



Measuring and Intervening on Resilience: The RABIT Approach

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The Resilience Challenge

As the 21st century proceeds, countries – particularly developing countries – will face a growing series of short-term shocks (economic crises, climate events, violent attacks, health epidemics, etc) and long-term trends (climate change, migration, economic restructuring, new technologies, etc). In abstract terms, we know the solution: countries must become more resilient.

That is because resilience is defined as the ability of vulnerable systems – countries, regions, communities, value chains, organisations – to withstand, recover from, adapt to, and potentially transform amid change and uncertainty. Resilience will therefore play a crucial role in the achievement of development outcomes. It provides a holistic and long-term approach that is rising up the development agenda.

That is the theory. The challenge arises in practice: there are few credible guides that activists and researchers can follow which explain what resilience is, how to apply resilience metrics, and how to use those metrics to shape action. This briefing document provides such a guide, based on the University of Manchester's Resilience Assessment Benchmarking and Impact Toolkit (RABIT). Our illustration will be at the level of individual community, but RABIT is applicable to all and any of the systems described from households to nations.

Understanding Resilience

To understand resilience, RABIT identifies nine attributes – or sub-properties – of resilience. Three are primary foundations of resilience: **robustness, self-organisation, learning**. Six are secondary enablers of resilience: **redundancy, rapidity, scale, diversity, flexibility, equality**. The stronger these are in a community, the more resilient it will be. As summarised in Table 1, each attribute has a series of key markers: indicators that we can use to assess the strength or weakness of each attribute.

These can be measured in two main ways:

- **Resilience benchmarking**: at the pre-hoc stage of project design, resilience can be benchmarked to establish key areas for resilience-building action during an intervention.
- **Resilience impact assessment**: RABIT can be used to assess the impact on resilience of interventions during or after their implementation, to draw lessons learned, and to inform future programming/strategising.

Resilience Attribute	Definition	Key Markers/ Indicators
FOUNDATIONAL ATTRIBUTES OF COMMUNITY RESILIENCE		
Robustness	<ul style="list-style-type: none"> Ability of the community to maintain its characteristics and performance in the face of environmental shocks and fluctuations. 	<ul style="list-style-type: none"> Physical Preparedness Institutional Capacity Multi-level Governance and Networking
Self-Organisation	<ul style="list-style-type: none"> Ability of the community to independently re-arrange its functions and processes in the face of an external disturbance, without being forced by external influences. 	<ul style="list-style-type: none"> Collaboration/Consensus-building and Participation Social Networks Local Leadership and Trust
Learning	<ul style="list-style-type: none"> Capacity of the community to generate feedback with which to gain or create knowledge, and strengthen skills and capacities. Closely linked to the community's ability to experiment, discover and innovate. 	<ul style="list-style-type: none"> Capacity Building New and Traditional Knowledge Reflective Thinking
ENABLING ATTRIBUTES OF COMMUNITY RESILIENCE		
Redundancy	<ul style="list-style-type: none"> Extent to which community resources and institutions are substitutable; for example, in the event of disruption or degradation. 	<ul style="list-style-type: none"> Resource Spareness Functional Overlaps and Interdependency Resource Substitutability
Rapidity	<ul style="list-style-type: none"> Speed at which assets can be accessed or mobilised by community stakeholders to achieve goals in an efficient manner. 	<ul style="list-style-type: none"> Rapid Resource Access Rapid Resource Assessment/Coordination Rapid Resource Mobilisation
Scale	<ul style="list-style-type: none"> Breadth of assets and structures a community can access in order to effectively overcome or bounce back from or adapt to the effects of disturbances. 	<ul style="list-style-type: none"> Multi-level Networks Resource Access and (intra/inter) Partnerships Cross-level Interactions
Diversity and Flexibility	<ul style="list-style-type: none"> Ability of the community to undertake different courses of actions with the resources at its disposal, while enabling them to innovate and utilise the opportunities that may arise from change. 	<ul style="list-style-type: none"> Different Courses of Action/Emerging Opportunities Adaptable Decision-making Innovation Backbone
Equality	<ul style="list-style-type: none"> Extent to which the community provides equal access to rights, resources and opportunities to its members. 	<ul style="list-style-type: none"> Strengthened Competencies/ Gaps' Reduction Inclusiveness Openness and Accountability

Table 1. The RABIT Model of Resilience¹

¹ Ospina, A.V. (2013) *Climate Change Adaptation and Developing Country Livelihoods: The Role of Information and Communication Technologies*, PhD thesis, IDPM, University of Manchester, UK.

Measuring and Visualising Resilience

The RABIT model of resilience and [Implementation Handbook](#) allow for various different approaches to measurement. These include document review, focus group, interview, and survey. In all cases, data-gathering focuses on the attributes and markers described in Table 1.

Data is then subject to enumeration that enables a variety of different visualisations, as illustrated in Figure 1. These identify current resilience strengths to build on, and current resilience lacunae that need to be addressed.

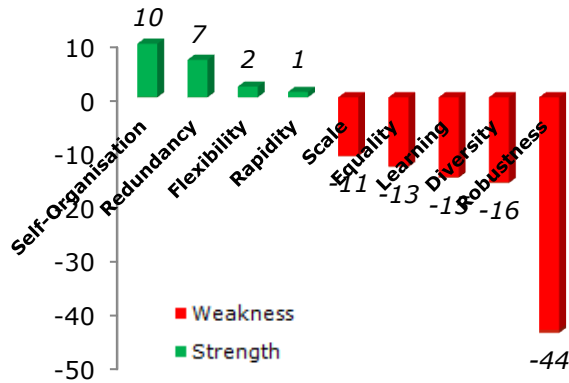


Figure 1a: Column Chart
(Benchmarking Resilience)

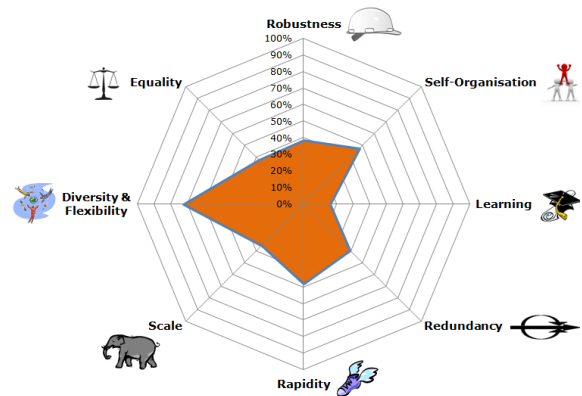


Figure 1b: Spider Diagram
(Resilience Impact Assessment)

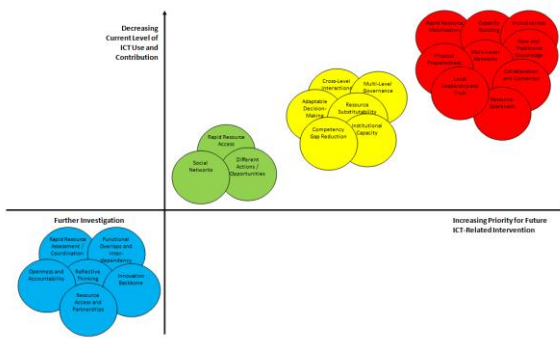


Figure 1c: Bubble Chart
(Resilience Impact Assessment)

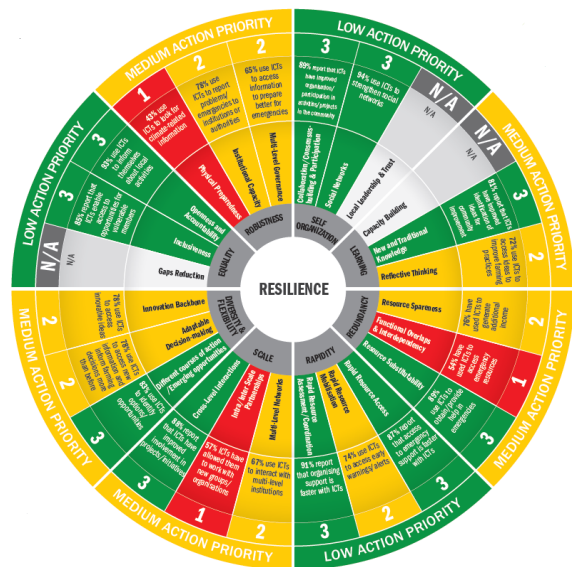


Figure 1d: Resilience Wheel
(Resilience Impact Assessment)

Prioritising Resilience Interventions

Based on the visualisations illustrated in Figure 1 plus further analysis, RABIT then provides the basis for prioritising future interventions which will build resilience. A sample is shown in Table 2, with interventions identified; typically following a discussion of the visualisations with key stakeholders. An indication is provided of which stakeholders – in this case, community-level (C), municipality-level (M) and national-level (N) – will be involved.

Resilience Attribute	Resilience Marker	Intervention	Level of Involvement		
			C	M	N
ROBUSTNESS	Physical Preparedness	<ul style="list-style-type: none"> Community campaign to clear and maintain river area prone to flooding 	X		
	Institutional Capacity	<ul style="list-style-type: none"> Devolve seedcorn funding to community Risk and Disaster Prevention Group 	X	X	
	Multi-Level Governance and Networking	<ul style="list-style-type: none"> Ensure emergency action plan has identified individual contact points within community and in local/national institutions 	X	X	X
EQUALITY	Competency Gap Reduction	<ul style="list-style-type: none"> Targeted training activities towards more-marginalised groups including senior and unemployed community members 	X	X	
	Inclusiveness	<ul style="list-style-type: none"> Review membership of community organisations to ensure some incorporation of more marginalised groups 	X		
	Openness and Accountability	<ul style="list-style-type: none"> Ensure general availability of information such as contacts, actions, etc of community organisations, including a 'welcome pack' for new residents 	X	X	

Table 2. Sample priority actions to improve resilience

Further Information

For full details of the Implementation Handbook showing how to use the RABIT toolkit plus case studies of RABIT's application, see: <http://www.niccd.org/resilience>

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RESILIENCE ASSESSMENT BENCHMARKING and IMPACT TOOLKIT