The Household Vulnerability Index (HVI)

1. Background
There are multiple external vulnerabilities, like HIV/AIDS and climate change, which exacerbate poverty. They mainly manifest themselves in rural households where over 70% of the people in Sub-Saharan Africa reside. This population relies on rain-fed agriculture, and chronic food insecurity is a common feature amongst them. The majority of rural households lack the necessary capacity to adapt to the negative impacts of these external vulnerabilities. Policy response is limited, whilst interventions are not carefully matched to the needs of communities. There is, therefore, a need to identify and measure household vulnerability to inform decisions around the design of policy responses and programme interventions for them to strengthen the capacities of households to adapt to external hazards. Unfortunately, there is a paucity of reliable evidence to inform policy processes and programming in this regard.

To address this gap FANRPAN has developed the Household Vulnerability Index (HVI), a statistical tool for measuring household vulnerability. The HVI categorises a household by assessing “external” vulnerability that is introduced by shocks and “internal” vulnerability or inability of such a household to withstand shocks, and then classifies the household as low, moderate and highly vulnerable, depending on its ability to prevail. The tool was recently piloted in three countries (Lesotho, Swaziland and Zimbabwe) over three years.

2. HVI Pilot Project

<table>
<thead>
<tr>
<th>Duration</th>
<th>January 2008 - September 2010</th>
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<tbody>
<tr>
<td>Funding</td>
<td>World Vision International (WVI)</td>
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<td>Southern African Trust</td>
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<td>Focal Countries</td>
<td>Lesotho, Swaziland, Zimbabwe</td>
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<tr>
<td>Partners</td>
<td>The World Vision Lesotho, Swaziland &amp; Zimbabwe</td>
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<td>University of Venda</td>
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<td>Development Data</td>
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<tr>
<td>Project Objectives</td>
<td>To explore the feasibility of using a statistical vulnerability index to improve the quality and effectiveness of development and relief programmes</td>
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<td>To further the opportunities for improved targeting – Social protection for vulnerable households</td>
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<td>To document recent trends of HIV and AIDS impacts on agriculture and food security in rural households in the SADC region</td>
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<tr>
<td>Project Output</td>
<td>Livelihoods databases on asset ownership by rural communities to inform policy and practice</td>
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Produced September 2011
2.1 The Household Vulnerability Index Tool
The HVI measures the vulnerability of households and communities in relation to the impact of diseases and shocks such as HIV/AIDS, erratic weather patterns and poverty. The HVI achieves this by assessing a household’s access to five livelihoods capitals:

- Natural assets such as land, soil and water;
- Physical assets such as livestock and equipment;
- Financial assets such as savings, salaries, remittances or pensions;
- Human capital assets such as farm labour, gender composition and dependents; and
- Social assets such as information, community support, extended families and formal or informal social welfare support.

A total of 15 variables (called dimensions) are assessed together, and a statistical score is calculated for each household.

2.2 Categories of Vulnerability
The HVI classifies households in three categories according to their level of vulnerability:

- low vulnerability (i.e. the household is in a vulnerable situation, but still able to cope);
- moderate vulnerability (i.e. the household has been hit so hard that it needs urgent but temporary assistance for it to recover); and
- high vulnerability (i.e. the household is in a situation of almost a point of no return – but could be resuscitated only with the best possible expertise).

Based on these different vulnerability levels, relevant relief or development packages are recommended to policy makers and development agencies to assist the affected households to overcome their vulnerability.

2.3 Steps in Conducting an HVI Assessment
1. Hiring and training of enumerators on eliciting information (questionnaire) and collecting data;
2. Survey dry-run to field-test and fine tune the questionnaire;
3. Data collection;
4. Data cleaning and entry;
5. Data analysis using Statistical Package for Social Services (SPSS); and
6. Dissemination of findings to relevant stakeholders to inform investment decisions, policy making and programming processes.

The results from an HVI assessment can be mapped using Geographical Information Systems (GIS) to facilitate spatial analysis, e.g. the distribution of households in the different categories of vulnerability.
3. Results of HVI Pilot: Maphutseng, Lesotho

3.1 Background
The majority of the Basotho population (85%) live in rural areas. Lesotho is classified as one of the least developed countries, and ranks 149 out of 177 countries on the United Nations Development Programme (UNDP) Human Development Index (HDI) rating. A significant proportion of the country’s population are living below the poverty line (36.1% living on $1 a day and 56.1% on $2 a day), and rely on small-scale subsistence rain-fed agriculture as their main source of livelihood.

3.2 Location
To improve targeting and programming quality, Maphutseng Area Development Programme (ADP), was selected by World Vision Lesotho as the pilot site for an HVI assessment. Maphutseng is located in Mohales’ Hoek District, southern Lesotho.

3.3 Results
The community was given an opportunity to assign weights based on their perceived importance of the five asset capitals (see Figure 1).

Financial capital was ranked as the most important asset because it helps during times of crisis or unforeseen disasters, and also in accessing other required services. This was followed by physical capital, especially for females, because there is no access to water. Natural capital is important because, in order to survive, households need water, fertile land, and good vegetation for livestock, especially draught power.

Figure 2 presents HVI values using the Community Based Asset Weighting (CBW) process. About 1.3% of the households have low vulnerability, whilst the majority of households (94.5%) in the ADP studied are in the moderate vulnerability category, facing transitory or temporary vulnerability which makes them slide in and out of chronic situations whenever they are exposed to shocks that impact on their livelihoods. About 4.1% of the households are in the high vulnerability category, and require the greatest investment. This population is living in chronic poverty, and requires specially packaged and targeted social protection interventions to get them out of this situation.
4. Results of HVI Pilot: Mpolonjeni, Swaziland

4.1 Background
Swaziland is characterised by a high population growth rate, high HIV/AIDS prevalence rate, and a large section of the population living under poverty. More than 60% of the population rely on subsistence farming, and are unable to support themselves because of HIV/AIDS, drought and poor land management.

4.2 Location
The HVI pilot project was implemented in the Mpolonjeni Area Development Programme (ADP). Mpolonjeni ADP is located in the central east of Swaziland in the Lubombo region. The programme covers ten communities: Ngcina, Mpolonjeni, Shoba and Ndazungu, Langa, Maphatsinduku, Mncitsini, Ekupheleni, Matsetsa and Nyetane.

4.3 Results
The community was asked to assign weights based on their perceived importance of the five asset capitals (see Figure 3). Comparing the HVI Standard Database Value (SDV) and community values, physical and financial capitals were weighted more than the standard value by the community. Of importance is that physical capital was valued significantly more than the HVI assigned weight. Furthermore, human, natural and social assets were valued less than the assigned weights. That is, Mpolonjeni communities consider physical and financial capitals as being central to their livelihood.

Figure 4 presents HVI values using the Community Based Asset Weighing (CBW) process. About 1.2% of the households are lowly vulnerable. The majority of households (93.9%) are in the moderate vulnerability category facing transitory or temporary vulnerability which makes them slide in and out of chronic situations whenever they are exposed to shocks that impact on their livelihoods. About 4.9% of the households are in the high vulnerability category, requiring the greatest investment. This population is living in chronic poverty, and requires specially packaged and targeted social protection interventions to get them out of this situation.

Figure 3: Community perceptions on asset value

Figure 4: Categories of Household Vulnerability of households in Mpolonjeni Community.
5. Results of HVI Pilot: Rushinga, Zimbabwe

5.1 Background

Zimbabwe has experienced a decade of economic deterioration, resulting in a decline in living standards. A food crisis has ravaged the country as a result of persistent drought, unplanned land re-distribution and shortage of inputs. High unemployment rates of over 90% have also been a direct result of the country’s economic meltdown. The lack of basic social services further deepens the vulnerability of people living with HIV and AIDS, who account for 15.3% of the adult population.

5.2 Location

Rushinga Area Programme Development (ADP) was chosen as a site for data collection. The ADP is in the Mashonaland Central Province, and along the Zimbabwe-Mozambique border.

5.3 Results

The community was asked to assign weights based on their perceived importance of the respective capitals (see Figure 5).

Of importance is the natural capital that was valued more than double the assigned weight. Furthermore, financial and social assets were valued less than the assigned weights. Thus, Rushinga communities consider human, physical and natural capitals as being central to their livelihood.

Figure 6 presents HVI values using the Community Based Asset Weighting (CBW) process, indicating that there are 8.2% lowly vulnerable households. The majority of households (90.6%) are in the moderate vulnerability category facing transitory or temporary vulnerability which makes them slide in and out of chronic situations whenever they are exposed to shocks that impact on their livelihoods. About 1.2% of the households are in the high vulnerability category, requiring the greatest investment. This population is living in chronic poverty, and require specially packaged and targeted social protection interventions to get them out of this situation.

Comparing the HVI Standard Database Value (SDV) and community values, human, physical and natural capitals were weighted more than the standard value by the community.
Partners Speak Out on the Benefits of the FANRPAN Household Vulnerability Index Tool

Mr. Ian Mashingaidze; HVI Project Manager, FANRPAN

The tool provides for more accurate targeting. It is helpful in programming relief and development efforts. It provides a baseline against which trends can be monitored and analyzed. Understanding vulnerabilities of households makes development efforts more effective.

Ms Thato Lepele; World Vision, Lesotho

How have you as pilot countries found the HVI Tool? Has it informed your programming in any way?

Mr Dalton Nxumalo; World Vision, Swaziland

It provides a good base for programming. The national census does not always provide all the basic information that is required for development programming. The HVI Tool has filled this gap. World Vision Swaziland has used results of the HVI as a basis for informing programming, and also as a monitoring tool. Every household is given a unique ID, which can be used to trace what happens to them over time, and how intervention programmes impact on their vulnerability. The tool can also inform modeling projections.
Examples of results of HVI Studies undertaken by FANRPAN and World Vision 2009-2010

**ASSET OWNERSHIP IN SOUTHERN AFRICAN RURAL HOUSEHOLDS**

<table>
<thead>
<tr>
<th>Country</th>
<th>Location</th>
<th>Sample size (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesotho</td>
<td>Maphutseng</td>
<td>2665</td>
</tr>
<tr>
<td>Swaziland</td>
<td>Mpolonjeni</td>
<td>3211</td>
</tr>
<tr>
<td>Zimbabwe: sample size</td>
<td>Rushinga</td>
<td>5679</td>
</tr>
</tbody>
</table>

**HUMAN ASSET**

- % Number of hh with economically active member (18-64 age group)
  - Lesotho: 62.7%
  - Swaziland: 53.6%
  - Zimbabwe: 76.6%

- % gender of hh heads
  - Female Headed hh
    - Lesotho: 40.9%
    - Swaziland: 44.2%
    - Zimbabwe: 23.3%
  - Male Headed hh
    - Lesotho: 59.1%
    - Swaziland: 55.8%
    - Zimbabwe: 76.7%

- % hh with sick/orphaned members
  - Number of hh with sick member
    - Lesotho: 77.1%
    - Swaziland: 60.9%
    - Zimbabwe: 74.8%
  - Number of hh with orphans
    - Lesotho: 60.6%
    - Swaziland: 55.9%
    - Zimbabwe: 82.8%

**hh(s) - Households**
This project contributes to CAADP Pillar 3 to increase food supply and reduce hunger across the region by raising smallholder productivity and improving responses to food emergencies.