

Assessing the impact of ICF programmes on household and community resilience to climate variability and climate change

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Measuring resilience: progress to date and proposed methodology

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Presentation outline

- Definitions of resilience
- The Measuring Resilience study – summary to date
- Review of methodologies - dimensions of resilience & indicator clusters
- Methodological outline – measuring resilience for BRACED projects
 - [Mapping to DFID Resilience Framework](#)
 - [Methodological steps](#)
- Key issues for discussion

Part 1. Definitions & review

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What is resilience?

Ecology

The ability of a system to tolerate disturbances without collapsing into a qualitatively different state that is controlled by a different set of processes. Resilient systems can withstand shocks and rebuild themselves when necessary.

Development & poverty reduction contexts

Resilience requires more than simply enabling social systems to continue functioning as they were before a disturbance of shock.

DFID working definition of resilience

“the ability of countries, governments, communities and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses, while continuing to develop and without compromising their long-term prospects”

ICF & BRACED aim to build resilience to shocks and stresses caused by weather variability and the magnified effects of that variability due to climate change.

Measuring resilience study

- Landell Mills, Garama 3C, December 2013 – February 2014
- Review existing methodologies & assess applicability to ICF/BRACED
- Develop methodology for ICF/BRACED projects
- Consistent with DFID's Resilience Framework (& TAMD framework)
- Final report in February 2014 to present results of review, methodology, and discussion of issues & challenges (resilience vs poverty, indices, etc)
- Workshop on 20 February
- Will feed into interim KM & KM activities

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Outputs & findings of study

- List of criteria for methodology to be applicable to ICF/BRACED projects
- Review of methodologies¹ + ICF & BRACED projects & indicators
 - Multiple 'dimensions' of resilience - commonality & diversity
 - Prescriptive to general. (Context-relevant? How to operationalise?)
 - Tracking resilience/vulnerability rather than assessing projects
 - Key challenge is demonstrating project outputs lead to enhanced resilience (outcomes) and then to improve well-being (impacts)
 - No existing methodologies directly applicable (Oxfam relevant but general)
- Identification of types of outcome indicator that can be used by projects to report against ICF KPI4 (No. of people with enhanced resilience)
- Outline of methodology for measuring resilience, report (Feb. 2014)

¹TANGO review, Oxfam multidimensional approach, FAO, Tulane (Haiti, post-earthquake resilience), Florence (rural HH resilience post Hurricane Mitch), ICIMOD Mountain Level Vulnerability Index, TAMD.

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Dimensions of resilience

ICIMOD	FAO	Florence	Tulane	Oxfam
Resource access	Assets	Assets (non)-agr.	Wealth	
Food security	Income/food access	Income/food access	Debt & credit	
Health, water, san.	Access to services	Access to services		Soc/Inst. capability
Social networks	Social safety nets	Social safety nets (inst/community)	Comm. networks	Contingency resources/support
L/H & coping strat.	Adaptive capacity	Adaptive capacity	Coping behaviours	L/H viability
	Stability		Protection/security	
Phys. accessibility		Phys. connectivity		
		Econ. connectivity		
S/D-graphic status		HH structure	Human capital	
		HH technol. level		Innov. potential
			Psychosocial status	
Env. stability				Nat/built env. Integ.
Exposure/shocks				

Potential ICF/BRACED Outcome Indicator Clusters for ICF KPI4

Number of people whose main **livelihood(s)** managed using climate-resilient practices as result of ICF support

Number of people covered by **resilient markets** and private, 3rd sector and state **resilient service provision** as result of ICF support

Number of people with access to **ecosystem services** which are stable and climate-resilient as result of ICF support

Number of people covered by appropriate **risk reduction investment** (infrastructure and capacity) in place to priority climate related (and other) disasters as result of ICF support

Number of people with good-enough access to climate related/other **early warning** as a result of ICF support

Number of people with access to good enough climate **resilient WASH** (Water, sanitation and hygiene) as result of ICF support

Number of people with access to good-enough **social protection** in time of acute need/disaster

Number of people with adequate climate resilient **'buffer capacity'** (assets, savings, food stocks, social capital, insurance)

- Broad categories using terms ('adequate', 'good enough', 'access', 'covered by,' etc) that have specific meanings in individual contexts
- Resilience as function of (i) systems/processes/resources, (ii) access, (iii) I attributes of individuals

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Part 2. Outline of methodology

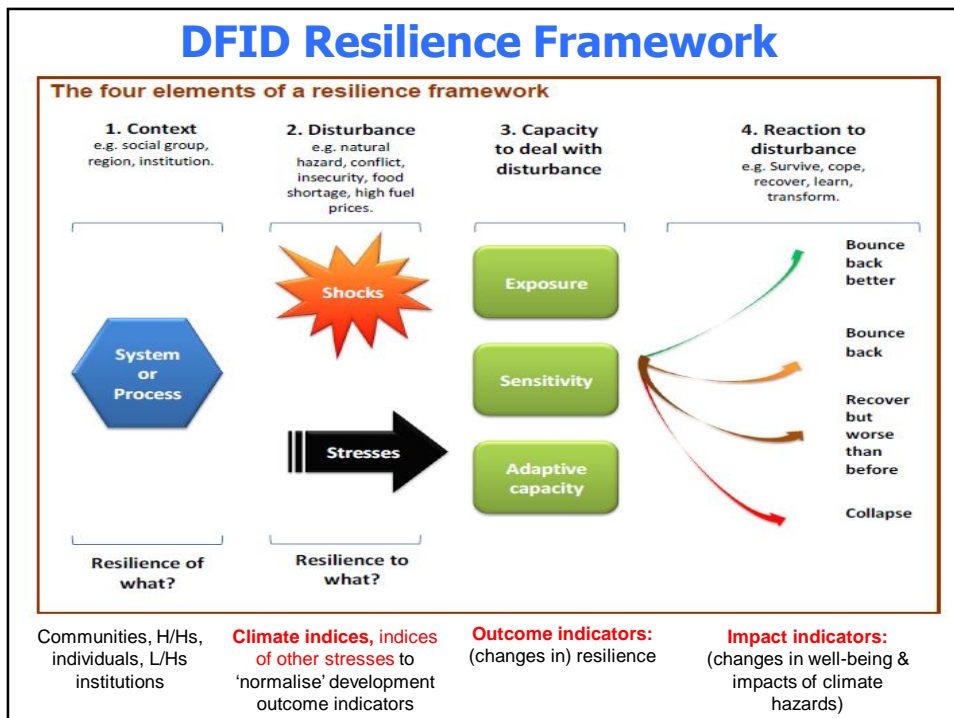
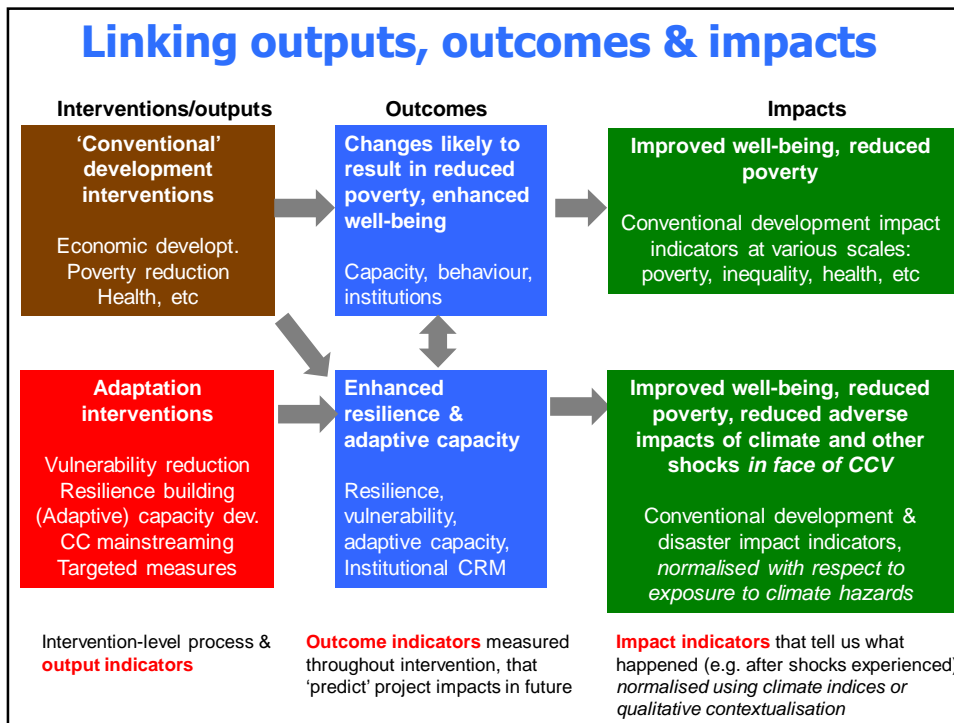
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The methodological challenge

To identify identify/define a methodology for

- Measuring resilience that addresses resilience at relevant scales (country, government, community, household) but also addresses ICF KPI4 (no. of people with enhanced resilience as result of ICF projects)
- Monitoring/tracking ICF/BRACED projects and providing quality control
- Evaluating effectiveness of projects in enhancing resilience
- Assessing value for money of projects
- Assessing success & value for money across ICF/BRACED programmes
- Align with DFID Resilience Framework (see below)
- **How to go beyond measurement of outputs & outcomes to impacts**
- **How to interpret impact indicators in context of changing stresses?**
 - **The 'normalisation' problem**

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Proposed methodological approach (I)

Step 1. Characterise resilience context (Element 1 of RF)

- Identify the beneficiaries of the project whose individual resilience will be tracked
- Identify the systems and processes accessed by the beneficiaries, so the resilience of these systems and processes (i.e. resources) can be tracked
- Participatory methods to identify vulnerable groups

Step 2. Identify key stresses and shocks (Element 2 of RF)

- Identify current hazards and observed trends
- Identify, as far as possible, how hazards may evolve in future
- Develop climate hazard indicators/indices based on experience/observational data

Step 3. Identify key consequences of hazards (Element 4 of RF)

- Identify principle adverse consequences/impacts
- Identify/develop impact indicators that tell us what happened (hazards, disasters)

Step 4. Identify determinants of resilience (Element 3 of RF)

- Functioning of systems, processes, resources on which people depend
- Access to systems, processes & resources
- individual capacity to anticipate, plan, cope, recover, adapt

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Proposed methodological approach (II)

Step 5. Establish how impact indicators will be 'normalised'

- Establishment of 'no-intervention' baseline or projection-based counterfactuals
- Normalise impact indicators w.r.t. population, assets exposed, hazard frequency/severity
- Participatory approaches - how did project help (or not)?

Step 6. Decide on composite indices or disaggregated indicators

- Separate indices for hazards, resilience changes (outcomes) & impacts
- One index for each of above, or multiple indices (e.g. for floods vs droughts)
- Ensure disaggregated data available for learning, identifying surprises, etc

Step 7. Convert indicators/indices to scores

- Score *individuals* from 1-5 for each indicator/index for ICF KPI4
- Estimate numbers with increased resilience from changes in scores

Step 8. Address issue of attribution/contribution

- Control groups/locations for comparison (*cf* RCTs)
- Continual stakeholder engagement and feedback to develop explanatory narratives

Step 9. Address resilience-well-being links

- Statistical analysis of relationships between outcome (resilience & impacts (well-being))
- Qualitative and participatory comparisons - are changes linked?

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Key issues

- Details of methodologies for representing resilience at the level of the individual with respect to access to and functioning of systems, processes & resources
- More detailed mapping of dimensions of resilience
- Practicality of gathering context-specific data
- Feasibility of constructing robust hazard indices (data & technical expertise)
- Feasibility of normalising impact indicators with respect to hazards
- Clarity of methodology and language/terms used
- Others...

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END

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Applicability criteria

1. **Clear conceptual foundation** setting out output-outcome-impact links in coherent theory of change that addresses attribution/contribution, is informed by evidence, avoids questionable generalisations, and is testable during & after project implementation.
2. **Applicable at the project level across diverse range of contexts**, while paying attention to those contexts and the diverse range of factors that influence resilience.
3. **Blends quantitative and qualitative methods that strike a balance between practicality and comprehensiveness**, employing clear and meaningful indicators that capture outcomes & impacts as well as inputs/outputs.
4. **Be sufficiently versatile to be used for multiple purposes**, including project quality control (monitoring), assessment of project success/effectiveness (evaluation), comparison across projects (relative performance, while acknowledging different contexts and constraints), and assessment of [value for money](#) or programme-wide performance.
5. **Be able to identify, measure and explain unexpected outcomes** and feed these back into project design and implementation through mechanisms for learning and the dissemination of lessons (including after the end of the project).
6. **Be highly participatory**, engaging intended beneficiaries in project-level M&E design, the identification of appropriate proxies/indicators, qualitative monitoring and evaluation of the project's effectiveness, and ongoing evaluation of project outcomes and impacts once the project has ended.

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Review of existing methodologies

- TANGO review, Oxfam multidimensional approach, FAO, Tulane (Haiti, post-earthquake resilience), Florence (rural HH resilience in context of Hurricane Mitch), ICIMOD Mountain Level Vulnerability Index, TAMD.
- All built around key dimensions of resilience/vulnerability (see next slide)
- Significant overlap but also significant differences
- Some mix fundamentally different types of indicator (see below)
- Oxfam approach most closely aligned with ICF/BRACED needs/context
- Some (e.g. ICIMOD) highly prescriptive, others general & would need to be operationalised (e.g. Oxfam)
- Tracking resilience/vulnerability rather than assessing effectiveness of projects or programmes

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Review of ICF/BRACED projects

- ICF projects: 14 projects most relevant to resilience for which adequate documentation available
- BRACED proposals: 13 proposals as sample of BRACED submissions
- Output & outcome indicator clusters identified (note similar indicators used in different capacities as impact, outcome & output indicators)
- >70 indicators, even when clustered into more 'generic' indicators
- Many projects use composite indicators
- Wide but imprecise use of term 'transformational change'
- Key challenge is demonstrating project outputs lead to enhanced resilience (outcomes) and then to improve well-being (impacts)

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Some* ICF/BRACED Output Indicator Clusters

# Ha land managed under climate-resilient approaches	Animal survival rates post shock
Area restored or re/afforested	Change in perceived conflict over NR
Area managed using economic incentives for sustainable resource management (e.g. payment for environment services - PES)	Level of participation by national government, local government, private sector, civil society in resilience building activities
Security of tenure (or functional tenure arrangements) of vulnerable/improved land	Number of adaptation/resilience policy recommendations generated
# businesses benefitting/increased turnover from adaptation/resilience opportunities	Early Warning systems operational
# jobs from adaptation/resilience opportunities	# People trained in resilience/DRR/adaptation
\$ value or absolute quantity of new or existing infrastructure made climate resilient	# functioning livestock corridors
# people using financial/insurance services or savings groups	Availability of key pastoralist services (vet. inputs, insurance? etc.)
change in water-use efficiency (in agric.)	# people receiving/aware of CC information

Will outputs lead to resilience outcomes?

*Over 70 clusters identified in review of BRACED proposals

'Dimensions of resilience'

Categories of indicator / dimensions of resilience identified from 6 contexts (ICIMOD, Florence, Oxfam, Tulane, ICF/BRACED (a) outputs & (b) outcomes). No. of contexts in which each dimension represented shown in brackets.

1. Safety nets (6)
2. Access to services (5)
3. Adaptive capacity (5)
4. Income & food access (4)
5. Assets (4)
6. EWS & risk reduction measures (3)
7. Environmental sustainability/resilience (3)
8. Household structure & human capital (3)
9. Connectivity (2)
10. Security (3)
11. Knowledge/awareness (1)
12. Wider societal resilience (e.g. economic/business) (1)

To be refined –
reduced no. of
dimensions? Other
(e.g. vulnerability)
frameworks

Mix of HH & district level indicators, mostly 'predictive' based on HH/community characteristics, with some based on (e.g. disaster) outcomes

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