

Hazard, Vulnerability and Capacity Assessment



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Introduction

Welthungerhilfe (WHH) has been working in Afghanistan without interruption since 1992. The focus of its work lies in the sectors of emergency and transitional aid, food and nutrition security, rural development and WASH. WHH is represented with a country coordination office in Kabul and also maintains four further project offices in the provinces of Balkh, Jawzjan, Samangan and Kabul.

Disaster Risk Reduction (DRR) project components aim at demonstrating simple, inexpensive preparatory measures owned by the community themselves, which can limit the damage and save lives in the event of a disaster. DRR projects typically emphasize training, capacity-building, awareness- raising, establishment or improvement of local early-warning systems, mitigating risks of hazard through small to large scale mitigation activities and contingency- planning. Carrying out a participatory assessment of hazard, vulnerability and capacity (HVCA) is an integral component of increasing disaster risk preparedness in communities in Afghanistan.

Ideally, the HVCA is facilitated by the trained members from the local community itself with the support of the WHH team. These village facilitators can be teachers, mullahs, Shura members or any other educated members from the community. Based on the context, educated women and people with disability should also be trained as local facilitators.

The purpose of HVCAs is multi-purpose:

- to identify groups who are vulnerable;
- to identify the factors that make them vulnerable and how they are affected;
- to assess their needs, available resources and capacities;
- and to ensure that projects, programs and policies address these needs.

HVCA is used as a diagnostic tool, a planning tool and a tool for empowering, mobilizing and listening to vulnerable populations. HVCAs are designed to consider a wide range of environmental, economic, social, cultural, institutional and political pressures that create vulnerability.

This toolkit is developed with the purpose of helping community facilitators in rolling out HCVA in villages. This guide explains the step-by-step process of HVCA and also describes in detail each participatory tool that can be used in each step. Reporting formats for each tool are available in the Appendices.

The steps and tools described in this toolkit serve as a basic reference, and it is important to adapt the methodology to the unique situation in each village.

Preparation

The WHH team shall hold a preparatory meeting with the community leaders/ development councils in each village to discuss and explain the project, objectives and expected outcomes in detail. It is important to discuss the different project activities and the responsibilities of the local facilitators.

Local facilitator selection: Local facilitators can be selected in consultation with the WMC/ FMA/ SHG community group established by the project in the village. If possible, identify literate and respected people from the village such as teachers, mullahs or Shura members. The facilitator should understand that their role is to ensure all participants have a chance to speak and to keep the conversation on the topic (not for them to lecture or do all the talking). Based on the context, educated women and people with disability should also be trained as local facilitators.

Local facilitators should receive a copy of the HVCA manual and be briefed on each session before the workshop.

Local facilitators can work in the process of reviewing any existing community watershed management plans, assessing the risks, vulnerabilities and capacity to work at this meeting.

The date and time for the village to carry out this assessment will be finalized at this meeting.

Workshop Plan

The workshop should be planned to cover 3 to 4 days for each village.

The workshop team (WHH staff and local facilitators) must arrive at least one hour before the appointed time.

The workshop venue must be large enough for participants to break into small groups to work, have enough light, be well ventilated, comfortable and centrally located for the participants.

Preparations to accommodate women should be made (female trainer and separate space for female participants).

Consider refreshments based on the timing of the workshop.

WHH staff must remember to bring:

- Workshop plan for the day
- Projector and PowerPoint file (if using)
- Laptop, projector and speaker if using the DRR videos (3 parts, approx. 20 minutes)
- White sheet for projector
- Items that can be used for mapping, such as: flip chart/large pieces of white paper, color marker pens for drawing, pencils, stone, seeds or beans, scissors, ruler, paper adhesives or flip chart board.
- Flip charts prepared for the Event Mapping (Tool 1).
- Camera or phone to photograph and record what the participants have drawn

Ensure the local facilitators who are leading the facilitation have the materials they need.

The team can communicate informally with the public. Formal topics such as welcoming and introducing the project to participants should be discussed with the local facilitator.

Step 1: Introduction

When all participants are present, the representative of the Water Management Committee or a village elder formally welcomes the participants and briefly explains the meeting and practice of the day.

To provide context for the workshop, the WHH team should give details about the project, its objectives and processes, and how the information collected and mapped through this workshop can help the community make better decisions for the future.

1. Introduction of project team members
2. Self-introduction of workshop participants
3. Introduction of WHH and relevant project information
4. Explain that the information that we are recording in the workshop is the experience of everyone in this village. Encourage all participants to contribute the knowledge they have (it is the facilitators job to make sure everyone has a chance to speak).

Step 2: Tool 1- Analysis of the timeline and trend of incidents/ events

Objective:

This exercise is performed to record the important events that have occurred in the village and to know how different people of the village were impacted by and coped with these events over time. This activity is designed to specifically capture the **events that have occurred in the village that have affected people's lives and livelihoods**. For example; landslides, droughts, floods, disease outbreaks, as well as good crop seasons, or the introduction of solar pumps (the events can be positive as well as negative). This exercise helps participants understand the process of events and the different effects on communities or people in different villages.

Process:

Create a table by drawing four columns on a flip chart. The first column represents the year, the second column represents the incident/event, the third column represents the impact of the incident and the fourth column represents the action of people against the incident (if the Incident was good – no 'Action against the incident' is required).

Event Mapping: Village name: _____ Date of analysis _____

Response	Impact of the incident	Incident / Event	Year
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1. Describe the purpose of the exercise for the participants. Make sure that older people are in the group because they can remember events from the distant past.
2. Ask participants to describe all past events that occurred in the village during the past 20 to 30 years and write them down in chronological order.
3. Make sure that each participant is expressing what they have and that none of the participants controls the top of the group.
4. Discuss more about the effects of the events (positive effects and negative effects) and how the community has controlled and adapted to them.
5. Collect and record information provided by participants on the flip chart.
6. Don't forget to photograph each page at the end.

Discuss:

Once you've finished filling out the columns, discuss the results and ask for clarity on points that aren't clear. Also discuss the frequency and trends of events that have been obtained from the given information.

Add details such as the name of the exercise (Event Mapping), the name of the village and the date of analysis,

On a separate piece of paper (example form in Appendix 1) add the names of the participants from the village, the age, gender of the participants, and if the disabled are present, the type of disability.

Record separately the information on the impact of incidents on women and the disabled.

Ensure that the WHH staff and local facilitators note all relevant information that comes out of the discussion between the participants.

Take a picture of the table to be documented at the office and added to the NRM/DRR Community Profile.

Figure 1: Timeline Analysis Example

دوره زمانی	وقایع مهم	تأثیرات	بازنگری	اقدامات پیشنهادی	مسئولیت کارشناسان
سال 1386	تفحص	1- عدم وارد شدن باران 2- عدم توزیع دارو 3- نبود خدمات بهداشتی	از طرف دفتر بهداشت کارکنان محترم نیروی دولتی	1- عدم وارد شدن باران 2- نبود خدمات بهداشتی 3- نبود خدمات درمانی	تفحص و توزیع دارو تفحص و توزیع دارو تفحص و توزیع دارو
سال 1387	اوج کج	1- آلودگی آب آشامیدنی 2- نبود خدمات بهداشتی 3- نبود خدمات درمانی 4- نبود خدمات اجتماعی	○	1- آلودگی آب آشامیدنی 2- نبود خدمات بهداشتی 3- نبود خدمات درمانی 4- نبود خدمات اجتماعی	1- آلودگی آب آشامیدنی 2- نبود خدمات بهداشتی 3- نبود خدمات درمانی 4- نبود خدمات اجتماعی
سال 1388	تفحص	1- عدم توزیع دارو 2- نبود خدمات بهداشتی 3- نبود خدمات درمانی 4- نبود خدمات اجتماعی	○	1- عدم توزیع دارو 2- نبود خدمات بهداشتی 3- نبود خدمات درمانی 4- نبود خدمات اجتماعی	1- عدم توزیع دارو 2- نبود خدمات بهداشتی 3- نبود خدمات درمانی 4- نبود خدمات اجتماعی

Step 3: Tool 2- Mapping Hazard, Vulnerability

Objective:

To draw a social map of the village along with various risks and vulnerability factors that have been identified. The hazard, vulnerability and capacity map can include available resources and capacities that are useful in disaster control.

Pre-workshop preparations

Prepare the checklists of information to be collected and mapped in the hazard, vulnerability, and capacity map.

- Characteristics of the people in the community (Appendix 2 General Information and Community Governance Checklist)
- Community infrastructure and risks (Appendix 3 Biophysical Community Assets Checklist)
- Elements of vulnerability in the community related to incidents and events (identified in Tool 1)
- Elements of resources and capacities related to disaster control.

Process

Phase 1 – Social Mapping

Describe the purpose of the exercise and decide with the participants whether to draw a map on the ground or the floor or to use a flip chart.

1a. Draw a basic map of the village – Ask participants to start drawing a map of the important places and key features of their village such as roads, springs, waterways, graveyards, village boundaries, mosques, schools, shura sites, etc. Allow the community to use their symbols and materials to draw the map as creatively as possible.

- Watch the process and make suggestions wherever needed.
- Encourage the participation of all participants in the discussion if needed.
- Ask about the map - ask where it is not clear and where more information is needed.
- Whether the map is drawn on the ground, or on a flip chart, make sure that you photograph it so it can be used in the Village NRM/DRR Community Profile later.
- Prepare a map key / guide table using the symbols used by the community.
- Add directions and names of nearby villages.
- Record details such as map name, village name, date of analysis, community participants and facilitators including age, gender, and if people with disabilities are available.

Figure 2: HVCA Map Example



1b. Draw a basic map of areas surrounding the village - Ask participants to draw a second map (at larger scale) of the land around the village, used by the villagers. This map could include, for

example, grazing lands used in summer, distant forests where construction wood or fuel wood is collected, or areas where seasonal plants or medicinal plants are collected.

Phase 2 - Hazard Map

On the social map, ask people in the village to identify places that are at risk of events identified through Tool 1 (Timeline of Incidents and Events) such as landslides, heavy snowfall, rock falls and floods, and to identify any situations that pose a higher risk to women and the people with disabilities.

Phase 3 - Vulnerability Map

Explain the term 'vulnerability' to the participants:

'Vulnerability' refers to the condition determined by physical, social, economic and environmental factors or processes that increase the susceptibility of an individual, a community, assets, or systems to the impact of hazards.

'Vulnerability' helps us understand why similar hazards and extreme events can have varying consequences for different households, communities, societies, and infrastructures.

Things that increase vulnerability include:

- ✓ *Factors that reduce society's ability to deal with and adapt to events.*
- ✓ *Factors that increase the likelihood of accidents and their impact on the community in question.*
- ✓ *Physical vulnerability: poor infrastructure that can be schools, village buildings, houses, agricultural land, drains, water resources, and power dams.*
- ✓ *Social vulnerability: disabled people, poor children, women-run homes, desperately poor families etc.*
- ✓ *Environmental vulnerability: clearing of forests, overgrazing land.*

Ask participants to brainstorm different elements of vulnerability to the specific risks and hazards the village is prone to.

List vulnerable elements in the Flip Chart. Physical elements such as homes, infrastructure, basic service facilities such as schools, clinics, etc., livelihood options, vulnerable groups such as, poor people, the disabled, the elderly alone, female-headed households and environments.

Identify the vulnerability factors in the **social map** (Phase 1a. Basic map of the village) using drawing and symbols, for example; households that are vulnerable to poverty, people with disabilities, and elderly people living alone.

Take note of the whole discussion.

Phase 4 - Resource and Capacity Map

Explain to participants what 'resources' and 'capacity' are, in relation to 'events'. Explain by

example.

*Community **resources**, refer to the actual **physical, financial, human, and organizational assets available within a community that can be utilized to address hazards and vulnerabilities**. These resources can include emergency services, medical facilities, community organizations, communication systems, and funding sources.*

*Community **capacity**: is the ability of a community to mobilize and utilize its resources effectively to address issues and challenges, such as natural disasters and emergencies. Capacity includes the **skills, knowledge, social networks, infrastructure, and other assets that enable a community to prepare for, respond to, and recover from hazards**.*

Ask people to brainstorm all the resources and capacities of the village that are useful in controlling the incidents/ events.

List all the resources and capacities identified by the participants on the Flip Chart.

Identify (or add, if missed) the **resources** and **capacities** of the village, on the **social map** (Phase 1a. Basic map of the village) using drawing and symbols.

Resources Checklist:

- Rivers and streams
- Irrigation canals
- Personal grazing lands
- Public grazing lands
- Personal gardens
- Public gardens
- Springs
- Agricultural land
- Forest lands
- Fields that are not cultivated
- Cemetery
- Electricity/ solar panels

Capacities Checklist:

- Transportation and communications infrastructure
- Mobile phones, TV, motorcycles, cars, jeeps, big cars, tractors, horses and ink
- Skilled persons
- Doctors, water heaters, electricians, police, unofficial health workers, health workers and drivers
- Safe havens (buildings/situations that can be used to evacuate people during an accident).

Step 5: Reflection and Integration

Currently the incidents are managed by the members of the communities themselves with limited facilities at their disposal. If the capacity of communities to assess disaster risks and hazards is strengthened and measures such as preparedness and response planning, early warning mechanisms, and those trained in first aid, search and rescue are strengthened, it can significantly reduce the impact of incidents on communities. Also, identifying measures to reduce possible risks at the village level and including them in village/district/provincial development plans can reduce the vulnerability of communities.

Once the analysis is complete, it is important to systematically deliver results for reflection and sharing of information into groups. All reflections and comments from the village should be noted and included in the analysis.

This session should be a 'listening session' with the community. It is critically important to let the community speak and not ask specific questions. *For example, do NOT ask the following questions as the likely answer is going to be 'no': do you have enough clean drinking water? Do you have enough irrigation water? Do you have enough irrigated land? Do you have enough fire fuel? Is your wheat harvest good enough? Asking such questions generates expectations and does not give room to the community to consider their priorities.*

Example good questions include:

- What did you notice or learn about your community in the mapping exercise and the transect walk?
- What hazards are a priority for this village?
- What are the biggest vulnerabilities in this village?
- Which hazards can be controlled or reduced?
- What could you do as a community to reduce the impact of this hazard?
- What could you do as an individual to reduce this hazard?

During the listening session the project team must ensure everyone has a chance to speak. If always the same community members (arbob, shura members, wealthy farmers) speak, then the chances for everybody, and especially the poor, to have a voice, and communicate their priorities, is low.

A good way to encourage all perspectives to heard is to organize a parallel listening sessions with women in the community. This requires the project team to dispatch two well-trained and informed teams, male and female. **It cannot be overemphasized that this stage of the HCVA is critical to the success of the community owning the next steps.** Enough time and resources must be allocated.

When the listening session / reflection process is completed, the next step is to facilitate a discussion about the current situation of the village incidents and the need to have a village level incident control plan, including preparedness and disaster response plans (this can be included as sections in the NRM/ DRR Community Profiles).

Facilitators should explain the main elements of disaster preparedness and response plans, and encourage the community members to discuss what mitigation, preparedness, response and recovery measures they can put in place.

Using the example of floods or landslide:

Mitigation: involves preventive measures to reduce vulnerabilities, such as building check dams and catch dams above the village and controlling grazing to ensure vegetation cover. Do not build houses, stables or villages in flood zones.

Preparedness: builds capabilities to manage the impact of hazards and includes trainings, early warning systems, identifying safe places to go and knowing who to contact in case of emergency.

Response: is an action to reduce adverse actions during the disaster such as assisting households in danger to evacuate as a flood or landslide is happening.

Recovery: involves actions to restore areas affected by the disaster to pre-disaster operations, such as assisting with clean up and repairing damage.

The necessity of establishing emergency control committees and compulsory tasks and building their capacity should be emphasized here.

The following Table might be useful to fill out during this discussion – but is not compulsory

Hazard Analysis and Overview: Village name: _____ Date of analysis _____

Prioritization	Controllability	Intensity	Opportunities	Occurrence degree	Duration	Frequency/ Occurrence	Disasters

Figure 4: Example of Hazard Analysis Matrix

تحليل مخاطر قرع دره بيد و سوال کوستان: تاريخ 17-9-2013
Hazard analysis para-c-bid Kowistan

حوادث	تكرار وقوع	دوام	درج وقوع	فروع يا جود	شدت	قابليت كنترل	اولويت بندي
برف كود	بزرگ و وقوع كارنده در سال بناد برت 6-10 بار	بزرگ و وقوع كارنده از 15 دقيقه تا بسيار كم	بسيار از حد	25-30 دقيقه	بسيار زياد درد	قابليت كنترل آسان (4)	3
ريش كود	زياد	نياد	بسيار از حد	12 سال	بسيار زياد	بسيار كم (4)	1
سيلاب	بسيار زياد	بسيار از حد	بسيار از حد	30 دقيقه از 13 ساعت	بالا	كم (3)	2
لندگير	بسيار زياد	كمتر	زياد	2 دقيقه	بسيار زياد	بالا (2)	(4)

محل اولاد كنش: 1- اشترقرع: بيد و سوال - 2- اشترقرع: بيد و سوال - 3- اشترقرع: بيد و سوال - 4- اشترقرع: بيد و سوال

Step 6: Development of Management Actions and/or Plans

Collaborative needs assessment implies that the final agenda is not dictated by either the community or the agency. The process ends with an agreement that satisfies the following criteria:

- ✓ The community must commit to a substantial contribution to the planned project interventions.
- ✓ The project teams must reach consensus that the interventions prioritized by the community truly reflect the needs of the community, and not just those of a powerful few.
- ✓ The proposed interventions must be technically feasible, address obvious needs, and their maintenance must be economically feasible for the community.
- ✓ The community must designate the lands affected by the vegetation restoration interventions as common property and open to all community members, under a defined management plan.
- ✓ The community and the agency must jointly define what they expect to be the result(s) of the intervention(s). These expectations must be made part of the agreement and should include descriptions of measurable benchmarks.

Thank the villagers for taking the time to participate in the evaluation process and their interest in controlling incidents and events. Then briefly describe the next steps of the process and the possible time distribution.

Make sure that all original copies of the risk, vulnerability and capacity assessment results such as

maps are delivered to the village after they have been properly documented.

The next steps include updating the NRM/ DRR Community Profiles, including Management actions, and holding a follow up meeting to finalize the community commitments and get the signatures of community leaders.

A copy of the Community Profile will stay with WHH, and 3 to 5 copies will be provided to the community for their record.

Appendix 1: Workshop Attendance Sheet

No	Village Name	Participant Name	Age	Gender M/F	Disability? Y/N
1					
2					
3					
4					
5					
6					
7					

Appendix 2: Village General Information Checklist

General Information Checklist				
General Community information				Comment
Name				<i>The information collected in this section serves to identify the community and complement and update Phase I information.</i>
Location (GPS)				
Name of Arbob/Malik				
Name of Head of Shura				
Number of families				
Total land owned by the community				
Distance to next district center				
Type of access (all weather road, road access part of the year, no road access)				
Tribes				
Neighboring communities and relationship with these communities				<i>Describe here all neighboring communities bordering the village. What kind of relationships exist (kinship, clan, sharing/renting of land, common grazing lands, common fuel collection areas, etc).</i>

Community Governance and previous NGO activities Checklist					
Community Governance	Describe how the community is organized:				<i>It is very important if the community has an effective government. In your meetings with the community, find out if there is any conflict between or within the shura(s). It is important to know how often they meet. Ask them about what kind of activities the community carries out. Make notes about these answers. It is important to get information from women in</i>
	Shura (yes/no)		Number members:		
	CDC (yes/no)		Number members:		

					<i>the village; especially governance issues must be discussed from all angles.</i>
NGO activities	List all previous NGO activities				<i>It is important to know what kind of NGO activity took place in the community before.</i>
	NGO name	Year	Activity		

Appendix 3: Biophysical Community Assets Checklist

Biophysical Community Assets Checklist					
Category	Response				Comment
Drinking Water	Please list all sources of drinking water in the community in the following format:				<i>Do not ask if the community has enough drinking water. Assess the situation and comment on the access and hygienic conditions. Information needed to rank priorities defined by the community.</i>
	Water source number	Distance from village	Approximate yield	Condition (access, hygiene)	
Irrigation Water	Please list all sources of irrigation water in the community in the following format:				<i>Do not ask if the community has enough irrigation water. Comment on aspects such as vulnerability to floods, silting, probability of sufficient flow through summer Information needed to rank priorities defined by the community</i>
	Water source number	Distance from village	Serves approx. how many jeribs of land?	Condition (location, risks)	
Irrigated Land	Please describe irrigated land resources at the village level in the following format:				<i>The purpose is to understand how 'rich' the village is in general, and how much potential exists in the village for intensified agricultural production.</i>
	Total area	Terraced area	Area in tree crop		
Rainfed Land	Please describe available rainfed area in the following format:				<i>The purpose is to calculate the ratio of irrigated to rainfed land, and relate it to total population in the village. Note signs of erosion. This is important when calculating potential for rainfed forage production.</i>
	Total area	Terraced area	Main crop		

Grazing Land	Please describe available grazing lands in the following format:				<i>Estimate total available grazing land.</i> Note if lands are extremely overgrazed. <i>Ask about time they keep area in quruk. Ask if the village would like to keep more area in quruk, and if yes, why they cannot allocate more area to quruk.</i>
Currently Used	Total area	Area close to village	Summer grazing lands	Condition	
Quruk	Total area	Area close to village	Summer grazing lands	Condition	
Fire Fuel Resources	How long do you have to walk to get your fuel collection area?				<i>These questions allow us to assess the severity of the fuel situation.</i>
	When do you begin collecting fire wood for the winter?				
	Do people in this village burn manure?				
Crops cultivated in the village (including vegetables from kitchen gardens)	List the total area of crops that are cultivated in the village in the following format:				<i>We have to know how much the village relies on wheat production, and how much land they can afford using for other crops.</i>
	Crop		Area		
		Are there any greenhouses in the village? If yes, how many and what is cultivated?			
Livestock	Summarize the number of animals in the categories listed below:				<i>Three things are of interest: dairy cows, draft animals (cows, oxen, donkeys), and an indicator of livestock wealth (sheep and goats).</i>
	Category		Number		
	Cows				
	Oxen				
	Donkeys				
	Sheep				

	Goats				
Market Access	Describe market access for the community as follows:				<i>In order to gauge the opportunities in market agriculture available to the community, we need to know about distance to market.</i>
	Crop / Commodity		Market Location & Distance		
	Field crops				
	Livestock				
	Inputs (seed, feed, fertilizer, pesticides, medicine for animals)				

Appendix 4: Example transect walk checklist:

Try to see that you visit different locations related to the six characteristics of resilience (see example table below).

This may include:

- **Social environment** to assess social cohesion and connectedness: mosque, sports fields, shopping areas, restaurants, main areas of gathering (for children, adolescents, adults);
- **Physical environment** to assess basic shelter and water needs, and infrastructure and services: characteristics of housing construction and sanitation facilities, quality of roads, streets, bridges, drainage systems, water points, health and education facilities etc.;
- **Neighbouring communities** to assess connectedness: How close is the neighbouring community? Does the neighbouring community have any influence in the community you are working with? For example, does garbage from community A affect community B? Do people from community B go to community A to access health care?
- **Natural environment** to assess risk location, natural assets management, and economic activities: Hilly areas, steep slopes, erosion gullies, deforestation, overgrazing, status of rivers and major streams, land reserved for crops or livestock (grazeland), mono-cropping or intercropping, etc.