic hardship and struggle were common themes in Sundarganj resilience stars. In Ujan Durail, a participants commented that many people "run their lives on loans" and "cannot manage their lives with their earnings".

3. In Sundarganj, a positive correlation coefficient of 0.165 was identified between the share of Type B income and food security. This means that persons with a greater share of non-agricultural income are significantly less likely to be food-insecure.

Meanwhile, far fewer people receive social benefits than in Fulchari: Sundarganj's SNBI score of 0.135 compares with Fulchari's SNBI of 0.217. A mere 8.1% are enrolled in the vulnerable group development programme (Fulchari 35.5%).

Concerning **disaster risk management**, current capacities are particularly dire. Only 32.7% say they know any measures to prepare their households for disasters; a mere 36.2% say they have received a warning message ahead of an incoming flood (Fulchari: 92.4%). Community preparedness measures (such as RRAP, VDMC, contingency plans) are virtually non-existent or unknown. Very few respondents are aware of any emergency services (18.4%) or recovery support (13.2%).

Access to health services is poor (health access score 0.42; Fulchari 0.80); only 45.2% say they have a functional health centre within 30 minutes of walking (Fulchari: 73.2%).

With regard to **water and sanitation**, the starkest contrast between the two upazillas is found in relation to latrines. Only 50.0% have a latrine, compared to 99.2% in Fulchari. And while almost all Fulchari latrines meet hygienic standards (90.2%), only 28.6% of those in Sundarganj do.

Tube wells are very common, and most respondents have water access throughout the year (81.1%) and within 50 meters from their home (80.6%). Resilience star discussions show however that only 5-10% of these wells can be considered flood-resilient.

In addition to the analysis of resilience radar and star (that were conducted in selected communities of Haripur and Kapasia), interviews were conducted with the Sundarganj UNO and the Haripur UP chairman (by the programme manager) and with the local MP for Sundarganj (by the international consultant).

A common tenor amongst these interviews was the issue of extreme poverty (although food insecurity was not directly listed as a concern). According to interviewees, alternative livelihoods and income-generation opportunities were amongst the most pressing issues.

Compounding and inter-related with poverty were pressing social issues, including violent conflicts, gender-based violence, low education levels (54.1% have no formal education compared to 41.1% in Fulchari).

Five NGO operate in Sundarganj, but with limited coverage. All interview partners expressed hopes for support in the area. The local MP said he would guarantee strong coordination and support from relevant government agencies.

9. Strategic considerations

Having analysed the DRM programme's performance, the lessons that can be learnt from this experience, as well as local needs in the Gaibandha's Fulchari and Sundarganj areas, let us turn to the future. What could a new programme look like? What should it focus on?

To answer this question, additional insights were gathered from key informants. These included the leadership and management of BDRCS, country representatives of IFRC and Partner National Societies (PNS).

Three themes emerged in terms of an overarching road map.

First, it was observed that the flood-prone area in Bangladesh's north-west have been hit more frequently and more severely by flood events in recent years, and that more action was needed to reduce vulnerability and raise resilience of the affected population. Drawing from the Cyclone Preparedness Programme (CPP) along the country's coastal belt, the idea of a similar programme for the northern districts along the Bramaputra-Jamuna river system has been proposed.

The **second** issue concerns coordination: how could preparedness efforts supported by PNSs and IFRC be better coordinated in order to maximise effectiveness (as well as efficiency)?

The **third** common issue was that of 'localisation' - the idea that district-level units of BDRCS would be better resourced, more independent, and stronger local actors.

The three issues are interlinked and may best be tackled through a visionary and bold approach. Swiss Red Cross-supported DRM programming should support that bold approach. A three-tier framework is described below and illustrated in figure 23.

The framework represents a shift towards a **broader reach** on the one hand and a nuanced move from direct community-based service delivery towards a greater role of BDRCS units as **connectors and enablers** of community-driven action.

This idea is not new. The Road Map to Community Resilience (IFRC 2016) highlights the notion of branches that **ace** (Accompany communities, Connect them with local partners, and Enable action). Rather than the Red Cross/Red Crescent (RC/RC) helping to identify and then deliver solutions, the RC/RC is a process facilitator. It assists with assessment processes, strengthens community capacity, and connects the community with local sources of support.

If we imagine a continuum on which pure service provision (delivering the solution) was on one end and pure facilitation on the other, it could be said that several projects in Bangladesh are already a hybrid model that sit in between these poles. The several 'Vulnerability to Resilience' (V2R) projects supported by British Red Cross for instance featured a strong component that seeks to connect communities with local governments. And take this Swiss Red Cross DRM programme in Gaibandha, which did very well both at building institutional linkages (VDMC-UDMC-UzDMC) and at ensuring that communities make use of available government services such as safety net programmes.

Fig. 23 | **The next DRM programme: a framework of three tiers**

TIER 1: PULLING ON ONE STRING

What it aims for: the formation of a joint scheme led by BDRCS/IFRC and supported by PNSs to raise resilience across the flood-prone areas. This should be administered from a regional hub that a) pools resources (e.g. trainings), b) links with government agencies, c) exchanges practices and innovates (e.g. Google-supported EWS, local DREF/FbF institutionalisation, d) coordinates monitoring and resilience measurement (e.g. Zurich Flood Resilience Measurement for Communities, FRMC), and e) supports unit localisation efforts.

What it requires: Strong willingness for leadership, coordination and exchange, and commitment to contribute medium to long-term funding. Proposed SRC budget allocation for tier 1: 20% for core contribution and to cover limited support of another district (beyond Gaibandha).

Focus area: 12-14 flood-prone districts in the country's north-west

TIER 2: ENGAGING DEEPLY

Focus area: Selected unions in Sundarganj (Gaibandha district) and possibly in Kurigram

What it aims for: substantially raised resilience based on local conditions. Based on this review, this will need to include DRM, WASH as well as livelihood and food security support. The inherent aim is to strengthen access to services and connectedness, similar to the current programme but from a lower baseline.

What it requires: Sundarganj is remote and challenging for numerous socio-economic reasons (see part 8.2). Staffing allocations must reflect this and aim for high-density support. Proposed SRC budget allocation for tier 2: 60%

TIER 3: CONSOLIDATING & ADVANCING

Focus area: Previously/currently supported areas (Fulchari, Shaghata, Gaibandha Sadar upazillas)

What it aims for: the consolidation of entities (e.g. DMCs) through limited support. Involves monitoring, coaching, limited training (based on gaps) through training pool (tier 1); advanced actions (local DREF, FbF institutionalisation, competitions, exchanges, small grants, link to other tier 1 initiatives and regional hub. Also addresses minor gaps identified in this review.

What it requires: Adequate staffing with strong backgrounds in coaching, monitoring, information management, communication
Proposed SRC budget allocation for tier 3: 20%

There is an **important imperative** that stands behind the shift from service provider to facilitator: scale. Bangladesh is already one of the world's key hazard hotspots. Anticipating growing climate change impact means that resilience needs to be strengthened not just in a few hundred communities (i.e. the sum of target communities by all BDRCS programmes). To varying degrees, all of Bangladesh's communities ought to raise their resilience.

Even if one limited the focus on the top 20% of hazard-prone communities, we would be unable to provide direct and full-fledged support to all these communities. As a local politician from Gaibandha remarked: programmes have supported many communities. But there are so many others in need of support.

There is another argument for the switch of roles: BDRCS should not be in charge of solving all problems — of delivering latrines, wells, clinics. Its role is that of an auxiliary to the government. Well-aligned facilitation of community-led processes is a promising way forward that has also been appreciated by local government departments.

The suggested shift necessitates nothing less than a fundamental change in the way things are done. It requires concerted action; leadership. It requires a new lens that looks not just at the results of a project but also at the broader picture.

While latrines and tube wells are tangible and can be easily counted and communicated in reports, 'raised resilience' is more abstract. But as this report has shown, it is both plausible and possible to measure resilience and the change in the broader picture (Fulchari communities now feature a high resilience score of 0.75, instead of the medium 0.57 they used to in 2017).

Even with the shifted role (that features proportionally less direct action), the challenge to BDRCS is formidable. Its district-level units will play a critical role as facilitators - but these units need to be able to do so. The BDRCS leadership and staff at headquarters are committed to providing support to branches but recognised this as a major task. In fact, it is neither feasible nor desirable for the headquarters to support all units across the country's 64 districts from one main office.

In incident command systems, there is the concept of 'span of control': one leader never commands more than five resources. If more resources are needed, a mid-level is created. This span-of-control and the ratio of 1:5 has been tested around the world, and although it focusses on emergency response operations, a key lesson can be drawn and used for the BDRCS context: if effective support to units is to be provided, new mid-level entities are needed. Such hubs are not in contradiction to the idea of 'localisation'; they are in fact seen as a necessity to achieve it. Amongst key informants, there was general endorsement of this idea, although risks and concerns were also noted:

- A new layer as represented by hubs may add **complexity** and slow down processes if not properly aligned in terms of responsibilities.
- The **sustainability** of hubs was a concern: how would these hubs be funded initially and over the long term? BDRCS had a number of hubs about 20 years ago; these could not be sustained financially and were dissolved.
- Alternative means of support for district units may be cheaper while also contributing to the localisation idea: horizontal partnerships, exchanges and competitions were proposed as effective **peer-to-peer (P2P) mechanisms**.

These three considerations are thoughtful and valid. Indeed, hubs would need to be created with procedures and systems in place that see them as an extended arm of the headquarters - having some responsibility without becoming 'a separate headquarters'. Funding is a key concern: although hubs may be created initially with support from PNSs, a sustainability plan needs to be in place that enables long-term staffing without competing in resource development 'catchments' of the district-level units that the hubs are meant to support. P2P mechanisms can prove extremely effective but may better be conceived as complementary (rather than alternative) mechanisms to hubs. After all, they depend on strong and well-developed units who can share lessons with others while also following national guidance. A hub-facilitated P2P mechanism is more promising in this regard.

Following these strategic considerations, let us turn to the concrete proposal of a three-tiered framework of future Swiss Red Cross support to BDRCS in the flood-prone north-west.

Tier 1: pulling on one string

With many districts in the country's north-west being increasingly flood-affected, a concerted move towards greater flood resilience is suggested. A joint scheme, facilitated by a regional hub (that can serve as a pilot for other regions), brings numerous opportunities:

- **Pooling resources**: training courses could be offered from a hub-facilitated pool: the hub could have a roster of trainers and run courses that offer seats to participants from all flood-prone districts (this facilitates informal P2P links as a side effect). Other resources and expertise could be similarly coordinated by the hub.
- **Government links**: while horizontal (e.g. district unit-district government) and vertical links should be localised and remain the prerogative of district units, the hub could

provide resources for advocacy and support coordination amongst the numerous flood-prone districts.

- **Innovation and exchange**: the roll-out of an early warning system that utilises Google Maps (Google-ARC partnership) is a promising prospect to facilitate longer lead times and thus, further reduction of damages and losses. This and other innovations could be spearheaded by the hub, enabling wide reach across flood-prone areas.
- **Coordinated monitoring**: good programming relies on good data. Under the joint scheme, all actors should agree on common core indicators. Resilience radar and star could be part of this set-up. The Zurich Flood Resilience Measurement Tool could be rolled out to gather even more robust evidence.
- **Localisation support**: any technical support to district units should be coordinated by the hub. Support may include training and coaching in terms of resource development, financial management and performance, reporting, volunteer management, and the stronger ability to accompany, connect and enable (ACE) communities.

Swiss Red Cross should promote and support this idea and if agreed by BDRCS, IFRC and PNSs, contribute to set-up of the new hub as a pilot for other regions. In order to ensure broad coverage, PNSs and IFRC should each provide some limited support to district-level units. SRC should support Gaibandha, Kurigram and possibly a third district.

Tier 2: Engaging deeply

As the needs assessment in Sundarganj has shown, the assessed areas feature high exposure to floods as well as extreme socio-economic vulnerability. Crime and conflicts are common. Livelihoods are precarious. Food insecurity is widespread. Access to services is limited.

Selecting Sundarganj (and possibly similarly desolate places in adjacent Kurigram) as target areas and rolling out a programme of deep engagement could make a tremendous difference. Raising resilience here would start off from a low base, which is why deep engagement would be needed. Whereas a success factor in Fulchari was the openness and willingness to engage, Sundarganj features lower levels of social trust and propensity to collective action.

Tier 2 would be the main focus of the new phase and needs to include some direct action (latrines, wells, DRM investments). In fact, the programme should aim for 'quick wins' early on to develop interest and trust of communities (and then build on that trust). With higher poverty levels and fewer local resources, the requirement for local contributions will need to be carefully calibrated.

Survey results in Sundarganj suggest that more than half of the population in assessed communities are chronically food-insecure. In addition to the aspects covered in Fulchari (primarily DRR and WASH), food security and livelihood should be part of a programme portfolio in Sundarganj.

This may include trainings in food preservation (to reduce hunger during floods), food banks and safer food storage, investments to reduce post-harvest losses, and the creation of alternative income opportunities (ideally, based on non-agricultural sources to reduce hazard sensitivity). The current programme's focus on connectedness should be replicated; greater subscription to social safety nets would be highly relevant.

Operating in Sundarganj equates with high risk and high reward: baseline conditions are unfavourable in terms of security, logistics, and the social foundations that community-based action thrives upon. However, if these factors are considered and accounted for in terms of staffing, resourcing and other implementation parameters, a programme could make a huge difference to communities in which roughly one quarter currently lacks hopes for their future.

Tier 3: Consolidating & advancing

The third tier would focus on current and previous target areas of SRC programming - Fulchari as well as Gaibandha Sadar and Shaghata. The primary concern here would be the consolidation of outcomes. Monitoring of DMCs and other entities, for instance, may lead to targeted refresher courses based on gap analysis (these courses may be offered via the training pool under tier 1).

While the programme should refrain from supporting any direct action (e.g. well construction), it could establish a small grant system for strategic reasons: communities submitting propo-sals and competing for co-funding may indeed serve as a motivator for further action, as the experience from similar schemes in other countries has shown. Such schemes could also be run via the hub (tier 1) and should be coordinated with local governments. Furthermore, the tier should support the identification of local champions, exchange visits and common learning. Minor gaps in the current programme (e.g. more robust water testing, enhanced NRM) should be addressed.

These efforts in consolidation could be coupled with technical advances: the creation of local emergency funds (local DREF), databases of vulnerable households and the institutionalisation of FbF are means that could be incorporated under this tier - helping to raise the resilience of target communities even further.

10. Conclusion

This review bears significance in three ways.

First, the longitudinal comparison of resilience patterns as measured through the resilience radar and resilience star is a global first. This application shows that resilience can be measured as part of base- and endline surveys with relative ease. Meanwhile, the new version of the resilience star was appreciated by facilitators and communities; this version now makes it much easier and more meaningful to apply the star as part of community-based monitoring.

Second, that longitudinal comparison highlights the effectiveness of the DRM programme across the dimensions of resilience. The overall resilience score was raised by 31.2%; communities moved a level up from a 'medium' level of 0.57 in 2017 to a 'high' level of 0.75. With regard to two main dimensions of the programme - disaster preparedness (+86.8%) and water & sanitation (+43.8), improvements were especially strong. Almost all residents now have hygienic latrines and year-around access to water from flood-resilient tube wells, and receive early warning messages ahead of floods. The programme team is also commended for the effects and achievements in connectedness: vertical linkages have been strengthened through the DMC structure, while effective access to social safety services has more than doubled.

Third, the review shows the difficult situation in Sundarganj, an envisaged target area of the next programming phase. The metrics indicate high exposure and socio-economic vulnerability. Hunger is common. The needs assessment shows the features that an intervention in this area will need to have in order to navigate risk and raise resilience.

Despite the tremendous challenges posed by several floods over its implementation and the restrictions that were put in place to limit the spread of Covid-19, the DRM programme succeeded on most accounts. The team is commended for its dedication and ability to navigate these risks.

The results of this review give hope.

They show that with the right team, the right measures and the right modi, it is possible to raise the resilience of communities affected by increasingly frequent and severe hazard events. They give hope to residents in Sundarganj, many of whom currently have none.

The biggest hope however is that a fundamental shift towards much more powerful resilience programming appears feasible.

With its constellation of high hazard exposure, high population density, and high poverty rates, Bangladesh is set to be hit hard by climate change. Viewed against this light, the prevalent portfolio mix of disaster response and and targeted DRR support to a limited number of communities will be insufficient.

DRR has been hugely successful in reducing the number of disaster-related fatalities globally. Take storms and cyclones, which had killed 20,600 people on average per year in the 1990s. By the 2010s, this number had fallen to 2,800. Bangladesh itself has witnessed (and driven) huge successes of DRR. Whereas an estimated 500,000 people had been killed in 1970's Cyclone Bhola, 118 fatalities were recorded when the even stronger Cyclone Amphan hit the country in 2020. Any fatality is one too many, but the advances in forecasting, preparedness, early warning and early action pay off and should be recognised.

As the Global Assessment Report 2019 rightly states, future DRR however must move to a much broader approach of risk-informed development to address and revert the trend of growing economic and well-being losses incurred by hazard events. Launching larger-scale efforts that seek to reduce damages and losses while raising resilience are not an option but an imperative. The recent IFRC report on 'the cost of doing nothing' convincingly argued that reducing long-term exposure and vulnerability must be the top global priority.

The joint scheme for flood-prone districts proposed under tier 1 would indeed be a large-scale effort. Amongst BDRCS and its partners, there is willingness to invest in a joint scheme for the flood-prone areas in Bangladesh's north-west. District units will need to play a strong role as facilitators and connectors, and their ability to fulfil these roles needs to be strengthened. Their commitment to 'localisation' represents a palpable opportunity that should not be missed.

The experience from the DRM programme in Gaibandha holds several lessons. The stark increase in resilience between 2017 and 2021 is encouraging. This success is partly the result of deep engagement with direct service provision (e.g. tube wells, plinths, latrines) and may be thus be difficult to be replicated in full through a mere facilitation role. Nevertheless, the strong move towards better connected communities (through institutional linkages and improved service access) is a major achievement that lays the foundation for other flood-prone communities to move a level up, similar to those that the DRM programme supported in Fulchari.

Post-script:

Char Rajibpur assessment (Kurigram district)

Following the field research in Gaibandha district, it was decided to extend the needs assessment to Char Rajibpur upazilla of Kurigram district. The assessment in Kurigram was not part of the overall consultancy of the DRM programme review. Instead, it was carried out by the programme team and the BDRCS Kurigram district unit. The Planning and Development Department at BDRCS Headquarters provided the data analysis after having been briefed by the international consultant. The approach (questionnaire, sampling) was identical to the needs assessment in Sundarganj.

The results (see fig. 24 below and appendix A.5 for detailed data) show that the resilience pattern in Char Rajibpur is rather similar to that of Fulchari at the 2017 baseline. At 0.57, its overall resilience score happens to be identical with that of Fulchari in 2017.

The lowest dimension scores are natural resource management (0.41) and disaster preparedness (0.43). Scores for social aspects (community capacity, social capital, inclusiveness, connectedness) are substantially higher than in Sundarganj, suggesting that programming here may be easier than in Sundarganj (considering that aspects such as trust and propensity to collective action are enablers of community-based action). A separate study on the needs of elderly persons can be found in app. D.

Fig. 24 | **Char Rajibpur resilience radar**

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A level up.

Review of the disaster risk management programme in Gaibandha, Bangladesh

This review of a four-year disaster risk management programme in Bangladesh's north-western district of Gaibandha demonstrates that flood-prone communities moved 'a level up'. On the resilience radar, the overall resilience score increased from a medium-level 0.57 in 2017 to a high-level of 0.75 in 2021. Major improvements were recorded in disaster preparedness (+86.8%), water & sanitation (+43.8%) and connectedness (+34.5).

Looking to future programming, the assessment of needs in Sundarganj upazilla highlights extreme vulnerability (the resilience score here is 0.42), showing that efforts to raise resilience would be highly relevant.

The report concludes with strategic options for concerted action towards deeper and wider resilience programming in the country's flood-prone north-west.

BANGLADESH RED CRESCENT SOCIETY BDRCS

Swiss Red Cross