

Resilience as an issue in development cooperation: Definition and characteristics

Definition and scientific derivation of the concept of resilience

The definition of resilience used in German development cooperation is based on a definition given by the UK Department for International Development (DFID):

*Resilience refers to 'the ability of countries, communities, and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses – such as drought or violent conflict – without compromising their long-term prospects.'*¹

Understood in this way, the resilience of systems² depends on two important attributes: robustness and adaptability. Resilience is also indivisibly linked with the associated concept of vulnerability. Social and environmental scientists have engaged with this thematic complex since the 1980s. Vulnerability describes a situation of incalculability, defencelessness and insecurity in the face of external threats.³ Social vulnerability approaches look at the varying vulnerability of different groups.⁴ Power relations and gender issues are recognised as causal factors in vulnerability.

¹ Department for International Development (2011): Defining Disaster Resilience: A DFID Approach Paper

² As already explained in the introduction to this collection of briefing notes, resilience research is based on a systemic approach: people and households produce and consume in a livelihood system, live in an agro-ecosystem and are part of a political and social protection system.

³ Chambers, R. (1989): Editorial Introduction: Vulnerability, Coping and Policy. IDS Bulletin Vol. 20

⁴ Downing, T.E.; Aerts, J.; Soussan, J.; Barthelemy, O.; Bharwani, S.; Ionescu, C.; Hinkel, J.; Klein, R.J.T.; Mata, L.J.; Martin, N.; Moss, S.; Purkey, D. and Ziervogel, G. (2006): Integrating social vulnerability into water management. SEI Working Paper and Newater Working Paper No. 4. Stockholm Environment Institute, Oxford.

The relationship between resilience and vulnerability is vigorously debated: on the one hand resilience can be interpreted as the counterpart of vulnerability, so that the absence of the one points to the presence of the other.⁵ However, an understanding seems to be gaining prevalence that the two concepts are independent but often interconnected, and that each has specific strengths.

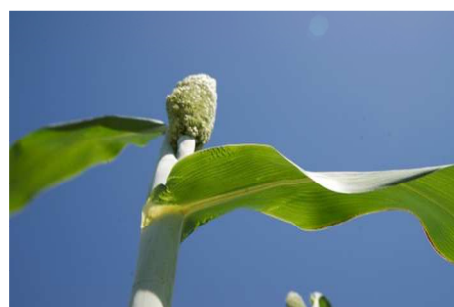
Since the 1990s, experts from the environmental sector have devoted increasing attention to the concepts of vulnerability and resilience. Consequently the concepts have become embedded in the thematic field of ecosystems, and particularly linked with the phenomenon of climate change.

The resilience debate in development cooperation

In the early 2000s, natural events such as droughts and floods prompted a surge in interest in the resilience debate in the development arena. Likewise, food price hikes in 2008 gave rise to a desire for mechanisms and strategies with which the people affected could better protect themselves against shocks and stresses.

Rural development work is concerned with people's 'well-being' in their different roles as members of households, of a society, and as citizens of a country. People interact with the surrounding agro-ecosystems, operate in market systems, access social networks, make use of state services and enjoy the protection and regulation of laws and institutions. Hence, looking at resilience in relation to ecosystems alone

⁵ Holling, C.S. (2001): Understanding the Complexity of Economic, Ecological, and Social Systems.



would not be sufficient to empower people to cope better with stresses.

Approaches to defining resilience

Development cooperation pursues the goal of improving the population's living conditions in Germany's partner countries. For its own legitimisation, but also for management processes, it is reliant upon delivering demonstrable results. Measuring the improvement of resilience is therefore a concern for researchers and practitioners alike, although they approach the subject of measurability from different sides:

Understanding vulnerability and resilience as opposing concepts yields a large intersection for the purposes of measurement. Reducing vulnerability contributes to raising resilience, so that to some extent resilience can be described in terms of vulnerability indicators.

Another approach to assessing resilience is to look at the length of time taken to restore the original situation after a shock. The focus here is on factors in relation to coping before and after the impact of a shock, and the question of whether the system returns at all to its initial state.

Various researchers assert that essentially resilience cannot be measured, only illustrated.⁶ They advocate a 'relative' measurement of resilience (more resilient than before, more resilient than others). This is determined by means of quantitative comparisons of the resourcing of systems⁷ or through trend analyses in which individuals, households, population groups, societies or regions are compared with one another.⁸

This view of resilience as a process also corresponds to the Resilience and Vulnerability Pathways approach: if households or communities are in a position to develop adaptive capacities in order to manage stress, then according to this approach they are on a resilience pathway.

These approaches capture changes in resilience very aptly already. Another important component of resilience, however, is the 'learning dimension': the ability to build and enlarge capacities for learning and adaptation. This will be explored in the following section.

Illustrating shocks and coping strategies

In order to propose targeted measures to increase resilience, we must understand the behaviour of human agents

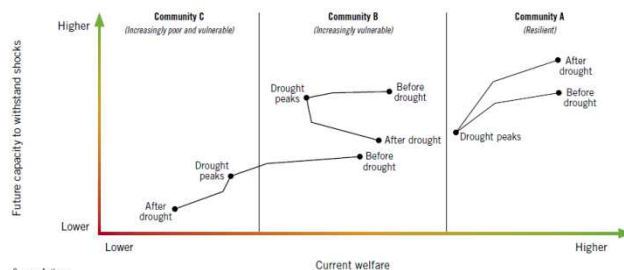
⁶ Deutsche Welthungerhilfe (DWHH) (2013): 2013 Welthungerindex, Herausforderung Hunger: Widerstandsfähigkeit stärken, Ernährung sichern [published in English as: International Food Policy Research Institute (IFPRI) (2013): 2013 Global Hunger Index, The Challenge of Hunger: Building Resilience to Achieve Food and Nutrition Security].

⁷ Reij, Chris ; Tappan, G.; Belemvire A. (2005): Changing land management practices and vegetation on the Central Plateau of Burkina Faso (1968 – 2002). In: Journal of Arid Environments 63

⁸ Pestel-Institut 2010, Lukesch et al. 2010

in households. Households vary in their resources. Their economic resources comprise means of production like land, water, land tillage technology, seeds, fertilisers, animals, labour, knowledge of techniques, physical access to markets and finance systems, and alternative sources of income. Their social resources are characterised by the number of family members (economically productive and unproductive), their level of education, membership of social protection networks and social access to markets.

A household uses its means of production and the resulting produce for consumption – either directly in order to secure the food supply for all family members or by selling the same in order to earn income. This income allows the household to purchase foods and access to basic services like education and health. If a household, a farm or an enterprise is hit by some shock or stress, the resulting drop in produce and income has negative impacts on both the food supply situation and the purchasing power of households. A direct reduction in access to services is the consequence. Many farms get around this by selling material goods (means of production). Such action maintains their access to food and services in the short term but weakens them and makes them more vulnerable in the long term since it erodes the household's production base.



Source: Deutsche Welthungerhilfe (DWHH) (2013) *Global Hunger Index 2013*, p. 22.

Figure 1⁹ illustrates how three communities whose livelihoods depend upon livestock herding fare before a drought in terms of their 'prosperity level' and 'future capacity to cope with shocks', and how they emerge from the shock after the drought.

After the drought Community C declines to a low level in terms of both prosperity and capacity to cope with shocks, and is classified as 'increasingly poor and at risk'.

Community B attains a similar prosperity level as before but is left with less capacity for coping with future shocks. It is rated as 'increasingly vulnerable'.

It can be assumed that both communities only managed to withstand the shock by selling their means of production.

⁹ Deutsche Welthungerhilfe (DWHH) (2013): 2013 Welthungerindex, Herausforderung Hunger: Widerstandsfähigkeit stärken, Ernährung sichern [published in English as International Food Policy Research Institute (IFPRI) (2013): 2013 Global Hunger Index, The Challenge of Hunger: Building Resilience to Achieve Food and Nutrition Security].

Community A has returned to the same level of prosperity after the drought and has built up better capacity for coping with shocks in future. In other words, it has learned from the crisis and made the right decisions. It is viewed as 'resilient'.

This illustration graphically describes the significance of action at the individual or household level. Communities do not become more resilient merely by investing in protective and precautionary mechanisms (e.g. disaster preparedness), but only when they act as a learning system: analysing, making decisions, taking action – and making use of precautionary mechanisms in the process. The goal of development cooperation must therefore be to support households in rural regions such that on the one hand they have access to precautionary mechanisms, and on the other hand they are in a position to make the right decisions based on analyses.

Promoting resilience in development cooperation: Making the case

As a general principle, assisting communities by making temporary transfers and supplying means of production (e.g. restocking livestock herds, seed and tools) are ways of providing short-term relief in the aftermath of shocks. Ideally such measures should be embedded in long-term approaches by the government or donors. Although this is indeed frequently the case, often the approaches are not adequate to the high complexity of the situation.

It is becoming clear that resilience is a phenomenon that cannot be considered one-dimensionally or achieved by means of isolated measures: Construction measures for disaster prevention, new planting projects in the ecosystem, irrigation systems and food storage facilities are measures planned and implemented by municipalities or the administration which can protect against disasters and crises or reduce their negative impacts. But they are not enough per se to bring about resilience. A particular factor in avoiding future shocks or coping with acute shocks are the decisions people make. Decisions are based on capacity for action, but also presuppose knowledge and a willingness to take action. Fostering resilience means helping people to gain such capacity for decision-making and action-taking.¹⁰

It is therefore necessary in order to foster resilience that the state and development cooperation should invest in measures

- which stabilise people's natural and economic environment (e.g. ecosystems, agricultural production, access to markets);

- which protect people better (information systems, early warning systems, built structures, agricultural insurance schemes, social protection systems);
- which help people to survive during and after the crisis (welfare transfers, reconstruction);
- which support people in implementing adaptation and transformation measures (new farming and storage systems, new crop varieties, financing instruments, alternative sources of income).

From the definition and the approach outlined here, the following conclusion can be drawn:

The state and development cooperation can only increase the resilience of social systems if the people affected are able to contribute as constructively participating agents. Support is all they can provide; the primary responsibility for increasing resilience rests with individuals themselves.

The following briefing notes will show how rural development measures are relevant to improving resilience in concrete terms with reference to selected examples.

¹⁰ Zahn and Wegner (GIZ): Resilience – buzzword or new guiding framework? GIZ Cross-Sectoral Workshop, Sept 30 – October 1, 2013

Published by	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	On behalf of	Federal Ministry for Economic Cooperation and Development (BMZ)	
	Registered offices Bonn and Eschborn, Germany Sector Project Rural Development (ELR) Sector Project Sustainable Agriculture (NAREN) Sector Project Combat Desertification (CCD) Dag-Hammarskjöld-Weg 1-5 65760 Eschborn, Germany T +49 61 96 79-0 F +49 61 96 79-11 15 rural.development@giz.de www.giz.de	Division	One World – No Hunger	
		Addresses of the BMZ offices	BMZ Bonn Dahlmannstraße 4 53113 Bonn, Germany T +49 (0)228 99 535-0 F +49 (0)228 99 535-3500	BMZ Berlin Stresemannstraße 94 10963 Berlin, Germany T +49 (0)30 18 535-0 F +49 (0)30 18 535-2501
Authors	Martin Sulser; Martina Wegner		poststelle@bmz.bund.de www.bmz.de	
Layout	Katharina Schmitt			
As at	January 2015		GIZ is responsible for the content of this publication.	