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# Does integration matter? A holistic model for building community resilience in Pakistan

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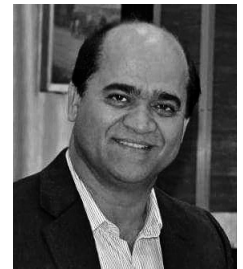
**Shesh Kanta Kafle** is a disaster and development practitioner with over 20 years of experience in disaster risk reduction (DRR) and development programmes. His research is focused on community-based DRR approaches, flood risk management, community resilience, forest fire studies and disaster governance, and his books include *Community Based Disaster Risk Reduction for Local Authorities and Disaster Risk Reduction: Case Studies from Asia*. As a researcher, he has worked for the International Development Research Centre, and Disaster and Climate Change Study Centre, while as a practitioner, he has worked for United Nations Development Programme, the Asian Disaster Preparedness Centre, and for various Red Cross and Red Crescent societies internationally.

## ABSTRACT

*This paper analyses an integrated community-based risk reduction model adopted by the Pakistan Red Crescent. The paper analyses the model's constructs and definitions, and provides a conceptual framework and a set of practical recommendations for building community resilience. The study uses the process of outcome-based resilience index to assess the effectiveness of the approach. The results indicate that the integrated programming approach is an effective way to build community resilience as it offers a number of tangible and long-lasting benefits, including effective and efficient*

*service delivery, local ownership, sustainability of results, and improved local resilience with respect to the shock and stress associated with disaster. The paper also outlines a set of recommendations for the effective and efficient use of the model for building community resilience in Pakistan.*

**Keywords:** *holistic model, integrated risk reduction, community resilience, Pakistan*



Shesh Kanta Kafle

## INTRODUCTION

### Community resilience

Resilience is a ubiquitous concept in sectors and disciplines ranging from psychology, ecology, engineering and physics to various applied fields of studies such as economics, disaster risk reduction (DRR), agriculture, humanitarian affairs and development.<sup>1</sup> The definition of resilience varies by sector. Within the field of development, however, the focus is on bouncing back to 'business-as-usual', as it were, following a shock or disaster. The United Nations Office for Disaster Risk Reduction (UNISDR) defines resilience as 'the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the

preservation and restoration of its essential basic structures and functions'.<sup>2</sup> The International Federation of Red Cross and Red Crescent Societies (IFRC), meanwhile, defines resilience as an 'ability of individuals, communities, organisations, or countries exposed to disasters and crises and underlying vulnerabilities to anticipate, reduce the impact of, cope with, and recover from the effects of adversity without compromising their long-term prospects'.<sup>3</sup>

Community resilience is a relative term and refers to an ideal condition of a community in terms of its capacity to anticipate, prepare for, respond to and recover quickly from the impacts of a disaster. The disaster-resilient community is a positive concept, and while complete resiliency is not attainable, every community is striving to achieve it.<sup>4</sup> As a step beyond merely bouncing back, Manyena *et al.*<sup>5</sup> advanced the concept of 'bouncing forward'; in other words, having made such a huge investment in recovery operations, any community affected by disaster will want to ensure it finds itself in a more resilient position than prior to the incident. Although 'bouncing forward' changes the original meaning of resilience, it provides the promise of a framework against which DRR and post-disaster measures should be undertaken. Tierney explores 'two correlated yet fundamentally distinct properties: inherent resilience, which is present during non-crisis periods and related to inherent vulnerability; and adaptive resilience, which is the flexibility and coping capacity demonstrated in the aftermath of disasters'.<sup>6</sup>

Jutersonke and Kaartas advocate for a new perspective in resilience measurement: 'a shift from deficits to strengths; from what is wrong or amiss to what is strong and robust about a body or system'.<sup>7</sup> This perspective is in line with the process cum outcome-based resilience

index proposed by Kafle.<sup>8</sup> Berkes *et al.*<sup>9</sup> discuss the social-economic systems from the multiple human community perspectives that can be analysed using resilience theory to account for their complex and dynamic behaviour.<sup>10</sup> The United Nations Development Programme (UNDP) emphasises resilience as the whole-system state<sup>11</sup> and can therefore be measured by system-level characteristics. As the notion of resilience encompasses a number of underlying elements or sub-systems, it is imperative to take into account a wide array of process and outcome indicators when measuring a community-level intervention. This study describes an integrated programming approach adopted by the Pakistan Red Crescent (PRC) with technical support from the IFRC and assesses its effectiveness in building disaster-resilient community.

Both the Hyogo and Sendai frameworks emphasised the holistic model of risk reduction incorporating the health and disaster management.<sup>12,13</sup> Ideally, community-based disaster risk reduction programmes are designed in such a way that they take into account the measures to reduce the root causes of the community vulnerabilities through an integrated approach to enhance community resilience and reduce disaster risks. This paper attempts to analyse and answer the following key questions:

- Does the integration of various sectors, ie organisational development, health and disaster management, accelerate the pace of building community resilience capabilities?
- What challenges are envisioned if implementing an integrated programme at full scale?

### **Integrated programme approach**

Integration is a holistic approach and encompasses all phases of a project, ie

project design, implementation and monitoring and evaluation. Integration is not about the addition of one or more elements from sectors or disciplines, but rather a collaborative approach that uses common tools, joint planning, implementing, monitoring and evaluation and the sharing of resources. Many individuals in organisations regard integration as similar to merging and fear their roles and responsibilities will decrease.<sup>14</sup> The power relations between the sectors in an organisation play a crucial role in the institutionalisation of a fully integrated approach.

The IFRC defines an integrated programming approach as:

‘a holistic approach to addressing the risks and needs faced by the community ... [it] is an approach that incorporates key components of the national society’s core programme areas into a holistic programme model, which recognises the beneficiary/beneficiaries in their totality of needs and rights.’<sup>15</sup>

The integrated programming provides a holistic and multi-sector approach to addressing risks, vulnerabilities and needs:

‘Integration is not simply the inclusion of multiple elements within a programme. It is a different approach that combines mutually supportive programme elements which collectively contribute to achieving a common programme objective. The elements within an integrated programme should be influenced by the communities’.<sup>16</sup>

The IFRC has proposed six key elements of integrated risk re-dedication programming:<sup>17</sup>

- disaster management;
- health;

- advocacy and communication;
- national society development;
- cross-cutting issues (gender, climate change, mitigation, persons with disability); and
- coordination and cooperation.

An integrated approach to service delivery is adopted as it is recognised that the issues affecting community resilience are interconnected; thus, community needs are addressed more effectively if services are also provided in a way that recognises this. The success of the community-based approach requires an ongoing relationship between the local branch and the community over the course of the project cycle in one community (3–4 years), and beyond. Therefore, a sustainable local branch structure (including the systems that link districts to provincial headquarters and provincial headquarters to the national headquarters) is critical to success.

The PRC integrated programme approach (IPA) model has three pillars: cross-cutting themes, externalities and enabling environments (Figure 1). The core pillars include organisational development (OD), disaster risk reduction (DRR) and health and care. The enabling environment is determined by the gender sensitivity, climate change and violence prevention issues, available resources, exchange of experiences and commitment of local community, local authorities, national and international partners and stakeholders. The DRR process has five sequential stages, which can be implemented before a disaster occurs or after one has happened to reduce future disaster risks.

The integrated approach is based on the organisational learning that integration in service delivery can be more cost-efficient and more effective from the local district or branch point of view, because assessment and planning activities, community

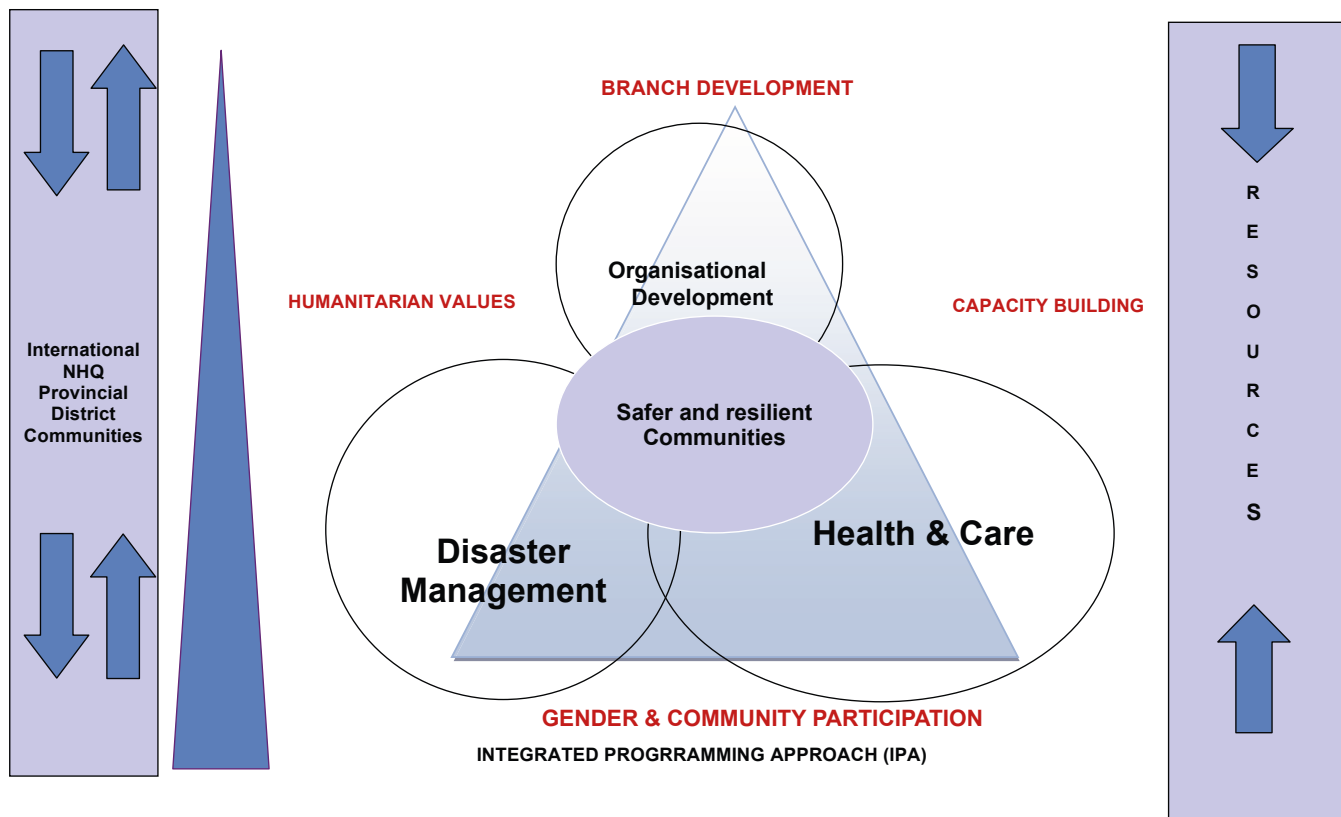


Figure 1 The Pakistan Red Crescent IPA model

mobilisers or volunteer selection and training, support visits to the community, etc can be done together. This reduces costs and also means that staff and volunteers learn to recognise cross-sector connections. In a time of disaster, this may also mean that the community mobilisers or volunteers and district staff are more adaptable to help as and when needed.

In practice, a number of integrated models are seen in community-based DRR in Asia. The level of integration is not the same in all the approaches. Table 1 categorises the integration into three levels.

**Integrated community-based risk reduction: A holistic model for community resilience**

Across Asia there are a number of integrated programming approaches in

practice. Integrated community-based risk reduction (ICBRR) is a recent approach adopted by the PRC and supported by the IFRC.<sup>18</sup> The PRC has adopted this comprehensive and integrated approach involving organisational development, health and DRR in order to reduce risks and strengthen the capacities of targeted communities to make them resilient to future disasters.

ICBRR is a participatory and multi-sectoral intervention in which at-risk communities engage actively in the identification, analysis, treatment, monitoring and evaluation of risks in order to reduce their vulnerabilities and enhance their capacities.<sup>19</sup> In recent years, various non-government and Red Cross and Red Crescent societies in South and South-east Asia have adopted an integrated approach

**Table 1: Level of integration in community-based risk reduction approaches in Asia**

<i>Level</i>	<i>Nature</i>	<i>Key characteristics</i>	<i>Examples</i>	<i>Applications</i>
1	Early or primary level integration	Purely natural hazards related intervention with elements from other sectors (eg health and organisational development) included in the traditional CBDRM/CBDRR programmes	CBDRR programmes where after the VCA, health, livelihoods and OD needs are included in the planning	Natural hazard-specific interventions, led by DM team
2	Middle-level integration	Integrated in nature with DM-led multisectoral interventions	ICBRR programme, Indonesia (Kafle 2010), MRCS (2012)	Sector-specific needs and concerns are addressed at the various stages of the intervention; however, the intervention is primarily led by DM
3	Mature integration	Purely integrated in nature, one proposal, one set of human resources, one set of assessment guidelines, one approach and led by a neutral department with one set of monitoring and reporting systems	ICBRR Programme, Pakistan (Kafle 2017)	Multi-hazard, multi-disciplinary intervention; led by a joint team of various sectors and departments

DM, disaster management; ICBRR, integrated community-based risk reduction; OD, organisational development; VCA, vulnerability and capacity assessment

CBDRM, Community Based Disaster Risk Management; CBDRR, Community Based Disaster Risk Reduction;

Source: Kafle, S.K. (2010) 'How resilient are our communities?', *Continuity*, September/October, pp. 28–29; Kafle S.K. (2017) 'Measuring resilience capability of drought-prone desert communities: a case study of Tharparkar, Pakistan', *Journal of Geography and Natural Disasters*, Vol. 7, p. 193; MRCS (2012) 'Community Based Disaster Risk Management: Common Framework', Myanmar Red Cross Society, Nay Pi Daw.

to risk reduction incorporating organisational development, health, livelihoods, water and sanitation and DRR, among many other sectors and fields.<sup>20,21,22,23</sup> In all these countries, integration has become a common aspect of community-based interventions. However, the level of integration varies in terms of understanding, practices, priorities and resource allocation.

With technical and financial support from the IFRC and Norwegian Red Cross, the PRC has implemented an ICBRR programme in ten communities across three provinces. A comprehensive and multi-sectoral programme, ICBRR engages a multi-sectoral team including branch development, health and DRR to mobilise communities for identification, analysis, treatment, monitoring and

evaluation of risks in order to reduce their vulnerabilities and enhance their capacities. The programme aims at building community resilience through strengthening community-based organisations and mobilising them to address underlying causes of vulnerabilities, thereby reducing future disaster losses. The programme helps strengthen the resilience of targeted communities through sustainable and quality branch capacity in service delivery. The specific objectives of the project were to enhance the resilience of communities through community-led integrated risk reduction activities, and to establish and strengthen the district branches in the delivery of integrated community resilience-building interventions.

The key features of PRC ICBRR programme include:

- one narrative proposal;
- one logframe;
- one budget/one cash request/one cash forecast;
- one HR structure;
- one working modality — one community based organisation (CBO) with multi-sectoral experts;
- multi-sectoral assessment tools (one set of integrated tools); and
- a harmonised process.

A four-year integrated programme comprising disaster management (DM), organisational development (OD) (with a focus on branch development (BD)) and health sectors was designed to facilitate PRC interventions at all levels to build the capacity of the national society staff and volunteers from three provinces and five districts, and enhance resilience of ten of the most vulnerable communities. The overall objective of this programme is to strengthen the resilience of targeted communities through sustainable and quality branch capacity in service delivery. The specific objectives were to enhance the resilience of ten communities through community-led integrated risk reduction activities, and to establish and strengthen the district branches in the delivery of integrated community resilience-building programmes. More specifically, the ICBRR programme is expected to help the PRC in the following respects:

- enable the PRC to develop and grow in order to be able to fulfil its mandate;
- ensure cost-effectiveness and sustainability in reducing disaster impacts;
- involve at-risk communities in planning, implementation and all stages of decision-making at the community level;
- make risk reduction efforts more effective by involving all stakeholders and all sectors;

- address all hazards;
- build disaster-resilient communities.

Districts were selected on the basis of a set of multi-sectoral criteria comprising the Human Development Index, Health Profile, the National Disaster Management Authority list of prioritised districts, the National Disaster Risk Reduction (DRR) policy (districts identified for DRR) and existing PRC infrastructure. Selection of the most vulnerable areas was based on agreed criteria and a district vulnerability mapping exercise. An integrated vulnerability and capacity assessment (IVCA) framework was designed to identify the priority needs, which provides bases for community risk reduction planning (CRRP) in the targeted communities.

In the first year, the programme focused on the development of the human resources base, preparation of operational guidelines, development of tools and modules, and conducted baseline studies. The second year gained momentum and sped up the delivery of its activities at the district branch and community levels. ICBRR technical and support services training were conducted for the province and district branch staff and volunteers. Formation of community-based organisations (CBOs) in all the programme communities was completed and basic orientations were provided. Baseline survey data were analysed and reports produced. Vulnerability and capacity assessments (VCAs) were completed for all the programme communities. In the second and third year, the project team facilitated the formulation of integrated community risk reduction plans and implementations of selected risk reduction measures were done. Strengthening of branches through building the capacity of volunteers, resource mobilisation and office management are ongoing at the branch level.

## RESILIENCE MEASUREMENT: DOES INTEGRATION MATTER?

The interactions with the community members and staff members who were involved in the implementation of the integrated programme reveal that the ICBRR seems to offer a major role in building safer, more resilient communities. The ICBRR programme model is more appropriate in promoting community ownership and sustainability. This integrated approach to service delivery is adopted as it is recognised that the issues affecting community resilience are interconnected, hence community needs are more effectively addressed if services are also provided in a way that recognises this. The initial learning and experiences show that an integrated community risk reduction approach offers the following benefits:

- less fatigue/time-consuming for communities;
- optimum utilisation of resources;
- minimum human resources for maximum outputs;
- cost sharing;
- community involvement;
- easy planning;
- harmonisation of various tools;
- shared ownership;
- cost effective;
- impact-oriented;
- avoids duplication of resources;
- sustainable in terms of local management, ownership and adoption by local communities;
- multi-sectors included;
- more resilient communities;
- effective utilisation of resources;
- step towards sustainable development;
- easy to coordinate and monitor the activities.;
- holistic approach addresses all issues;
- longer impact;
- increased effectiveness/efficiency;

- addresses root causes of vulnerabilities associated with all sectors;;
- engagement of multi-sectors and stakeholders in all phases of the programme;
- approach— multi-stakeholders, multi-sectoral considerations, and multi-disciplinary actors;
- mainstreaming ICBRR in local development planning;
- mutually supportive activities between sectors;
- application of common tools (multi-sectoral tools in identification, analysing, treatment/implementation and monitoring and evaluation (M&E));
- inclusiveness: gender, vulnerable groups, elderly, physically handicapped, climate change adaptation, etc;
- cost-effectiveness, technically sound; and
- efficient, sustainable and impactful.

The effectiveness of the ICBRR model with respect to building the resilience of communities was measured in terms of the resilience measure developed and subsequently elaborated by Kafle.<sup>24,25</sup> The outcome indicators were used as recommended by IFRC.<sup>26</sup> The process cum outcome-based mathematical index was used in ten communities across five project districts.

The five ICBRR phases were divided into ten steps. The value of each step (standard) was given a rank 'R' (j = 0 to 5), and was assigned to each based on its status of achievement. The process score (PS) of the process was calculated as follows:

$$PS = \sum_{i=1}^{i=10} P (W_i \times R_j) \quad (1)$$

Similarly, outcome indicators were identified based on the IFRC<sup>27</sup> with slight changes in order to address local hazard-specific needs such as droughts.



**Table 2: The inputs-outputs of the ICBRR programme**

<i>Phase</i>	<i>Key interventions</i>	<i>Expected outputs</i>
Preparation	<ul style="list-style-type: none"> <li>— Orientation and consultation at NHQ, PHQ and DHQ level partners and stakeholders</li> <li>— Set up project management structure/mechanism: HR, finance, PMER, monitoring and reporting framework, etc</li> <li>— Prepare integrated approach, training resources and tools, (ICBRR, OD, CBHFA, resource</li> <li>— Develop trainers at NHQ, PHQ mobilisation, etc)</li> <li>— Training on ICBRR and practical skills (IVCA, community mobilisation and organisation)</li> <li>— Capacity mapping of selected district branches</li> <li>— Planning workshop (with training) on ICBRR for district staff (led by PHQ)</li> <li>— Training on OD/BD at PHQ/district level (including PPP, PMER, RM, VM, etc, led by NHQ)</li> </ul>	<ul style="list-style-type: none"> <li>— Programme socialisation</li> <li>— ICBRR guideline prepared</li> <li>— Branch capacity building mapping</li> <li>— Well-established programme management structure at all levels (fully equipped with clear roles and responsibilities etc)</li> <li>— IVCA guideline prepared</li> <li>— District vulnerability mapping done, selection criteria for both districts and communities</li> <li>— Organisational development activities carried out (volunteer recruitment, training)</li> <li>— Selection of programme districts and communities</li> <li>— Developed a team of trained human resources</li> <li>— Development of business plan for PRC branches</li> <li>— Technical training conducted (ICBRR ToT, IVCA ToF)</li> <li>— Mapping of capacity building at branch level</li> <li>— Planning workshops at district level OD/BD activities — business planning, resource mobilisation</li> </ul>
Capacity building and community mobilisation	<p><i>Human resources planning and development:</i></p> <ul style="list-style-type: none"> <li>— Identify communities based on district vulnerability mapping and community selection criteria</li> <li>— Building rapport and understanding the communities</li> <li>— IVCA and baseline survey in the communities</li> <li>— Forming village committees (CBOs)</li> </ul> <p><i>Community capacity building, formulation of integrated community risk reduction plans:</i></p> <ul style="list-style-type: none"> <li>— Training for community members on DRR, health, WAT-SAN, livelihoods as needed</li> <li>— Participatory CBRM planning and DRR advocacy</li> <li>— Community-led risk-reduction activities (prioritised by communities among DRR, health, WAT-SAN, livelihoods)</li> <li>— Branch-led BD/OD activities (capacity mapping, drafting district/PHQ Operation plans — including youth and volunteers, RM, preparedness, etc)</li> </ul>	<ul style="list-style-type: none"> <li>— Community selection based on district vulnerability mapping and community selection criteria</li> <li>— Baseline survey conducted</li> <li>— IVCA conducted/reports prepared</li> <li>— CBOs formed in each community</li> <li>— OD/BD activities: business plan implementation and resource mobilisation</li> <li>— CBOs and community members received various training</li> <li>— ICRR plans formulated</li> <li>— OD/BD activities continued</li> <li>— OD/BD activities linked to community activities</li> </ul>
Implementation of ICRR plans and OD/BD activities	<ul style="list-style-type: none"> <li>— Organisational and resource mapping</li> <li>— Strengthen/establish networking</li> </ul>	<ul style="list-style-type: none"> <li>— CBOs are connected to the district/province/state-level resource centres</li> </ul>
Review and evaluation	<p><i>Sustainability/exit strategy implementation:</i></p> <ul style="list-style-type: none"> <li>— Linkage development; resource mobilisation</li> <li>— End-line survey in the communities</li> <li>— End-line capacity survey on branch development</li> <li>— Participatory M&amp;E</li> </ul>	<ul style="list-style-type: none"> <li>— Participatory M&amp;E established and operational</li> <li>— Sustainability plan in place</li> </ul>

NHQ, national headquarters; PHQ, provincial headquarters; DHQ, district headquarters; ICBRR, integrated community based risk reduction; HR, human resources; M&E, monitoring and evaluation; OD, organisation development; BD, branch development; ToT, training of trainers; IVCA, integrated vulnerability and capacity assessment; WAT-SAN, water and sanitation; PPP, participatory project planning; PMER, planning, monitoring, evaluation and reporting; VM, volunteer mobilisation; RM, resource mobilisation; ToF, training of facilitators; CBHFA, community based health and first aid.

To calculate the outcome index (eight key characteristics and 94 indicators), ranking and values were given in a similar way to that of process standards:

$$OS = \sum_{i=1, j=0}^{i=8, j=5} O (W_i \times R_j) \quad (2)$$

Hence, overall resilience score (RS) can be calculated by summing up both the process and outcome scores:

$$RS = (PS + OS) / 2 \quad (3)$$

Community resilience was measured using the following index:

$$RS = [\sum_{i=1, j=0}^{i=10, j=5} P (W_i \times R_j) + \sum_{i=1, j=0}^{i=8, j=5} O (W_i \times R_j)] / 2$$

Where:

- OS = overall score expressed as a percentage;
- P = process indicators ranging from 1 to 10;
- O = outcome indicators ranging from 1 to 8;
- $W_i$  = weight of process and outcome indicators I; and
- $R_j$  = rank or value of process and outcome indicators j.

Ten process and eight outcome standards with 50 and 94 resilience indicators respectively were identified to measure the resilience capacity of the community. The overall resilience index was 51. The overall process value of the community was 56 per cent, while the outcome value was 45 per cent. This method of resilience measurement can be used to compare the resilience of different communities and monitor the progress of any DRR and resilience-building interventions.

The figures in parentheses indicate the maximum attainable score. Weight (rank) was given to the process standard as per their importance in the overall DRR; their corresponding values were given based on the completion of the task, quality in terms of the participation of stakeholders, clarity of the process to the stakeholders and the level of outputs. Similarly, output/outcome indicators were identified based on the work of GRC,<sup>28</sup> IFRC<sup>29</sup> and Kafle.<sup>30</sup> Some indicators were added in this study in order to incorporate hazard-specific resilient elements such as drought-prone desert community.

As shown in Table 4, the change due to programme intervention in the process output is 19 per cent, which is quite significant. The change in outcome indicators, meanwhile, is around 12 per cent (see Table 5).

As shown in Table 4, the change due to programme interventions at the output level is about 8 per cent. The overall change at the community resilience level is 13.5 per cent over the two-year period.

## CONCLUSIONS AND RECOMMENDATIONS

An increase of 13.5 per cent in the resilience index was observed during the period of intervention to reduce community-based risk. There was also an increase of 19 per cent in the process index and an 11.5 per cent increase in outcome resilience level.

Building community resilience through the integrated programme approach is considered the most effective way to reduce the impact of disaster. The immediate key deliverables of the integrated community-based risk reduction programme adopted by the PRC were the improved capacity of local institutions; the incorporation of all resilience elements at the community level; and the effective delivery of services to the most vulnerable segments of society.

**Table 3: Characteristics of a disaster-resilient community and the key indicators**

<i>Resilience characteristics</i>	<i>Key indicators</i>
Communities have the capacity to identify their vulnerabilities to key hazards and risks, as well as the capacity to take appropriate measures to reduce those vulnerabilities and to plan measures to cope in the event of a disaster	<ol style="list-style-type: none"> <li>1. Integrated VCA, community-based risk reduction tools developed and available for use</li> <li>2. Integrated VCA including all sectors/components conducted</li> <li>3. Integrated community risk reduction plans formulated</li> <li>4. Community contingency plans are in place</li> <li>5. Simulation exercises conducted</li> <li>6. Public awareness and public education (PAPE) activities conducted</li> <li>7. Community members trained in DRR, CBHFA, PASSA</li> <li>8. Community early warning systems in place</li> <li>9. Community EWS linked to government EWS</li> <li>10. Emergency stocks in place</li> <li>11. Communities have adequate and safe drinking water</li> <li>12. Community have adequate water for livestock</li> <li>13. Communities have capacity to consolidate indigenous knowledge and coping capacities</li> <li>14. Opportunities for sharing knowledge and experience</li> <li>15. Training workshops and community members trained</li> <li>16. CBO members involved in programme/project planning and M&amp;E</li> </ol>
Communities are healthy	<ol style="list-style-type: none"> <li>1. Community members have access to health facilities</li> <li>2. Climate change adapted into health training curricula</li> <li>3. Population have access to safe water supply</li> <li>4. People know how to prepare safe drinking water</li> <li>5. People reached through hygiene promotion</li> <li>6. Improved sanitation systems</li> <li>7. No or decreased number of water-borne disease outbreaks</li> <li>8. Community members have access to health services</li> <li>9. Increased number of community members with access to health insurance</li> <li>10. Mortality rates decreased, by cause</li> <li>11. Morbidity rates decreased, by cause</li> <li>12. Reduction of lifestyle-related diseases/illnesses</li> <li>13. At-risk population screened for chronic diseases</li> <li>14. Immunisation rates increased</li> <li>15. Community members received psychological/psychosocial support</li> <li>16. HH have safe and adequate drinking water for both people and livestock</li> <li>17. Farmers/livestock raisers provided with extension services</li> <li>18. Farmers receive training in farming systems/raising livestock</li> <li>19. Community members trained in food preparation and preservation</li> <li>20. Community members reached through education and awareness on food loss and waste reduction</li> </ol>
Communities are organised and there is cohesiveness among community members; community members should feel physically and psychologically safe and secure	<ol style="list-style-type: none"> <li>1. CBO is established and functional</li> <li>2. Community members received orientation on humanitarian values</li> <li>3. People aware of violence prevention approaches</li> <li>4. Reduction in domestic/gender-based violence</li> <li>5. Reduced incidence of violence in the community</li> <li>6. Government and Red Crescent roles in social cohesion; violence prevention recognised</li> <li>7. CBO members involved in assessment and planning of community programmes/projects</li> <li>8. Vulnerable (eg marginalised) people included in formal and informal networks</li> <li>9. Government and RCRC programmes conducted in the community</li> <li>10. Presence of trained and active volunteers (RCRC as well as government volunteers)</li> <li>11. Volunteers engaged in formal and informal networks</li> <li>12. Initiated partnerships</li> <li>13. People reached through humanitarian diplomacy</li> <li>14. People reached through public awareness outreach regarding good governance, accountability and transparency</li> <li>15. Engagement of youth and vulnerable groups in local development/DRR activities</li> </ol>

<i>Resilience characteristics</i>	<i>Key indicators</i>
Communities have a robust infrastructure and access to the services they need	<ol style="list-style-type: none"> <li>1. Public infrastructure plans and investments are disaster risk informed</li> <li>2. Community engagement in infrastructure planning</li> <li>3. Building codes and land use standards that consider disaster risk reduction and environmental concerns</li> <li>4. HH have received drinking water for both people and livestock</li> <li>5. Agriculture productivity increased due to adequate water supply (home gardens and farmlands)</li> <li>6. Public awareness and public education programmes implemented</li> <li>7. Training organised</li> <li>8. Urban and community plans formulated incorporating public space, parks and public transportation standards</li> <li>9. Incidence of road accidents decreased</li> <li>10. Decreased number of people killed or injured in road accidents</li> <li>11. People have access to safe shelter</li> <li>12. Buildings comply with building codes, rules and land use standards</li> <li>13. Community members know the safety elements of their home</li> <li>14. Affordable shelter</li> <li>15. People reached through safe shelter awareness training or activities</li> <li>16. People with secure tenure and legal protection of their assets</li> <li>17. Water and sanitation schemes in place</li> <li>18. Accessibility and affordability of transport and energy systems</li> <li>19. IEC materials available at local level</li> </ol>
Communities have socio-economic opportunities and stability through secure income	<ol style="list-style-type: none"> <li>1. People supported through livelihoods programmes</li> <li>2. People have benefited from vocational and skills training and are active in business</li> <li>3. Unemployment rate decreased; community standard of living increased</li> <li>4. Peer-to-peer programmes conducted</li> <li>5. Community members actively engaged in peer-to-peer programmes</li> <li>6. Awareness and understanding of new knowledge and technology and traditional methods and approaches</li> </ol>
Communities are able to protect their natural assets to manage and develop them in a sustainable way	<ol style="list-style-type: none"> <li>1. Increased level of understanding of environmental issues and consequences of mismanagement</li> <li>2. Urban plans that incorporate environmental measures</li> <li>3. Environmentally responsible livelihoods, food security projects, etc</li> <li>4. Reduction in environmental degradation as a result of inappropriate land use, shelter construction works, etc</li> <li>5. Use of sustainable building products and materials</li> <li>6. Environmental conservation projects ongoing/effective</li> <li>7. PAPE initiatives functional</li> <li>8. Carbon footprint</li> <li>9. New environmental rules/plans support DRR</li> <li>10. Provision of EIA integrating DRR in place</li> </ol>
Communities are connected	<ol style="list-style-type: none"> <li>1. Communities are part of local level networking with support organisations</li> <li>2. Community plans with clearly defined institutional roles and responsibilities in place</li> <li>3. Partners, standing agreements for support/ cooperation etc in place</li> <li>4. Support (resources, technical support, etc) received from external sources</li> </ol>
Communities and their needs are recognised by the political establishment and administration and are involved in local planning	<ol style="list-style-type: none"> <li>1. Conducted training in DRR, leadership, mainstreaming DRR/CCA/gender/vulnerable groups into local level planning, DM/DRR law, etc</li> <li>2. CBOs are recognised by local government units</li> <li>3. CBO members take part in the local government planning</li> <li>4. CBRP plans are incorporated into local government annual development plans; and communities receive financial support from local government units for CRRMP implementation</li> </ol>

Source: IFRC (2014) 'IFRC Framework for Community Resilience', International Federation of Red Cross and Red Crescent Societies, Geneva.

DRR, disaster risk reduction; CBHFA, community based first aid; PASSA, participatory approach for safe shelter awareness; CCA, climate change adaptation; CBRP, community based risk reduction plan; DM, disaster management; EIA, environmental impact assessment; EWS, early warning systems

**Table 4: Process indicators**

<i>Process standards (steps)</i>	<i>Weight (rank) of standards (Wi)*</i>	<i>Value (1–5)† (Rj)</i>	<i>Total score (Wi × Ri) (during the study)</i>	<i>Total score (Wi × Rj) (at the start)</i>	<i>Change</i>
1. Area selection, Pre-IVCA, comprehensive assessment, formation of working group	2	3	1 (10)	6 (10)	5
2. Baseline survey/KAP	1	3	1 (5)	3 (5)	2
3. Rapport building, social capital building, form/strengthen village committees and CBOs	7	3	7 (35)	14 (35)	7
4. Community mobilisation, community members	5	3	10 (25)	15 (25)	5
5. Risk assessment (IVCA)	10	4	10 (50)	25 (50)	15
6. Risk reduction planning	9	3	9 (45)	18 (45)	9
7. Advocacy/socialisation	4	2	8 (20)	8 (20)	0
8. Awareness raising/training	8	2	8 (40)	12 (40)	4
9. Mitigation activities	6	2	6 (30)	9 (30)	3
10. Participatory monitoring and evaluation	3	2	3 (15)	6 (15)	3
			63 (275) (23%)	154 (275) (56%)	53 (275) (19%)

\*The ranking of the steps was done on a consensus basis in a group discussion of programme staff from both IFRC and PRC

†1 being the least preferred and 5 being the ideal condition

IVCA, integrated vulnerability and capacity assessment; KAP, knowledge, attitude and practice; CBO, community-based organisation

**Table 5: Outcome indicators**

<i>Key characteristics</i>	<i>Priority/rank Weight (Wi)</i>	<i>Value (Ri) (1–5)*</i>	<i>Total score (Wi × Ri) (at the start of the project)</i>	<i>%</i>	<i>Total score (during the study)</i>	<i>Change (%)</i>
1: Communities have the capacity to identify their vulnerabilities to key hazards and risks, as well as the capacity to take appropriate measures to reduce those vulnerabilities and to plan measures to cope in the event of a disaster	8	$8 \times 2.5 = 16$	20 (40)	40	24	4
2: Communities are healthy	7	$7 \times 2 = 10.5$	14 (35)	30	14	0
3: Communities are organised and there is cohesiveness among comment members; community members should feel physically and psychologically safe and secure	6	$6 \times 2 = 12$	12 (30)	40	18	6
4: Communities have a robust infrastructure and access to the services they need	5	$5 \times 2 = 10$	10 (25)	40	10	0
5: Communities have socio-economic opportunities and stability through secure income	4	$4 \times 1.5 = 6$	6 (20)	30	6	0
6: Communities are able to protect their natural assets to manage and develop them in a sustainable way	1	$1 \times 2 = 2$	2(5)	40	2	0
7: Community is connected	2	$2 \times 2 = 4$	4 (10)	40	4	0
8: Communities and their needs are recognised by the political establishment and administration and are involved in local planning	3	$3 \times 2.5 = 9$	7.5 (15)	50	9	1.5
Total		68	75.5 (151)	50	87 (58%)	11.5 (8%)

\*1 being the least preferred and 5 being the ideal condition

The following initial outputs were observed:

- a culture of working together' developed through ICBRR technical committee meetings, review meetings, facilitation of IVCA, and integrated community risk reduction plans;
- incorporation of all sectors/fields including DRR, health and organisational development, representing all components of Sendai Framework for Disaster Risk Reduction;<sup>31</sup>
- CBO members were able to assess key hazards, vulnerability, capacity and risks, and formulate risk reduction plans;
- strengthened risk governance through the mobilisation of local government and line agencies (feasibility study and implementation of ICRRPs);
- CBO members received various training pursuant to the ICBRR baseline survey, vulnerability and capacity assessment, community risk reduction planning and implementation, community-based health and first aid (CBHFA), water and sanitation, basic first aid, advocacy, early warning system, community mobilisation, business planning and resource mobilisation;
- CBOs were equipped with first aid, disaster preparedness including an early warning system and response equipment;
- having a single multi-sectoral team, aided the quality and effectiveness of programme delivery, while a single message from the PRC to the vulnerable communities helped provide the consolidated package of support to vulnerable community members;
- community needs such as drinking water, river training, plantation, toilets and rural treks were supported;
- CBOs were linked to district-level local government authorities, non-governmental organisations (NGOs) and other resource centres; and
- as part of the organisational development to improve the sustainability of the community-based interventions, PRC district branches prepared and implemented business plans for income generation and mobilisation.

The integrated risk reduction approach requires a high level of coordination and cooperation among stakeholders, eg PRC at all levels, government departments, donors, NGOs and vulnerable groups. There is a need to maintain efforts to enhance inclusiveness, decentralisation and empowerment limited capacity and motivation among the national society and partner(s) will hinder the effective adoption and implementation of the integrated programming and community-based approaches.

To make a positive contribution to community resilience, integrated approaches require a significant timescale. Community risk reduction programmes are usually designed for a period of three years, which is insufficient to yield visible impacts. As the ICBRR programme is a process-oriented intervention, the processes should be strictly followed.

Organisational structure must be restructured to accommodate the changes in the sectoral roles and responsibilities. Funding restrictions may affect the motivation of staff members. Funding for the entire project period should be secured at the outset. Consistent efforts are required to achieve sustainable results. Senior-level support from the national society is essential to achieve the expected results.

To ensure visible change in community resilience, the strengthening of sectoral coordination is vital. Conceptual clarity and commitment towards the approach of the programme (development vs emergency interventions) are essential elements of a successful integrated programming approach such as ICBRR. Similarly, financial sustainability at the district branch

level is another important element of any successful community resilience initiative.

The following operational issues need to be clarified and made operational at the start of the programme intervention: lead agency, modality/phases, sectoral integration, purpose/aim, tools, structure for implementation, coordination mechanism at all levels, key components, HR structures, budget holder, salary sheets, reporting lines, and senior management's ownership and commitment to the approach.

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