

Vulnerability Assessment: Livelihood sensitivity approach (VAL)

Table of Contents

| | |
|---|------------|
| <u>Vulnerability Assessment: Livelihood Sensitivity Approach</u> | 1/4 |
| <u>1 Introduction</u> | 1/4 |
| <u>2 Methodology</u> | 1/4 |
| <u>3 Process</u> | 1/4 |
| <u>4 Review</u> | 2/4 |
| <u>4.1 Evaluation results</u> | 2/4 |
| <u>4.2 Experiences</u> | 3/4 |
| <u>4.3 Combinations</u> | 3/4 |
| <u>4.4 Strengths and weaknesses</u> | 3/4 |
| <u>4.5 Further work</u> | 3/4 |
| <u>4.6 References of the tool</u> | 4/4 |

Vulnerability Assessment: Livelihood Sensitivity Approach

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1 Introduction

This approach enables vulnerability to particular stresses to be captured by focusing on ability of individuals to deal with stress. The approach focuses on homogenous livelihoods, which enables an assessment of the capacity of individuals and communities to manage a range of stresses (Bohle et al., 1994). The simple approach presented here can be extended with more formal vulnerability assessment mapping.

The livelihood sensitivity tool is grounded in the approach that essentially melds a hazard + vulnerability = risk framework with the common Pressures–State–Impacts–Responses (PSIR) approach (Wisner et al., 2004). The implication of this is that it considers vulnerability to be determined both by internal characteristics, as well as external hazards or pressures. At the same time, the livelihood analysis, is concerned with a progression of vulnerability and how things change in response to social and environmental factors. It also links to subsequent steps in a climate adaptation assessment including identification of a range of adaptation options targeted toward vulnerable livelihoods and consideration of criteria for evaluating adaptation options, including effectiveness in reducing vulnerability and relevance to targeted stakeholders (Adger, 2003).

2 Methodology

The methodology seeks to assess vulnerability of livelihood typologies to stresses of concern. It does this by drawing out dominant livelihood characteristics and their specific vulnerability to a range of stresses. This process enables the vulnerability and sensitivity of livelihood activities to be assessed, rather than focusing on vulnerability of geographical areas, which may incorporate a range of livelihood typologies which will have resulting differences in vulnerability. It provides a first step in assessing vulnerability through qualitative and quantitative measures for a group that share common characteristics. The second step would be to develop the method further to assess social differentiation within the livelihood groups.

3 Process

The approach requires an initial analysis of the dominant livelihood typologies in the case study region. This information can be gathered from literature or initial qualitative research. The threats to these livelihood typologies are then identified, from the literature and in consultation with stakeholders from the identified livelihood groups. A matrix is developed that assesses how sensitive each typology is to each risk identified. This serves to reveal who is vulnerable to different threats and stresses. The outputs can be ranked according to different variables. For example sensitivity to mortality might have a different pattern than exposure to loss of livelihood or well-being. A review of literature and existing impacts models might underpin the rankings for specific cells that highlight why each livelihood type is vulnerable to each stress. Historical episodes (e.g., of a drought or flood) can be mapped in the same way as an example of vulnerability.

The outputs should be assessed to determine what indicators of vulnerability or adaptive capacity are generic to the matrix or specific for livelihoods and threats. It is also important to assess how the livelihoods are shaped by driving forces and trends, both internally and at a regional to global level.

The method is best suited to focusing on a particular ecosystem or resource. For instance, it might look at highland land use vulnerable to drought and floods or coastal zones susceptible to sea level rise and cyclones.

Vulnerability Assessment: Livelihood sensitivity approach (VALSA)

A contextual analysis, that highlights key issues of concern in the area, can be quite simple, with more substantive documentation presented as resource material and for further consideration and follow up.

The livelihood sensitivity approach is designed as a means to integrate existing knowledge on a chosen stress in a fairly rapid manner. This can be done in a workshop environment through breakout groups and so can be implemented over a period of days. As such, the exercise is not a complete assessment but can be used as an initial tool for local and national vulnerability assessments.

This method provides a way of understanding what underpins certain types of livelihoods in order to focus on where intervention should be targeted to enable the sustainable continuation of elements of livelihoods that are seen as critical. For example, if a certain livelihood typology relies on forest products, it would be critical to understand the threats to forest products if the livelihood typology were to remain sustainable. The method is therefore not primarily about policy but rather about the operational evaluation in order to support livelihoods in a sustainable and appropriate manner. It could therefore be used in conjunction with other sustainable development assessment tools and establishing how the chosen path of development might cause certain livelihood typologies to be more sensitive to certain stresses than others.

4 Review

4.1 Evaluation results

This tool is suited to capturing the perception of local stakeholders when wanting to evaluate what stresses they perceive as important and what options they have to respond to these stresses. This can help to provide bottom-up foundations before expecting external solutions to be desirable and effective. It is an easy tool to use although is subject to stakeholder bias.

Policy processes

This tool is particularly good for helping to identify locally-based concerns and identifying the various dimensions of the problem. It can be used as a stepping stone to identify solutions. It can facilitate the mapping of desired outcomes from policy options against perceived threats and stresses from the perspective of different livelihood groups.

Sustainable development aspects/cross-cutting aspects

This tool enables disaggregation of impact of stresses on different livelihood typologies and so facilitates the de-coupling of different stresses. It is also good for recognising adaptability as it captures how different livelihood typologies can respond to different stressors. If the tool is used with different groups, differences in response can be identified. It is a good tool for focusing on the local scale.

Impact coverage

This tool enables an assessment of how specific environmental factors impact on livelihoods. It also integrates impacts of environment factors with social factors and response but it does not capture details of economic aspects very well, although could be expanded to do so.

Operational aspects

The tool is not technical in nature and is straightforward and easy to use. However, it is not always clear how risk levels are determined which makes its hard to maintain consistency between cases. At the same time, the

Vulnerability Assessment: Livelihood sensitivity approach (VALSA)

results depend on stakeholders' input and so results might vary depending on which set of stakeholders are involved. The data comes from the stakeholders whom the tool is undertaken with. Although it has not been widely used as a tool in this manner, livelihood assessments are common and can be drawn on for resource-specific vulnerabilities.

4.2 Experiences

The tool has been useful in the NAPA (National Adaptation Programmes of Action) process to help Least Developed Countries (LDCs) identify which livelihood groups are vulnerable to climate stresses in order to prioritise adaptation activities. This has been successful in the sense that it has enabled livelihood characteristics to be integrated in to the selection of adaptation options rather than traditional foci on sectors.

4.3. Combinations

The stakeholder input aspect of the tool provides the opportunity to use a range of participatory tools, such as village mapping and timelines to identify threats and focus groups and oral histories to explore the impact of past stresses and the nature of vulnerability of specified groups to identified stresses. The tool can be used with vulnerability indicators and mapping, by using the scoring from the matrix to develop vulnerability indicators that can be mapped if appropriate. The tool can provide input for scenarios, syndromes and Agent based modelling but does not require output from other tools.

Focus groups might provide an alternative means of gathering similar information but in a less systematic way.

4.4 Strengths and weaknesses

One of the key strengths is that it provides a voice to the stakeholders who are exposed to stresses and thereby enables bottom-up identification of vulnerabilities. The process of using the tool facilitates engagement from a range of stakeholders, from the bottom up to others who might be involved in local and national development. At the same time, it is easy to use.

The weaknesses are that it depends on perceptions of those implementing the tools, as this will guide the focus of determining the livelihood typologies and the process of facilitation. Also the quantitative measurements of ranking might vary between groups depending on individuals or dominant personalities. The process of focusing on stresses and impact and response might cause other key determinants of vulnerability to be missed if they are not identified as key stresses.

4.5 Further work

The livelihood sensitivity matrix is the foundation for further analysis. If time is available, several extensions could be considered, including:

- What indicators of vulnerability or adaptive capacity are generic to the matrix or specific for livelihoods and threats? For instance, crop-drought indicators (such as yield) are of different importance for semi-arid subsistence agriculture than for highland commercial farms.
- What is the range of adaptation options? Are these specific to livelihoods and threats or more generic?
- How are the livelihoods shaped by driving forces and trends, both internally and at a regional to global level?
- What institutions are relevant for implementing adaptation options for each livelihood? Are these institutions/regimes different for different climatic threats? How do they differ in their support of adaptation options (e.g., evaluation criteria)?

4.6 References of the tool

UNITAR. 2004. National adaptation programmes of action (NAPA). Selection of examples and exercises drawn from regional NAPA workshops. <http://www.unitar.org/ccp/NAPA/index.htm>

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