

FINDING WAYS TOGETHER TO BUILD RESILIENCE

The Vulnerability and Risk Assessment Methodology

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Photos: Daniel Morchain / Oxfam, Oxfam in Ghana, Oxfam in Bangladesh, Oxfam in the Philippines

Reflecting on the voices of people living in difficult and unjust circumstances, government stakeholders and development practitioners from around the globe, the authors propose that conducting a truly participatory, multi-stakeholder and cross-scalar contextual analysis that considers a wide range of hazards, as well as people's capacities and aspirations, should become standard development practice. It is this type of participatory process that can facilitate an equitable, gender-sensitive, sustainable and appropriate design of pathways towards risk reduction and resilience. The Vulnerability and Risk Assessment (VRA) methodology aims to constitute such a continually evolving process. This document presents the VRA principles, a how-to guide, and discusses the strengths and lessons learned from implementation.

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GLOSSARY

Key VRA terminology

<i>Exposure</i>	The extent to which a social group (or a livelihood activity) could potentially – i.e. theoretically – be affected/damaged by the occurrence of a hazard or an issue.
<i>Hazards and issues</i>	Factors that have an impact on the landscape, both at present and (possibly) in the future. They include weather and climate change impacts, environmental degradation issues, issues of unequal access to goods and services, gender and ethnic-related inequalities.
<i>Knowledge Group</i>	The backbone of the VRA – of its findings and its analysis. The Knowledge Group consists of roughly 15 to 25 people with a stake in the social-ecological landscape in question. It should have a strong representation of communities and of marginalized groups. The Knowledge Group will spend two full days together and run through the four steps of the VRA in a roundtable discussion approach; as such, the findings of the VRA are largely the result of this group's thinking.
<i>Landscape</i>	<p>A continually changing, ecologically and socially integrated environment where people pursue their livelihood through different strategies. A landscape includes: 1) different groups of people, some powerful, some living at the margin of society, and their cultural norms; 2) a limited pool of natural resources and the services they provide, to which people have different levels of access; and 3. socio-economic and governance factors, as well as national, regional and global forces affecting it.</p> <p><i>The Little Sustainable Landscapes Book</i> (Denier, L., et al., 2015) defines a landscape as a socio-ecological system that consists of natural and/or human-modified ecosystems, and which is influenced by distinct ecological, historical, economic and socio-cultural processes and activities.</p>
<i>Risk</i>	The likelihood, or perceived likelihood, of the materialization of a hazard.
<i>Sensitivity</i>	The <i>actual</i> impact of a hazard or issue on a social group (or on a livelihood activity) over a set period of time in the past (usually ten years before the VRA is conducted)
<i>Social group</i>	A more or less homogeneous group of people within the landscape, such as 'fisherfolk', 'women agricultural labourers' or 'migrant workers'. For the sake of conducting an assessment of a usually medium-to-large landscape, the VRA will base its analysis on these groups rather than analysing individual or household vulnerabilities.
<i>Vulnerability</i>	Seen as multi-dimensional and understood to be strongly influenced by structural factors, governance systems and inequalities. However, vulnerability is also something that even (most) marginalized and poor individuals can act to reduce. While the VRA uses the original Intergovernmental Panel on Climate Change (IPCC) framing of vulnerability, which makes it a function of exposure, sensitivity and adaptive capacity, we analyse each of these three factors holistically – i.e. beyond a strictly biophysical context.

INTRODUCTION

The Vulnerability and Risk Assessment (VRA) methodology aims to develop a common understanding among a wide range of stakeholders about the main hazards and issues affecting people in a social-ecological landscape, and subsequently to jointly design measures to reduce risk, enhance well-being and promote resilient development in that landscape.

The methodology does so through a participatory process of identification and prioritization of existing and future vulnerabilities, risks, capacities and ambitions. The term ‘vulnerability’ in VRA comprises hazards, but also the capacities of people and the environment to respond, adapt and overcome these hazards. The VRA brings together actors across different levels – community, local, municipal, district and sometimes national – to understand the links between these governance levels. It seeks to influence stakeholders to proactively propose ways forward and ensure development initiatives are driven by inclusive, locally-relevant decision making that benefits poor and marginalized people. In doing so, the VRA aims to trigger a sense of empowerment and collaboration among stakeholders. This is a complex process where chaos can arise; the VRA methodology welcomes this and addresses it with an attitude of openness and exploration, while promoting participation from grassroots levels.

The VRA was developed by Oxfam to support practitioners to gain a better understanding of the context of landscapes and the communities and stakeholders that inhabit, depend on or use them. It also aims to actively and systematically include women in the joint development of an understanding of risks and ways forward – highlighting women’s capacities and the unfair structures that create inequality for women. Vulnerable people are rarely able to demand the critical support they require to manage the risks they face; this is central to the thinking behind the design of the VRA process, combined with the recognition that many risks need to be addressed across levels and by a range of actors.

Box 1: What makes the VRA different and interesting?

- joint analysis of vulnerability by a wide range of stakeholders and from different levels of governance
- addresses the social-ecological landscape; not limiting its focus and responses to community level
- seeks to integrate gender throughout the process and emphasizes the need to build analysis inclusively of women’s views
- builds and strengthens relationships between stakeholders, enabling local issues and the voices of marginalized groups to come to the surface;
- fosters empowerment through co-creation of proposals aimed at building resilience

Timing-wise there is no single preferable moment to conduct a VRA, as it can be used for different purposes, e.g. to help design a development programme or project; to highlight issues facing groups of women or marginalized ethnic groups; or to raise the awareness of governments or donors about specific needs in a landscape. It can be implemented iteratively at different moments in time to assess the evolution of vulnerability for different social groups.

The VRA process also helps to make people more comfortable talking about climate change by showing that climate change is not a technical issue that only researchers understand. Discussing, for example, drought and its real impacts on people’s everyday lives and the possible responses to it at different levels makes people aware that everyone can contribute meaningfully to action on climate change. Breaking this confidence barrier is essential if people are to participate in developing shared solutions to climatic and other change.

The VRA has been implemented by 12 Oxfam country teams, so this document is timely, both to provide guidance and share learning – on the methodology itself as well as on its potential as a tool to promote multi-stakeholder dialogue, challenge the status quo, contribute to cross-cutting themes such as gender equality, and ultimately to inspire and lead more effective and holistic programming and influencing.

This publication is intended to be a ‘one-stop guide’ to the VRA, providing practitioners and other stakeholders, including authorities involved in the planning and implementation of humanitarian and development programmes, with a better understanding of it.

The three aims of the document are as follows:

- to explain the foundational principles of the VRA methodology
- to be a step-by-step guide for implementing a VRA
- to reflect on the strengths of the VRA and share lessons learned from its implementation

The need for a practical guide to the methodology was highlighted during many of the consultations Oxfam had with its teams who had experience implementing the VRA. This document is therefore not only inspired by and embedded with practitioners’ direct experiences, but also speaks directly to their feedback to strengthen the support available for this tool.

‘The 195 countries gathered at the United Nations Framework Convention on Climate Change (UNFCCC) meeting in December 2015 adopted the Paris Agreement, emphasizing the need to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change. The Agreement recognizes that “adaptation is a global challenge faced by all with local, subnational, national, regional and international dimensions (Art 7.2)” and that there is a need for strengthening cooperation on moving on to action (Art. 7.7).

The VRA facilitates this type of necessary collaboration between different levels of governance and provides a space for marginalized groups to voice their concerns and work side by side with decision makers. The key principles of the VRA enable practitioners to appreciate the essence and motivating forces for conducting this type of participatory exercise. I think the VRA methodology will serve as a way to initiate many adaptation actions needed by organizations, practitioners and indeed communities. The fact that the authors have kept an opportunity for future learning and improvement will enable wider application and greater acceptability of this methodology.

I wish this initiative all success and look forward to seeing it as a tool to support disaster risk reduction and climate change adaptation efforts of the near future.’

– Dr. A. Atiq Rahman, Executive Director, Bangladesh Centre for Advanced Studies (BCAS)

For ease of use, this document is composed of three parts, which can be read together or separately:

- **Part 1: Principles**
- **Part 2: How-to guidance**
- **Part 3: Strengths and lessons learned from implementation**

We hope that you find this guide to the VRA useful and welcome any feedback you may have – both on the document and on the methodology itself.

PART 1: PRINCIPLES

WHAT IS THE VRA?

Global changes – including climate change, political instability, economic fluctuations, social change and environmental degradation – interact with local changes driven by local issues. The resulting complexities and uncertainties differentially affect individuals, households, communities and their livelihoods. Therefore, to properly understand people’s vulnerability and ability to overcome risks requires looking beyond the local level into higher levels of governance, where the roots of inequality will often lie and where power dynamics play a defining role in shaping the vulnerability of different social groups. This also opens up spaces for women and marginalized groups to participate in discussion, analysis and decision making, which is critical for equity as well as effectiveness. However, comprehensive, multi-hazard, cross-scalar and truly participatory contextual assessments of dynamic landscapes are often lacking or insufficient.

The VRA is like a backbone, a tree, and other [vulnerability assessments] branch off that.’

– Abdul Latif Walizada,
Poverty Reduction
Programme Manager,
Oxfam in Afghanistan

Reflecting on the voices of practitioners in several countries, we are in no doubt as to the need to make standard practice contextual analysis that looks at risks, vulnerabilities and opportunities. Such analysis will help design local- or landscape-level appropriate and effective programmes. In turn, these inform and are informed by programmes and policies at other governance levels, whether they are implemented as part of an emergency humanitarian response or a longer-term development initiative.

The VRA is a response to the usually insufficient breadth of community-based participatory rural appraisals (PRAs). These local-level assessments are highly valuable and provide excellent information; however, they are not designed to include in their analysis the ‘bigger picture’, not only of climate change impacts and trends, but also of socio-economic issues that can and do impact the community and landscape but which are not fully evident at the local level. PRA results are also very often reliant on perception.

The VRA methodology draws on the strengths of the PRA by including representatives of social groups in the group work (see below, the ‘Knowledge Group’), while addressing the PRA shortcomings by taking a landscape approach and incorporating inputs from a wider range of stakeholders. The added value of the VRA tool is precisely that it takes a holistic, landscape-wide understanding of vulnerability and links up relevant actors across various levels of governance – from women and men, to community, local, municipal and district, and sometimes even national levels – in order to first pinpoint and then jointly address the identified issues in an analytical, consensus-building way, which ultimately looks towards building longer-term resilience while addressing vulnerability.

While consensus building is something that the VRA methodology tries to foster, Oxfam recognizes that in order to contribute to efforts to reduce inequalities and poverty, any consensus reached needs to be underpinned by justice and inclusion. The unjust status quo which includes gender inequalities needs to be challenged in order to pave the way for longer-term resilient development. Therefore, paying attention to historic and evolving power dynamics is fully embedded in the design of the VRA, primarily through the convening of a Knowledge Group which also inspires and drives the analysis. As we shall see, the Knowledge Group is crucial, not only in shaping the results of the VRA through discussions and consensus building throughout the process, but in setting the tone for future collaboration and joint decision making based on values such as gender equality and environmental integrity.

The VRA methodology also aims to change the prevailing development narrative which perceives ‘beneficiaries’ as victims rather than people who are both affected by biophysical impacts and governance inequalities, and who are themselves capable of playing a critical role in reducing their vulnerabilities to hazards.

The VRA therefore addresses a general trend across vulnerability assessments (VAs) of ‘declining attention to broad structural and relational drivers of vulnerability and inequality, and an in-

adequate understanding of vulnerability dynamics which hampers forward-looking change processes' (Tschakert et al., 2013).

The VRA's analytical approach looks at structural and relational drivers within a social learning process that enables the participants to surface and discuss their 'divergent interests, norms, values and constructions of reality in an environment that's conducive to meaningful interaction'. This helps to shift perceptions and open up new possibilities and ways of thinking and working which is the 'real adaptive challenge' (O'Brien et al., 2012).

The methodology is composed of four steps and looks both to the past – to assess and understand the immediate and underlying causes of vulnerabilities and risks – and to the future – to assess and understand the local conditions and the big picture trends that affect the landscape.

Table 1: Key principles of the VRA

1	No pre-determined agenda or preconceived thematic focus overrules assessment findings (validation, on the other hand, is a legitimate aim of any VA). VRAs should be the core driver of decision making.
2	VRAs must be truly participatory multi-stakeholder processes . The VRA achieves this by convening a 'Knowledge Group' to drive the analysis. The Knowledge Group should include representatives from the communities in question, as well as representatives from external stakeholders, such as local and municipal authorities and planners; agronomists; meteorologists; emergency service personnel; sociologists; researchers; development practitioners; private sector actors, etc., depending on the context. The Knowledge Group should be gender balanced and have a strong representation of different communities and of marginalized groups. Furthermore, Knowledge Group members should be open to new knowledge introduced by each other, critique (and be critiqued on) this knowledge, learn from it and use it to jointly shape the VRA process and its findings.
3	Local information and assessment form the pillars of local-level VRAs (PRA methodologies), but are insufficient to draw a full picture of vulnerability and, therefore, to address its root causes. The VRA analysis incorporates further input of stakeholders above the local level (beyond that of existing secondary literature), and complements the local-level PRA analyses .
4	Moving far beyond a 'narrow', quantitative analysis of impacts that affect a community, the VRA gives a (participatory) multi-hazards understanding of risk that assesses qualitatively, as well as quantitatively, the context and inequalities of the system (governance issues as well as natural hazards, environmental integrity, socio-economic characteristics), and uses this wide-ranging understanding to determine a qualitative level of vulnerability and subsequent risk reduction measures for different social groups and livelihood activities.
5	Vulnerability is largely determined by structural inequalities and governance shortcomings ; it is not just inherent to a woman, a household or a community. This is acknowledged and reflected in the VRA process and discussions.
6	A VA should propose how to identify and suggest pathways to transformational change . The VRA does this by building risk reduction/adaptation measures based on the five principles of adaptive capacity identified by the African Climate Change Resilience Alliance (ACCRA).
7	Unequal structures often make women, in aggregate, more vulnerable than men. This is not a result of women's inferior capacity to respond and adapt, but a consequence of women having fewer opportunities, e.g. access to education, resources, or entitlement in general. A VRA must ensure the free and equal participation of women in the process and address expected shortcomings in advance (for example, by prior coaching for women participants on public speaking, or holding meetings in advance with Knowledge Group members who may oppose women's open participation to emphasize the gender equality approach of the process). The opportunity for men and women to meet each other and discuss gender roles and relations can foster reflection leading to change; men can be encouraged to think about women's positive contribution (potential and current) to development and resilience.
8	The findings of a VRA and the proposed measures/pathways resulting from it should feed into existing development plans and be owned by community members and decision makers (local, municipal, district authorities, private sector partners, etc.).
9	VRAs should, as much as possible, look into the future (through scenarios) to try to reduce uncertainty of future planning and enhance the effectiveness of the measures implemented, as well as remain flexible in the pathways chosen.
10	Considering the increasing complexity of landscapes and the people inhabiting them, a VRA should be repeated roughly annually or biannually, or when important changes take place. This will ensure the findings reflect the latest dynamics.

WHY CONDUCT A VRA?

In summary, a VRA can be undertaken to support these different purposes:

- develop a shared understanding among participants of the links between local, regional, national and global drivers of vulnerability and risk in a given landscape
- build understanding of the root causes and drivers of vulnerability for different people and social groups
- inspire different stakeholders to discuss and explore climate change impacts and vulnerability
- support the joint identification and prioritization of hazards, issues, social groups and livelihood activities
- enable participants to discuss future aspirations and visions of a more resilient future, including pathways to transformational change
- integrate different types of knowledge including local and traditional knowledge, scientific knowledge and knowledge from policy and practice
- identify and explore how gender norms shape and constrain people's responses to hazards and issues – and address these with the aim of strengthening women's rights
- promote inclusive decision making, and raise 'red flags' concerning specific groups at risk of being marginalized or made more vulnerable
- enhance collaboration across sectors and levels of governance
- strengthen local level or other existing technical vulnerability assessments
- support the joint identification of potential responses to reduce vulnerability and promote buy-in for sound adaptation planning
- promote innovation and new ways of working and thinking among participants
- strengthen the accountability of decision makers to communities
- support long-term, flexible decision making and planning

In particular, the VRA explicitly makes women and women's organizations protagonists of the process by recognizing and highlighting the diversity of socially differentiated groups of women, promoting women's active participation in the debate, as well as by providing opportunities for women to be facilitators, co-facilitators and *rappoteurs* in the process. Likewise, it promotes the design and implementation of risk reduction measures that benefit groups of women and contribute to gender justice.

'The VRA is an empowerment tool – as a learning approach for communities to analyse risk, identify adaptation and risk reduction measures and take positive action to adapt accordingly. It opens us up to genuine community-led action based upon individual agency and informed choice. It is definitely not a one-size-fits-all approach and I really like this about it. I also like the way that it integrates "modern/scientific" knowledge with "traditional/community-based" knowledge – this has been a gap in much climate change adaptation work.'

– Paul Joicey, Country Director, Oxfam in Myanmar

PART 2: HOW-TO GUIDANCE

This section is intended to guide practitioners through the process of preparing for and carrying out a VRA.

The VRA has a preparation phase **followed** by four steps.

Preparation is essential and takes time. It is during this phase that logistical arrangements for the VRA exercise are worked out and the Knowledge Group is formed.

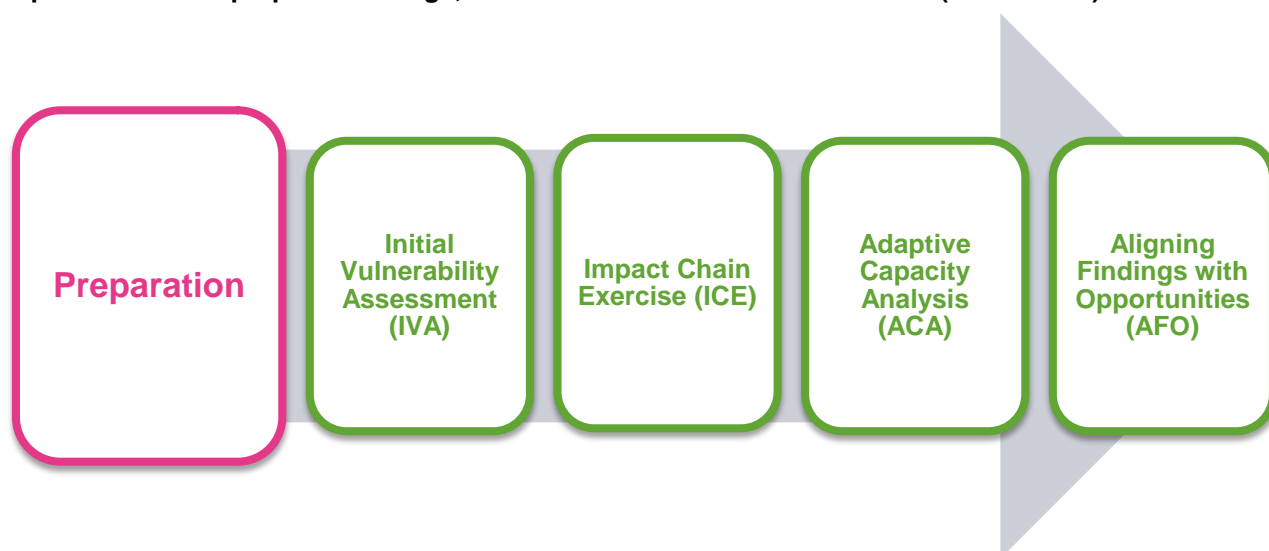
After the preparation phase, the four steps of the VRA are conducted back-to-back with the Knowledge Group, normally over two days. These steps are summarized below:

1. **The initial vulnerability assessment (IVA)** allows the Knowledge Group to analyse the exposure and sensitivity of a social group or a livelihood activity with respect to relevant hazards and issues. This step helps develop a common understanding of the hazards that have posed and are likely to pose the highest risk to groups of community members in a landscape and their livelihoods.
2. **The impact chain exercise (ICE)** allows the Knowledge Group to assess the impacts of hazards and issues and their implications over time, by mapping their impacts throughout the system (i.e. the landscape and beyond). This step also generates initial ideas about measures that can be taken to reduce the vulnerability of social groups and promote their resilience. These measures are then analysed and prioritized in step 3.
3. **The adaptive capacity analysis (ACA)** allows the Knowledge Group to explore further the measures to reduce vulnerability identified in the ICE and to test their potential contribution to risk reduction and resilience over the longer term, by applying an adaptive capacity lens. The analysis looks forward and considers the extent of the impacts in the next ten years or longer. Tools can be used to support the Knowledge Group's thinking; e.g. climate models, socio-economic scenarios and the ACCRA resilience game.¹
4. **The aligning findings with opportunities (AFO)** stage allows the Knowledge Group (or members of the Knowledge Group in collaboration with local leaders) to consider which of the measures identified could be inserted into existing or new development plans of the community, municipality, district or other level of the landscape. The selection is based on equity, impact, cost and urgency of the measure, as well as stakeholders' priorities and availability of funding.

'The VRA focuses the decision making process and involves a wider range of people in it, making the process more representative and grassroots.'

– Alexey Petrosyan, Economic Justice Programme Officer, Oxfam in Armenia

Figure 1: The Vulnerability and Risk Assessment process. The figure emphasizes the importance of the preparation stage, which should take at least six weeks (see Table 2).



HOW LONG DOES EACH STEP TAKE?

It is important to carefully consider how long it will take to complete both the preparation and implementation steps of the VRA. Each VRA process is different due to context-specific factors such as culture, language, specific aims of the exercise, indicated availability of stakeholders, number and type of stakeholders present, and expected level of formality. The table below provides general guidance on the timings required for each step. It should be adapted by the Planning and Facilitation Team (see below) when planning a specific VRA.

Table 2: Step-by-step timings

	Step	Time allocation	Main outcomes and outputs
	<i>Preparation</i>	At least six weeks	All logistical arrangements made; Knowledge Group formed; first draft of lists of 'social groups and livelihood activities' and 'hazards and issues' completed
Day 1	<i>1: Initial vulnerability assessment – IVA</i>		
	<i>Introduction of exercise and of stakeholders; agree common expectations</i>	¼ day	Clarity on objectives and format; start building trust
	<i>IVA (including final selection of hazards and social groups lists)</i>	¾ day for IVA	Vulnerability matrix completed
Day 2	<i>2: Impact chain exercise – ICE</i>	¼ day	Impact chains mapped and headlines of adaptation measures
	<i>3: Adaptive capacity analysis – ACA</i>	¼ day	Adaptation measures strengthened
	<i>4: Aligning findings with opportunities – AFO</i>	¼ day	Findings discussed in relation to existing and new development plans (climate change adaptation, disaster risk reduction, resilience)
	<i>Concluding, summarizing and reflecting on the exercise</i>	¼ day	Build ownership of common findings; discuss next steps
	<i>Total</i>	ca. 6 weeks (prep.) + 2 packed days (running the exercise)	

PREPARATION

Comprehensive preparation for carrying out a VRA is essential. At least **six weeks'** preparation time is advised.

There are two key groups of players in the VRA: the Planning and Facilitation Team and the Knowledge Group.

The Planning and Facilitation Team

The Planning and Facilitation Team is tasked with identifying and convening the Knowledge Group; overseeing logistical arrangements; preparing pre-workshop reading material for the Knowledge Group (e.g. a summary of the exercise); being a point of contact for the Knowledge Group ahead of the exercise; facilitating the two-day VRA exercise; producing, distributing and collecting feedback on the report of findings; following up with community, local, municipal and district-level groups to identify opportunities to include VRA findings into existing or new plans of action; and maintaining communication with the Knowledge Group with respect to future opportunities for engagement and collaboration.

To run the VRA, the Planning and Facilitation Team will require:

- two experienced facilitators
- two note-takers (fluent in the language selected for the exercise and knowledgeable about the context and issues being discussed);
- one person fully dedicated to logistics (venue, travel, accommodation and catering for the whole group)
- optionally, development practitioners and/or researchers whose work is expected to be informed by the VRA findings (often, the two facilitators would also fit in this group)

The facilitators

Strong facilitation skills and familiarity with the VRA methodology are essential for facilitators, not only to successfully navigate through the somewhat elaborate steps of the methodology with a diverse group, but also to ensure that potentially marginalized voices within the Knowledge Group are heard and the expected transformation of power dynamics – not least with respect to gender relations – can begin to catalyse, little by little. Relationships of trust will support the ongoing implementation of the decisions made during the VRA and can contribute to longer-term transformational change, such as the valuing of marginalized voices by decision makers and appreciation by marginalized groups of how power is distributed across different government levels and agencies.

Furthermore, the facilitators need to understand the importance and context of gender dynamics, relations and inequalities in the landscape because these play an important role in shaping vulnerability. Therefore, having an open discussion that acknowledges and explores gender issues will ensure that social groups and risks are accurate and that the identified responses are appropriate. Facilitators should be able to recognize when 'existing coping mechanisms further entrench gender inequalities and disempower women, and pay particular attention not to unintentionally celebrate and reinforce sexual stereotypes that may exacerbate women's disproportionate responsibility for coping with the effects of stresses and shocks' (Morchain et al., 2015).

Ideally, facilitators will have prior experience of working with the community in question, or else can identify opportunities to start gaining their trust and respect ahead of the exercise. Prior experience of working with the community – in addition to a review of existing secondary

literature – will also help to ensure that indigenous knowledge and existing coping strategies are identified and incorporated into the analysis.

Preferably both and at least one of the facilitators should be a woman, so that potential barriers of communication within the Knowledge Group are reduced as much as possible.

A final word of advice: set and uphold 'clear ground rules and emphasize that all participants are equal' (Janice Ian Manlutac, Regional Change Lead – Building Resilience, Oxfam in Asia).

The Knowledge Group



Knowledge Group members discuss which key 'hazards and issues' and 'social groups and livelihood activities' will be prioritized in the exercise, grabbing the interest of members from the nearby community in the Upper East region of Ghana, who have gathered round. Photo: Oxfam in Ghana

The Knowledge Group is the backbone of the VRA, of its findings and its analysis. The Knowledge Group consists of roughly 12–20 people with a stake in the social-ecological landscape in question. As described below, it should have a strong representation of communities and of marginalized groups. The Knowledge Group will spend two full days together and run through the four steps of the VRA in a roundtable discussion approach; as such, the findings of the VRA are largely the result of this group's thinking.

Box 3: Knowledge Group composition

The composition of the Knowledge Group will vary depending on the context, but, as an illustration, the Knowledge Group of a VRA exercise run in the Irrawaddy delta in Myanmar in 2013 consisted of representatives from:

- Department of Agriculture (district)
- Department of Fisheries (district)
- Department of Forestry (district)
- Department of General Administration (district)
- Department of Relief and Resettlement (district)
- meteorological office (district)
- fisheries school
- fisherfolk Association
- village representatives
- official authorities
- informal/customary authorities
- women's group
- youth group
- fishermen
- farmers
- local NGOs
- international NGOs

A Knowledge Group that comprehensively reflects the full range and diversity of stakeholders in the landscape in question will contribute to a more representative analysis and will, additionally, increase the buy-in of the results by third parties (e.g. potential donors and national government actors). The Knowledge Group should therefore be composed of stakeholders acting at the community, local, municipal/district and landscape levels – sometimes also at the national level. It should include formal as well as informal representatives from the communities in the landscape in question, such as community leaders, representatives of women's groups, ethnic minorities and relevant livelihood activities, as appropriate.

In order to fully support and enhance women's capacity as agents for change within their communities and the wider landscape, VRAs look beyond identifying women as a potentially vulnerable group; rather, they aim to understand what makes women vulnerable, in what areas they are particularly able to overcome challenges and reduce risks, and to proactively support women's capacity to address vulnerability at the individual, household, community and landscape levels. More than a technical exercise, VRAs should be viewed as an opportunity to challenge cultural stereotypes that reinforce women's marginalization and vulnerability to shocks and stresses (Ravon, 2014). This approach applies to **all potentially marginalized stakeholders** and it is therefore vital that practitioners implementing the VRA take the necessary steps to ensure that the more vulnerable participants in the Knowledge Group (or those representing these groups) are 1) actively involved in the discussions; 2) feel valued and have their input considered; and 3) are not negatively impacted by the process, such as through retaliation for speaking out or by feeling further disempowered if gender inequalities and power imbalances are reinforced in the Knowledge Group discussions.



The Knowledge Group splits up to work on separate Impact Chains, which will later be critiqued and validated by the other Knowledge Group members. Marihatag, in Mindanao, the Philippines. Photo: Oxfam in the Philippines

Box 4: Voices of vulnerable groups

Are the voices of the following social groups represented in your Knowledge Group, either directly or indirectly (through a Knowledge Group member who speaks on their behalf)?

- women of different backgrounds
- economically marginalized groups
- politically marginalized groups
- people with disabilities
- people with chronic illnesses (including HIV/AIDS)
- adolescents
- Children and elderly people
- indigenous groups and other ethnic minorities
- survivors of disasters
- In addition, are the following stakeholders in your Knowledge Group?
- authorities of different levels of governance (local, municipal, district)
- government agencies (e.g. meteorological agency, disaster risk management, social affairs)
- relevant private sector players in the landscape
- research and academic organizations
- local and international NGOs
- civil society organizations (likely representing a number of the groups described in the previous list)

The Knowledge Group should also include representatives from external stakeholders, such as local and municipal authorities and planners, agronomists, meteorologists, emergency service

personnel, sociologists, researchers, development practitioners, private sector actors, etc., depending on the context. The input these external actors provide is as crucial as that of social group representatives, so their careful selection is key to a robust outcome of the assessment.

Beyond the fundamental contribution of the Knowledge Group to the VRA results, a carefully selected group will also serve to initiate or strengthen stakeholder relationships across sectors and levels of governance, as well as to generate ownership of findings and create accountability of stakeholders with respect to communities and marginalized groups.

PREPARING YOUR VRA



Preparatory meeting for a VRA exercise in Korgayee Balah, Badakhshan province, Afghanistan. Depending on the context and circumstances of the country or landscape where the analysis is conducted, special arrangements may have to be made to ensure that women engage in the VRA process, such as by running separate male and female discussion groups. Photo: Hamid Big / Oxfam in Afghanistan

The following activities should be undertaken by the Planning and Facilitation Team in preparation for the two-day VRA exercise.

Read available secondary literature and data.

- Review existing assessments of the landscape such as participatory rural appraisal reports and other 'grey' literature and data, if there are any.
- Gather, as much as possible, an up-to-date contextual understanding of the landscape from the perspective of community members, women, ethnic minorities and other groups considered to be vulnerable or potentially vulnerable.
- Conduct interviews with actors who play an important role in shaping the dynamics of the landscape (e.g. private companies, government, development actors).

Conduct a stakeholder mapping and analysis exercise.

- Gain a landscape-level understanding of key stakeholders (including communities): their objectives, how they interact or don't interact, how influential they are with respect to the issues you are working on, and so on. This is strongly recommended before starting the VRA as it will help imbue the VRA exercise with an in-depth knowledge of who are the enablers, the blockers, and all of those in between, as well as their agendas and possible leverage points.

- Remember to include women’s organizations, women’s groups or leaders within mixed organizations in your stakeholder mapping. Build a picture of existing gender roles and power dynamics – in the households, community and country – and how these act as barriers to women’s ability to act. Ask women how they would like to participate in the VRA and ask for their ideas on how to gather information from/about all members of the community, including children for example. Further, given that ‘inequality stems from the intersection of different social identities (i.e. gender, status, ethnicity, class, age) it is important to investigate their interaction in order to gain a comprehensive understanding of the underlying causes of women’s vulnerability’ (Morchain et al., 2015).
- Through this process, demarcate geographically what will be understood as the ‘landscape’ – this will later have to be validated by the Knowledge Group. A social-ecological landscape is rarely limited by political boundaries; rather it is normally a combination of ecological and political boundaries. A landscape that is big enough for relevance yet small enough for manageability will help frame the discussion and keep it in context.
- Note: a stakeholder mapping and analysis exercise² was conducted in Namibia in July 2015 as a prior step to carrying out a VRA. For more information on the methodology used, please click [here](#)³.

Draw up a list of ‘ideal’ Knowledge Group members.

- Conducting a stakeholder mapping and analysis (see point 2) will aid you in drawing up a list of ‘ideal’ stakeholders to participate in the VRA exercise.
- Be sure to include participants from groups that you have identified as marginalized.
- Include elderly members of social groups in the Knowledge Group. As Abdul Latif Walizada, Poverty Reduction Programme Manager of Oxfam in Afghanistan explains:

‘These men and women are the most important resource and knowledge [with] the history of the natural resources inventory and trend of the changes and given life examples in the area. [This] information is less documented and [more] difficult to find.’

Discuss plans to conduct a VRA with the ‘ideal’ Knowledge Group.

- The initial communication with stakeholders needs to be engaging. An email won’t do! A letter won’t do! The Knowledge Group members will be committing two full days of their time to this exercise, plus more for preparing, travelling and following up. They will be sitting on a roundtable with other stakeholders that they don’t always talk to, and possibly some of whom they are not very comfortable with. They need to understand the basics of the VRA and be convinced of its purpose and usefulness – of the benefit of the results for the landscape as well as for their own agenda. Getting to this point will require engaged conversations either in person or by phone, with email/letter follow up.
- A visit to some of the communities included in the ‘catchment’ area of the VRA (i.e. the landscape) is necessary in order to get an up-to-date sense of the context, to discuss specifics of the process and identify social group representatives to be included in the Knowledge Group.
- Recognize and promote leadership roles of women in the ‘ongoing monitoring of community vulnerability, e.g. in early warning committees or by drawing up communication trees to demonstrate how women connect different social groups within the community. Enabling women to take on these roles and speak up about their contribution early in the process will help ensure that hazards affecting women are addressed and that proposals for reducing vulnerability and building resilience include activities where women take an active role’ (Morchain et al., 2015).
- Being flexible and selective about when and where to carry out initial conversations with potential Knowledge Group members is likely to increase the numbers of women participating and also the number that feel comfortable expressing their views and participating actively.

Select the 'best possible' Knowledge Group.

- Based on discussions with the 'ideal' Knowledge Group members, decide among the Planning and Facilitation Team who are the 'best possible' Knowledge Group members who you would like to be part of the VRA exercise (i.e. it is possible that some of the 'ideal' members will decide not to participate, or that the Planning and Facilitation Team will decide not to include a given stakeholder after initial discussions with them).
- Ensure that Knowledge Group members have a general understanding of the VRA process, the community and landscape, and that they agree to be active participants in the exercise and are fully aware of the intended outcomes. If government officials and other stakeholders are not familiar with the community and landscape in question then a pre-visit may be useful to improve their understanding. This may also be a good opportunity to emphasize the need to pay attention to the voices and concerns of particularly vulnerable groups within the community.
- Confirm the availability of the Knowledge Group members for the duration of the exercise (including the specific dates, travel time and logistics arrangements).
- Maintain communication with the Knowledge Group members near the date of the exercise to confirm their availability and travel/accommodation arrangements.

Find an appropriate venue for running the VRA.

- As the VRA exercise takes two days and requires an overnight stay, it is advisable to find a venue in a town that can provide accommodation and basic services and that is reasonably accessible to all Knowledge Group members. Ensure that Knowledge Group members, and especially women and those groups with less voice, are able to dedicate two days to the exercise. If they can't, consider how feasible it may be for other Knowledge Group members to conduct the exercise on separate days (e.g. Day 1 one week and Day 2 the next) to ensure full Knowledge Group participation.
- The venue should feel to everyone more or less like 'neutral' ground so that it does not predispose the conversation, e.g. by being an overly official or politically loaded venue. An ideal venue could be a university campus, the offices of a (non-militant) civil society organization or an NGO, or, depending on specific circumstances, even a local government office (e.g. their environmental or planning office).
- Remember to take into account the particular needs of all Knowledge Group members (e.g. people with disabilities, pregnant women, elderly participants, etc.) when deciding on a venue.
- The venue should provide basic comfort (avoid luxurious venues even if you have the budget), as well as a table and chairs that enable roundtable type discussion.
- It is the responsibility of the Planning and Facilitation Team to organize accommodation and meals for the Knowledge Group for the duration of the exercise, as well as provide support for travel arrangements. This should be considered in the budget preparation for the VRA.

Consider which language(s) to use for running the VRA.

- Ideally there is one language confidently spoken by all Knowledge Group members and by all, or most of, the Planning and Facilitation Team. In this case, the language selection is obvious. The main facilitator(s) of the Planning and Facilitation Team need to speak the selected language fluently.
- If one or some of the Knowledge Group members don't speak the more common language, then translation should be provided.
- Consider the language(s) spoken by the most vulnerable participants – what are they comfortable with? If the local language is preferred, it would be good to have a facilitator who can speak it.

Consider the different needs of your Knowledge Group members.

- Think carefully about how to meet the needs of the different members of your Knowledge Group so that they can actively participate in the VRA process. In particular, be aware of limitations and time constraints of women representatives and the risk of overburdening women with additional tasks. Be mindful that 'care-giving responsibilities and livelihood activities often make it difficult for women to actively participate in VAs. Ensure to arrange a convenient time and place for the VRA activities in order to avoid that additional pressure is added in women's busy daily schedule' (Morchain et al., 2015).



As necessary, consider holding separate conversations with women and/or with ethnic or other minority groups to consolidate arguments ahead of the Knowledge Group analysis. Photo: Oxfam in Ghana

- You will also need to decide on appropriate participatory techniques to ensure active participation of all members of the Knowledge Group. As Janice Ian Manlutac, Oxfam Asia's Regional Change Lead – Building Resilience explains,⁴ a representative of an indigenous community, for example, may be more comfortable and confident with oral tradition than written manuscript, whereas a child may find it easier to participate if visual aids are used. As long as the input collected is inclusive, the facilitator should feel free to use a range of facilitation techniques.

Build the capacity of women and representatives of other potentially marginalized groups to take on specific roles and responsibilities in the process.

- Identify and address gaps in access to information and knowledge of women and any other representatives of potentially marginalized groups in any matters related to their vulnerability, including their capacity to bring about change (for example, support women's learning around their existing coping strategies in order to enhance their resilience).
- Conduct orientation for all Knowledge Group members, but particularly social group representatives, on what the VRA is, why VRAs are useful, who the expected participants are and what their roles are, etc., and encourage representatives of the most vulnerable groups to hold their own meetings to gather opinions.
- Ensuring that women and others not only access information but also contribute to the discussions is paramount. As appropriate, 'provide training to encourage and inspire women to take on specific roles in the VRA process within or outside the Knowledge Group – as facilitators, note-takers and leaders of group discussions for example – so that they experience playing influential roles in the process, rather than simply being offered the

opportunity to comment' (Morchain et al., 2015). Janice Ian Manlutac suggests that a good way to introduce this may be a 'dry run' of some of the steps of the VRA, which will also allow them to think through the issues they would like to raise in the real exercise.

Identify key 'hazards and issues' and 'social groups and livelihood activities'.

- Based on the Planning and Facilitation Team's knowledge, the results of the stakeholder mapping and analysis, and the initial discussion with the Knowledge Group members, the Planning and Facilitation Team needs to prepare, ahead of the VRA exercise, a list of key 'hazards and issues' and 'social groups and livelihood activities', together with a justification for each of the points identified.
- This is an important activity because it will form the basis for what is analysed (and what isn't) during the VRA. Therefore, at least half a day should be allocated to this activity by the Planning and Facilitation Team, in collaboration with others. The lists will then be reviewed, modified and agreed by the Knowledge Group during the first day of the VRA (see step 1 below).
- The lists should reflect the realities of the landscape and therefore include hazards/issues that are sufficiently prevalent in the area, as well as groups/activities that are either widely impacted by these or are important for the community's well-being. By justifying each hazard/issue and social group/livelihood, the team is pushed to consider whether or not one issue is relevant enough (compared to others) to be included and whether two or more issues can be merged because they are sufficiently similar (see the Myanmar example in Figures 3 and 4). Each list should have about eight to ten items; any more will make the analysis overrun the time allocated for the exercise, while a list that is too short runs the risk of being insufficient for a holistic analysis of the local context.



Facilitators and members of the Knowledge Group in Marihatag, Mindanao, the Philippines, fill out the vulnerability matrix with the agreed 'hazards and issues' and 'social groups and livelihood activities'. The Knowledge Group will, immediately afterwards, analyse the exposure and sensitivity of each hazard or issue with respect to each social group or livelihood activity. Photo: Oxfam in the Philippines

Table 3: Key hazards and issues, social groups, livelihood activities

What to include in your ‘hazards and issues’ list	What to include in your ‘social groups and livelihood activities’ list
<ul style="list-style-type: none"> • structural conditions that create inequalities (e.g. corruption, conflict/ war, sanitation crisis) • gender- and ethnic minority- related inequalities and injustices • weather/climate change and geological impacts • dysfunctional or non-existent physical systems • inappropriate access to resources, including health services, education, land and natural resources, and markets • impacts stemming from a degraded natural environment; natural resource management and governance issues • industrial or economic activity having an economic and/or environmental impact on the landscape and the people who inhabit it 	<ul style="list-style-type: none"> • differentiated social groups – shaped by gender, age, race, ethnicity, social status, livelihood, trade – that are marginalized, lack power or agency, or are otherwise relevant for the community’s development • livelihood activities relevant for social groups in the landscape • other actors which positively or negatively impact the landscape (e.g. through employment generation and/or depleting the natural resource base). These would often be ‘powerful’ actors.

RUNNING YOUR VRA

The section after this one describes each of the four steps of the VRA in detail. But first, here are a few suggestions for running these four steps in the two-day workshop.

These points relate to the process:

- Start with a general, but not overly detailed, description of the VRA methodology, emphasizing what will be achieved with each step and at the end of the two days.
- Inquire about the expectations of all Knowledge Group members and try to bring them into the agenda.
- Allow some time for Knowledge Group members to get to know each other: building trust is a pillar of the process. Consider starting the morning with a ‘facilitated’ tea/coffee break where people meet in pairs, etc. Try to create an informal environment and discuss openly what the findings will be used for, showing the benefits of having an honest, open conversation. If appropriate and feasible, consider hosting a dinner at the end of Day 1.
- At the end of Day 2, inquire about Knowledge Group members’ experience – how useful the exercise was, how the findings will be used in their organizations, how the experience was of meeting such a diverse set of stakeholders, whether it was easy or difficult etc. – and agree on next steps. These would normally include a date for feeding back and discussing the findings with the Knowledge Group, as well as planning bilateral or multilateral meetings between Knowledge Group members (resulting from discussions during the workshop) and possibly other stakeholders not represented in the Knowledge Group. It is also important to start thinking about ways to keep the Knowledge Group connected in the mid and long term.
- Appoint a person and organization as the main contact point for post-VRA workshop communications and linking up between Knowledge Group members. This would ideally be the convener of the VRA (e.g. a local or international NGO, or a research body), and it should ideally not be a stakeholder in a position of high formal power (e.g. the mining company or the district government).

These points relate to aspects of gender justice and inclusivity during the VRA workshop:

- It is the role of the facilitator to ‘create an enabling environment for all participants to become comfortable with the process, and be able to speak up’ suggests Ana Caspe of Oxfam in the Philippines.

- The Oxfam team in Bangladesh emphasizes that, for the sake of inclusivity, at the beginning of the meeting the facilitator needs to repeat strongly the need for all voices to be heard.
- Throughout the process the facilitator needs to maintain a non-threatening environment for women and other potentially marginalized Knowledge Group members to express their views. This may mean using tea/coffee breaks to discuss and reiterate the principles of the exercise to Knowledge Group members who may be taking unfair advantage of the group or making inappropriate remarks about other members and who they represent.
- Furthermore, the more powerful/vocal members might show a tendency to dominate the discussion. The facilitator needs to have the confidence and assertiveness to deal with this and ask questions to ensure all voices are heard. After hearing from the more vocal participants, the facilitator needs to ask questions to give other participants a chance to speak up and share experiences, recommends Abdul Latif Walizada of Oxfam in Afghanistan.
- If more vocal members talk about something that would be difficult for everyone to understand, then team members from Oxfam in Bangladesh suggest the facilitator might paraphrase the comments in simpler language to ensure everyone understands and can contribute to the process. Furthermore, the facilitator should encourage participants, especially those not used to having discussions with local communities, not to use jargon and to spell out acronyms.
- Don't rush. Give people time to think, gather their thoughts and have the confidence to share them.
- The facilitator might like to have a separate debrief with representatives from the social groups at the end of each session to check on any negative/positive impacts of the VRA process. She/he can then take corrective actions to ensure their voices are heard.
- Encourage social group representatives from the Knowledge Group to share findings of the VRA with the rest of their community (and vulnerable groups) and to discuss the extent to which their opinions and concerns were incorporated in the process.

Step 1: Initial Vulnerability Assessment (IVA)

During the first day of the VRA exercise, following introductions to the methodology and to each other, the Knowledge Group review, modify and agree on the list of key 'hazards and issues' and 'social groups and livelihood activities' proposed by the Planning and Facilitation Team.

The facilitator may need to prompt the Knowledge Group to include intra-household dynamics in their considerations of 'hazards and issues'. Gender-blind VAs tend to ignore many intra-household dynamics that put women at risk (e.g. violence against women, lack of contraceptives, implications of polygamy, unequal division of unpaid care, etc.) and as a result, these issues do not get factored into resilience-building and risk reduction projects.

After discussing the content of the lists in 'plenary', the facilitator may want to propose a vote to choose the roughly ten 'hazards and issues' and the roughly ten 'social groups and livelihood activities' to be analysed. One way to do this is to give each Knowledge Group member five or six votes for each of the two lists, and then choose the twenty categories most voted. A word of caution: if an issue or social group identified as particularly relevant during the discussion (especially by 'vulnerable' groups) doesn't get prioritized in the voting, the facilitator should bring it up again and may decide to include it on the basis of its importance to address key developmental issues in the exercise.

Step 1 is by far the longest of the 4 steps because it includes two key and lengthy processes: agreeing on the lists of 'hazards and issues' and of 'social groups and livelihood activities' and analysing the exposure and sensitivity of each one with respect to the other. The Planning and Facilitation Team should aim to complete it by the end of Day 1. Ideally the vulnerability matrix is completed in plenary, but if, say, two hours into the process the facilitator feels that the matrix

will not be completed at the end of Day 1, then an alternative solution at that stage is to split the Knowledge Group into mixed, representative groups that analyse a *selection* of 'hazards and issues' with respect to *all* 'social groups and livelihoods activities' or vice versa. If the matrix is completed this way, then plenary discussion on the fully completed vulnerability matrix will be necessary, so that Knowledge Group members understand and validate or challenge values they may not agree with.



Knowledge Group members discussing their Initial Vulnerability Assessment matrix during a VRA exercise in Kusolnigor village, Bangladesh. Photo: Oxfam in Bangladesh

The Knowledge Group debates, justifies and makes the final selection of 'hazards and issues' and 'social groups and livelihood activities'. Below are examples from exercises conducted in the Irrawaddy delta, Myanmar, in 2013 and in the Bobirwa Sub-District in Botswana in 2015.

Table 4: Hazards and issues – Irrawaddy delta, Myanmar, 2013

Hazards and issues	Justification
<i>Cyclones and storms</i>	Cyclones have caused significant devastation in the area (e.g. Nargis in 2008); storms are frequent and possibly intensifying
<i>Drinking water scarcity</i>	Changing rainfall patterns and insufficient water storage facilities in some villages of the 'VRA catchment'
<i>Limited access to information (including market information)</i>	Community members' income depends directly on the price for fish and rice from the middlemen
<i>Limited access to health services</i>	Water- and vector-borne diseases (e.g. diarrhoea, dengue fever); snake bites are common and can lead to complications or death if untreated
<i>Fish resource depletion</i>	Directly affects fisherfolk livelihoods; also affects farmers indirectly (fish breeding in rice fields because reduced spawning grounds in mangrove)
<i>Changing rainfall patterns</i>	Directly affects rice farmers and wage labourers through variable crop yields; also affects fisherfolk (change in conditions of spawning grounds)
<i>Increasing temperature</i>	Affects health of the elderly, livestock breeding, fish populations, and (in future) might affect rice yield
<i>Sea-level rise, river erosion/ sedimentation, tsunamis, deforestation, saline intrusion in soil</i>	Can damage rice crops, people's homes and assets, quality of water, infrastructure
<i>Poor transportation channels (roads, fluvial transport services)</i>	Crucial for access to health services, education, goods and information

Table 5: Hazards and issues – Bobirwa Sub-district, Botswana, November 2015*

Hazard or issue	Justification
<i>Drought, lower rainfall, high temperatures and ponds drying up**</i>	A common occurrence in Bobonong and a key issue affecting people's livelihoods and well-being.
<i>Limited access and uptake of meteorological data</i>	Relevant, timely and context-specific information and advice from the meteorological service agency does not reach the farmers and communities in general.
<i>Limited knowledge about climate change</i>	There is a general lack of awareness about climate change and the risks it poses to the communities and their well-being.
<i>Foot-and-mouth disease (FMD) outbreaks</i>	Most residents of Bobonong keep cattle. FMD outbreaks affect many farmers in the area. This is possibly partly caused by the migration of Buffalos from neighbouring countries into Botswana.
<i>Limited uptake of new agriculture practices and farming technologies</i>	There is very low uptake of new technologies and new approaches of farming by the small-scale farmers. New technologies of farming are introduced by central government and there seems to be no ownership by the local farmers.
<i>Poorly resourced agricultural extension services</i>	The agricultural extension officers have inadequate support – they lack transport, phones and internet. They are also extremely understaffed.
<i>Political interference with sound and evidence-based planning</i>	At times, politicians change plans such as planting approaches and land allocation.
<i>Difficult access to markets and lack of alternatives to agricultural based livelihoods</i>	Insufficient access to institutions that facilitate and promote trade for small scale producers is prevalent in the Sub-District. At the same time, climatic impacts put additional stress on the majority of the population, who cannot find alternative employment options to farming, e.g. in services or industry

* Five hazards i.e. Floods, Unequal and unfair access to water at sub-district level, Sand mining, Livestock theft and Cultural and religious beliefs stopping new practices were taken out of the list after voting

** High temperature and drought were combined under one category

Table 6: Social groups and livelihood activities, – Irrawaddy delta, Myanmar, 2013

Social groups and livelihood activities	Justification
<i>Fisherfolk</i>	Highest proportion of population engages in fishing
<i>Men wage labourers and traders</i>	Considerable proportion of population engages in waged labour, especially in farming. There are also some small enterprises in communities.
<i>Women wage labourers and traders</i>	Same as above. The Knowledge Group deemed it appropriate to separately analyse the vulnerability of men and women.
<i>Unmarried/widowed women who engage in subsistence farming</i>	The combination of responsibilities (including care-related) and limited access to resources puts an additional burden on this group and exposes them to hazards to which men would not normally be exposed.
<i>Rice yield</i>	Highest proportion of population engages in rice cultivation
<i>Livestock/small stock</i>	Relevant livelihood activity for food security and trading (e.g. duck eggs)
<i>Young children (2–5 years old)</i>	Left in vulnerable state due to inappropriate care by parents and other family members when circumstances become volatile, especially conflict; high index of malnutrition; particularly sensitive to snake bites (risk of death)

Table 7: Social groups and livelihood activities – Bobirwa Sub-district, Botswana, November 2015

Social groups and livelihood activities	Justification
<i>Phane harvesters (mainly women)</i>	Large number of Phane (also known as mopane) worm harvesters and therefore important in terms of income generation
<i>Women traders of vegetable produce</i>	This group is significantly limited in actions at the moment due to difficult access to markets, but trading in produce has the potential to become a more relevant livelihood opportunity.
<i>Women handicraft (basketry)</i>	Relevant income-generating activity for women and an alternative to agricultural-based livelihoods
<i>Out-of-school youth (18–35 years old)</i>	Very important group, with few options for making a living. In some cases this is leading to intra-household violence (violence against women and against parents), as well as creating urban migration problems.
<i>Small scale subsistence arable farmers</i>	Majority of the local community are involved in small scale subsistence arable farming. This includes both men and women.
<i>Small scale livestock keeper</i>	Keeping cattle is not only a key livelihood strategy but also cultural practice for the people of Bobonong.
<i>Out of school youth (18–35 years old)</i>	Very important group finding few options for making a living in the Sub-District and resorting, in cases, to anti-social behaviour, such as intra-household violence (violence against women and violence against parents cases described), as well as creating urban migration problems both in cities and in the Sub-District. It should be noted that success stories of migration also exist, and also that this group offers an educated workforce supply for potential non-farming livelihoods in the Sub-District.
<i>Retirees</i>	They are an educated group, retired around 45, wealthy; have an influential voice in the landscape.
<i>Commercial farmers</i>	They irrigate land and are an important user of water resources; they own considerable numbers of livestock and contribute to horticultural production.
<i>Elderly</i>	Elderly make up a considerable percentage of the local community.

Vulnerability matrix

With the lists of ‘hazards and issues’ and of ‘social groups and livelihood activities’ agreed by the Knowledge Group, the process moves on to analyse and agree on the respective exposures and sensitivities, using the vulnerability matrix, as follows:

In the X-axis of the vulnerability matrix (top, horizontal row; see Figure 2 for an example of an IVA matrix completed in Armenia), all ‘hazards and issues’ are listed, while the ‘social groups and livelihood activities’ are reflected in the Y-axis.

There are three separate matrices: the exposure matrix reflects exposure values as inputted by the Knowledge Group; the sensitivity matrix reflects sensitivity values as inputted by the Knowledge Group; and the vulnerability matrix automatically calculates vulnerability values based on the exposure and sensitivity values assigned by the Knowledge Group. This first step of the VRA is called the *Initial Vulnerability Assessment* because the full picture of vulnerability, including an assessment of adaptive capacity, will only be drawn after the two following steps of the VRA – the impact chain exercise (Step 2) and adaptive capacity analysis (Step 3) – have been completed.



In Ghana, sticks of different lengths were used to prompt discussion among the Knowledge Group when deciding on values for exposure and sensitivity. Photos: Oxfam in Ghana

To assess **exposure**, the facilitator requests input from the Knowledge Group, asking **‘What is the extent to which a social group (or a livelihood activity) could potentially – i.e. theoretically – be affected/damaged by the occurrence of a hazard or an issue?’** This question can be rephrased and made less technical to make it crystal clear to everyone. What is most important is that everyone in the Knowledge Group understands what is being asked. The Knowledge Group will engage in discussion and try to build consensus around a value from 0 to 3 (0 meaning the ‘highest extent’ and 3 the ‘lowest extent’). The Knowledge Group should

consider present circumstances when deciding each exposure value, and not the situation 20 years ago or future expectations.

To assess **sensitivity**, the facilitator requests input from the Knowledge Group, asking **'What was the actual impact of a hazard or issue on a social group (or on a livelihood activity) over a set period of time in the past (usually ten years before the VRA is conducted)?'** As with exposure, the facilitator can rephrase the question for the sake of clarity. Again, the Knowledge Group will engage in discussion and try to build consensus around a value from 0 to 3 (again, with 0 representing the highest impact and 3 the lowest). Sensitivity should reflect the actual impact within the agreed period of time. This period of time (say, ten years) should remain the same for each of the hazards/issues being analysed. On a case-by-case basis the facilitator will need to guide the Knowledge Group in deciding how to assess impact; for example by loss of production, incidence of disease, percentage of population without prompt access to health services, income levels, etc., and in all cases it should be informed by anecdotal evidence from Knowledge Group members.

The values 0 to 3 for exposure and sensitivity will be put into the vulnerability matrix (an Excel file). However, these values are not always the easiest way for Knowledge Group members to think about exposure and sensitivity, especially as 0 represents the highest exposure/sensitivity and 3 the lowest, which is counter-intuitive. The facilitator, and beforehand the Planning and Facilitation Team, may decide to not refer to values 0 to 3, but instead use either numbers, e.g. 1 (lowest) to 4 (highest), or words, for example 'very little or almost nothing', 'somewhat', 'considerable' and 'very high'. What matters is that exposure and sensitivity are ranked based on an increasing scale of four options, and that they are inputted in the Excel sheet in the form of 0, 1, 2 or 3.

Case Study 1: Assessing exposure and sensitivity in Armenia

A VRA conducted in the village of Aknaghbyur and its surroundings in April 2013, in the Tavush province of Armenia, focused on analysing the exposure and sensitivity of hazards and issues related to **agricultural production**. The Knowledge Group decided that for **'outdoor-growing vegetables with respect to strong winds'** some low-significance exposure was expected (E3). This value for exposure was agreed based on the fact that only a small proportion of these vegetables (i.e. peas – climbers) are exposed to strong winds. The Knowledge Group agreed that sensitivity is also very low (S3) as farmers have established measures to minimize the potential damage to exposed vegetables (e.g. attaching growing peas to sticks to minimize damage to the plant from strong winds).

For **'persimmon yields with respect to difficult access to markets'**, medium-level exposure (E2) was agreed; although markets normally have a high capacity to absorb persimmon, this is threatened by an increasing supply of the fruit from Georgia, which could flood the local Armenian market and lower the market price. As for sensitivity, the least sensitive scale was selected (S3), as the Knowledge Group considered the existing storage capacity to have outweighed the supply threat, since farmers were able to store and sell the produce out of season at higher prices.

In one last example, for **'any livelihood activity with respect to the ongoing border conflict with Azerbaijan'** exposure was considered to be the lowest level (E3), as the ongoing conflict had not had any direct negative impact in the previous five years (the period evaluated); however, the Knowledge Group considered that activities would be affected to a large extent (S1) if the conflict were to escalate and directly impact the livelihood activities of locals, such as by limiting road transport between cities and the countryside.



Discussion about key 'hazards and issues' and 'social groups and livelihood activities' with the Knowledge Group during a VRA exercise in Hermon village of Voyots Dzor province, Armenia. Photo: Beniamin Ghazaryan / Oxfam in Armenia

Table 8: How Exposure and Sensitivity values are combined to show the Initial Vulnerability value. Initial Vulnerability values go from lowest levels (green), increasing through yellow and orange to the highest levels of vulnerability (red).

	S3	S2	S1	S0
E3	3	3	2	2
E2	3	2	1	1
E1	2	2	1	0
E0	2	1	0	0

Case Study 2: Assessing exposure and sensitivity in Botswana

A VRA conducted in Bobirwa Sub-District, Botswana in November 2015 focused on analysing the exposure and sensitivity of hazards and issues related to **high temperatures**. Through their discussions, the Knowledge Group decided that for **'arable farmers'** (thus described to refer to food-growing smallholder farmers, as opposed to smallholder farmers focusing on small stock and livestock rearing), the highest significance exposure was expected (E0). This value for exposure was agreed based on the fact that crops have frequently been dying in the heat, the health of farmers themselves is also affected (e.g. high blood pressure in the extreme heat), and crops are more likely to succumb to outbreaks of disease when the farmers cannot tend to them because of the impact of extreme temperatures. Sensitivity was assessed as high (S1). This is because although temperatures have been high for the past 15 years, the Knowledge Group members now consider the temperatures to be extreme, especially as they combine with the effects of low and inconsistent rainfall.

For the category of **'livestock farmers with respect to high temperatures'**, high-level exposure (E1) was agreed, albeit not as high as for 'arable farmers'. This is because high temperatures are directly and indirectly contributing to boreholes drying up (more evapotranspiration, more water demand) and thus temperatures are a contributing factor preventing livestock farmers from taking appropriate care of their cattle. A high sensitivity scale was selected (S1) for this combination of hazard and social group, as the Knowledge Group agreed that access to water had become more difficult over the past 15 years, because the mouths of rivers where locals would dig for water nearby were drying up and the cost of pumping water from boreholes had increased.

Lastly, for **'commercial farmers with respect to the combined issues of drought, lower rainfall and ponds drying up'** both exposure and sensitivity values were considered to be low (E2, S2) because, commercial farmers commonly have technology and infrastructure to absorb these impacts (e.g. irrigation systems, larger water reservoirs), and in the last 15 years the negative impact has been quite moderate.

Table 9: Initial Vulnerability Assessment matrix in the Bobirwa Sub-district, Botswana (November 2015). The higher level of vulnerability is assigned the colour red (0), followed by orange (1) and yellow (2), down to the lowest level of vulnerability, green (3).

Social group/LH activity	Drought, lower rainfall, ponds drying up	Foot and mouth disease (FMD) outbreaks	Limited knowledge about climate change	High temperatures	Poorly resourced agricultural extension services	Limited access & uptake of meteorological data	Limited access & uptake of new agricultural practices and farming technologies	Difficult access to markets	Lack of alternatives to agricultural based livelihoods
Small scale subsistence farmers (arable)	0	2	1	0	2	3	2	3	0
Small scale livestock keeper	0	0	0	1	1	3	1	1	0
Woman traders	2	2	1	1	2	1	1	0	3
Phane harvesters	0	1	1	0	N/A	1	1	0	3
Women handicrafts	2	0	2	0	N/A	1	1	0	3
Social welfare dependents	1	N/A	2	2	2	1	3	2	1
Out of school youth (18-35 years old)	0	3	2	2	2	1	2	2	0
Commercial farmers (livestock and horticulture)	2	0	2	1	2	3	2	2	2



Members of the Knowledge Group working on Step 1 – the Initial Vulnerability Assessment, Bobirwa Sub-district, Botswana. Photo: Daniel Morchain / Oxfam

Returning to the matrix, the values of sensitivity and exposure for specific hazards and livelihoods are then combined in a pre-vulnerability matrix (see Table 8), where green shows lowest vulnerability, moving up in the scale through yellow, orange and red being the most vulnerable combination of hazard (or issue) with respect to social group (or livelihood activity).

It is important to note that while choosing a value from 0 to 3 for exposure and sensitivity can be data-driven when data is available, it should be recognized that data has limitations and potential bias, and as such it should be just one element in determining exposure and sensitivity values. A combination of input from Knowledge Group members based on their own experience and views, their roles and the data they have access to should determine the values.

Robustness is an important aspect of the VRA, but the process to reach an acceptable level of robustness is not a fixed one; it depends as much on the formation of the Knowledge Group and its dynamics, which needs to be fostered by good facilitation. Facilitation must also encourage the broadest possible participation from Knowledge Group members. Regardless of the approach taken during the IVA, the exercise is a cornerstone of the process because a multi-stakeholder consensus is reached, and it will form the basis for the following discussions around risk reduction, adaptation and resilience-building measures and strategies.

It should be stressed that the discussions that lead to a value for exposure and sensitivity are as relevant for the Knowledge Group’s understanding of vulnerabilities and risk as the value that is eventually assigned. Notes should be taken of the points raised and of the thread of the discussion, as these will (and should) inform the following steps of the process.

‘The IVA matrix helps planners to easily identify and prioritize hazards that are affecting their entire locality and plan for effective solutions. The VRA is an effective way of improving the planning process and enhances the planning capability in regards to the Comprehensive Land Use Plan and Annual Investment Plan.’

– *Abdulkhabar Pasandalan, Municipal Planning and Development Coordinator of Datu Abdullah Sangki, Maguindanao, the Philippines.*

Step 2: The impact chain exercise (ICE)



Members of the Knowledge Group working on Step 2 – the Impact Chain Exercise, Bobirwa Sub-district, Botswana. Photo: Gina Ziervogel.

The second step of the VRA is the development of impact chains for the three or four 'hazards and issues' that are considered most relevant by the Knowledge Group, as a result of the IVA step. Relevance is normally understood in relation to high levels of vulnerability across many social groups, and/or to high levels of vulnerability for one or a few social groups, especially if they include the most marginalized ones. The chosen 'hazards and issues, in any case tend to be crucial for the viability of livelihoods across the landscape, whether this relation is immediately obvious or not – e.g. the impacts of drought/floods and gender injustices, respectively.

An impact chain is a graphic representation of the consequences of a given hazard throughout the geographical, social, cultural, political and economic landscape in question. In other words, rather than focusing exclusively on the direct immediate impact of a hazard, the impact chain seeks to reflect the full picture of a given hazard in order to better understand how it propagates through a system via its direct and indirect impacts. As a result, this step – Step 2 – of the VRA facilitates the identification of impacts that are not always obvious in an initial analysis. It also allows for linking causes and effects, and visually shows how designing interventions addressing a specific impact may create one or several later effects. For instance, the analysis is not restricted to the damage caused by heavy rain to the production of vegetables, but will rather try to identify what this means for household livelihood strategies, such as the need for one member of the household to migrate for work and the implications of that on, say, children's education.

While Step 1, the IVA, normally reflects on approximately previous 10 years, the ICE contemplates the extent of impacts over the next one, two, or even three decades as a basis for forming/strengthening the development strategies of communities, municipalities and districts.

Impact chain development should start with the **joint development of a future scenario**, based on the input of the Knowledge Group members. The future scenario should ideally reflect local/indigenous knowledge, as well as climate impact models and trends, and socio-economic

expectations for the period under consideration – and it should be done in a simple and quick way (no more than one hour), building on Knowledge Group members’ knowledge. We have often done this by drawing in a flipchart the main trends that Knowledge Group members expect the landscape to see in 10–20 years’ time (see Figure 2). From here, **the impact chains will then be developed** (for example see Figure 3) with the help of guiding questions from the facilitator that include appropriate geographical and temporal scales, such as ‘What is the immediate impact of seasonal frost on figs (and other livelihood activities identified as vulnerable)?’ followed by ‘What are alternative sources of income to figs, in which the same social group that grows, harvests and trades figs could become involved?’ and so on. Remember to include questions that identify *differential* impact across social groups – for example, ‘What is the impact of deteriorating water quality for the elderly ... for socially differentiated groups of women (e.g. both in consuming water and in travelling further to access safe water) ... for people with disabilities ... for livestock?’

Figure 2: Joint development and visualization of a future scenario in the landscape around Marihatag, Mindanao, the Philippines (November 2013). It shows increasing temperatures and its impacts on crops, the increasing intensity of typhoons and floods, as well as impacts from conflict and mining activities.



In addition to visually mapping the impact of a hazard throughout the system, the ICE will encourage the Knowledge Group to identify potential measures that will reduce the vulnerability of communities and enhance their resilience. The identified measures will be written as simple ‘headlines’ wherever appropriate in the impact chains (see yellow boxes in Figure 3 and red boxes in Figure 4), ready to be further explored and strengthened during the third step of the VRA, the adaptive capacity analysis (ACA).

Box 5: Developing an impact chain

When developing an impact chain, it may help to include not just impacts, but also causes of the hazard or issue being explored. As shown in this impact chain from a VRA in Botswana, the main causes of the hazard have been listed to the left of it. This contributed to a more insightful discussion about the impacts and later to designing responses.

Figure 2: Impact chain analysis for the identified 'lack of fishing facilities' issue in Marihatag, Mindanao, the Philippines (November 2013)

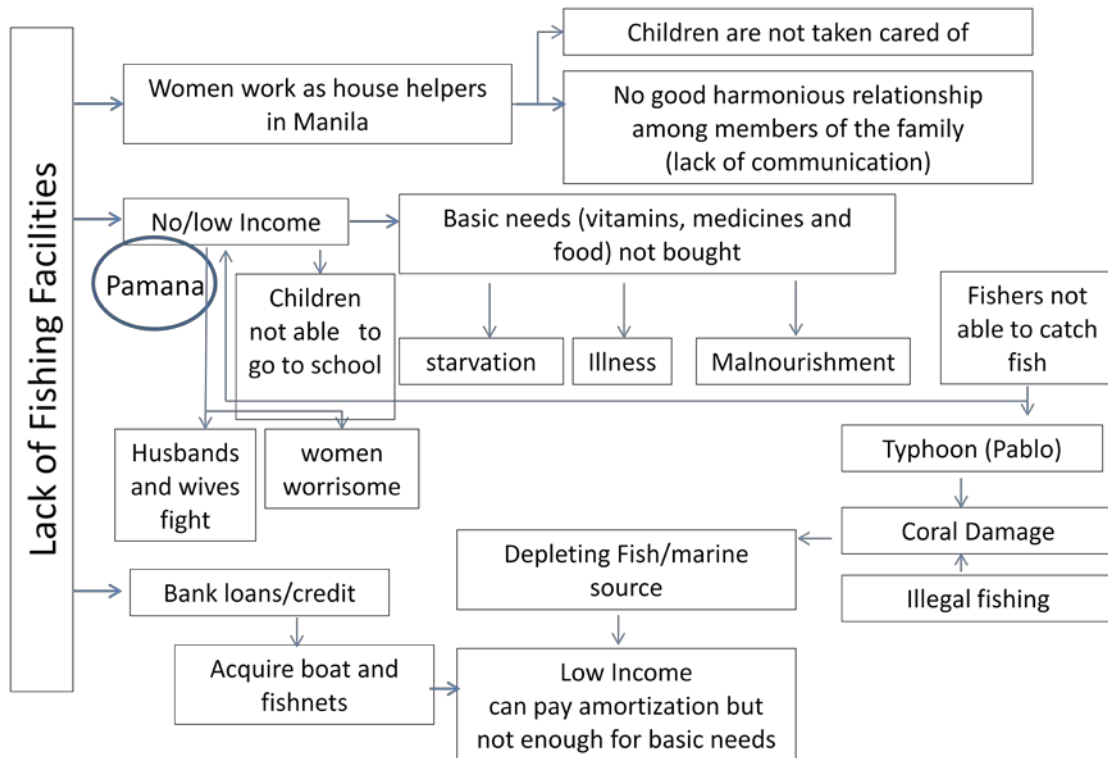
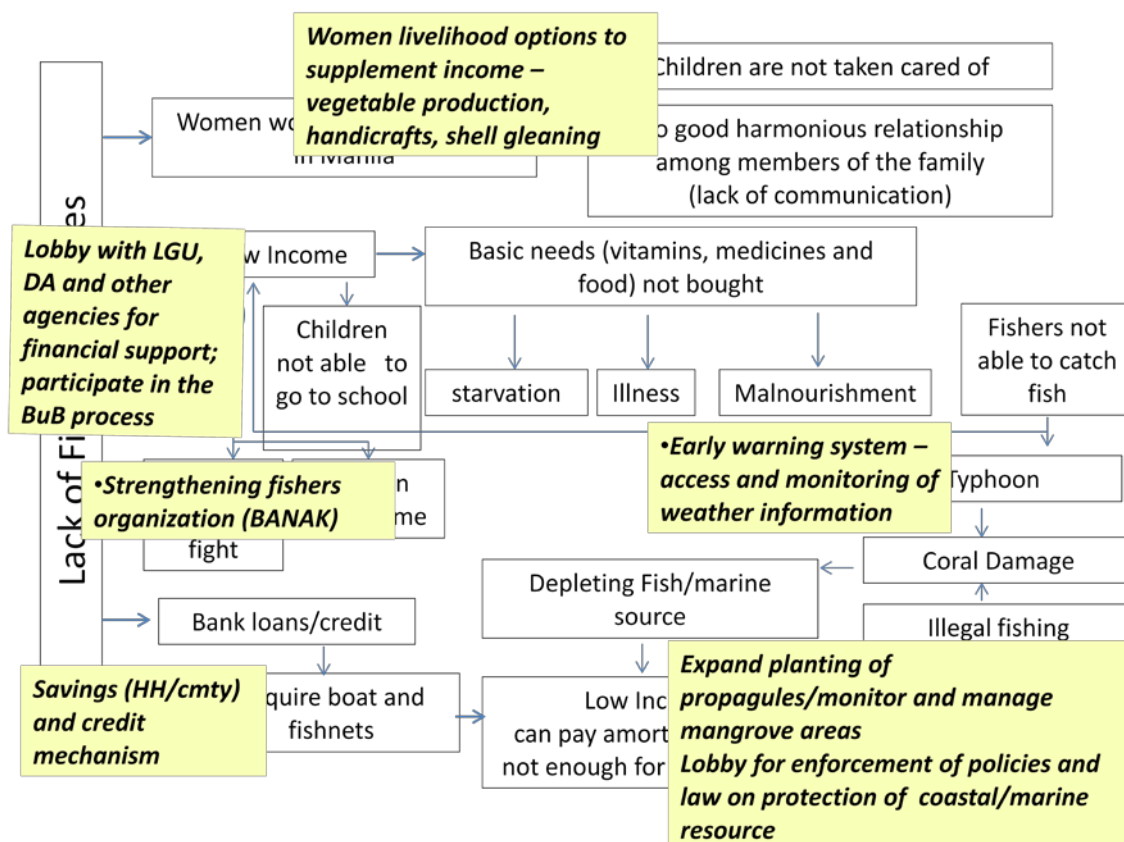


Figure 3: Identification of measures ('headlines') for the identified 'lack of fishing facilities' issue in Marihatag, Mindanao, the Philippines (November 2013)



Step 3: Adaptive capacity analysis

In order to paint a complete picture of vulnerability and to explore opportunities to build resilience, Step 3 of the VRA focuses on turning the ‘headlines’ produced in Step 2 into first drafts of solutions or ways forward to address vulnerability and build existing and potential capacities. The essence is to explore possible opportunities and the direction that a number of these might take, their feasibility, and the extent to which they may (or may not) benefit different social groups.

Table 10: The three ‘hazards and issues’ chosen for further analysis and the headlines further developed into ‘full proposal titles’; from VRA in Bobirwa Sub-District, Botswana, November 2015

Hazard or issue	Title of proposal
Drought, low rainfall, high temperatures and ponds drying up	Increasing awareness and uptake of drought-management strategies
Inadequate and insufficient alternatives to agricultural-based livelihoods	Decentralization of structures to promote employment in Bobirwa
Difficult access to markets	Training on production and marketing skills

The Knowledge Group explores a number of ‘headlines’ in further depth by turning them from the ICE step into more fully-fledged ‘measures’ through the adaptive capacity thinking developed by the Africa Climate Change Resilience Alliance (ACCRA).⁵ The ACCRA framework recognizes five characteristics of adaptive capacity: 1) asset base; 2) institutions and entitlements; 3) knowledge and information; 4) innovation; and 5) flexible, forward-looking decision making and governance.

The Knowledge Group uses a list of questions (see Table 6 for examples) intended to guide the design, rethinking and fine-tuning of the possible measures identified during the ICE, in order to ensure a more appropriate, inclusive, sustainable and adaptive design of the selected measures. When answering these questions, the specific characteristics of the community and their implications for and contributions to gender equality issues should be addressed.

Box 6: The relationship between sensitivity and adaptive capacity

There is a close relationship between sensitivity and adaptive capacity. Wherever existing adaptation measures are in place, the sensitivity value agreed by the Knowledge Group in the IVA should reflect this (in such cases, a note is included to explain how the sensitivity value has been adjusted). For example, if over a five-year period the movement of cattle had been restricted to the fields furthest away from the river, in order to minimize the risk of harm to them by flooding as well as to reduce erosion of the riverbed, the reduced risk should be reflected in the value allocated to the sensitivity. The reason for allowing this is to create a more realistic picture and to avoid conducting a strictly theoretical exercise, which would prove less useful. In other words, it is crucial to identify ways in which communities and stakeholders are already coping with change in the landscape, and, through the ACA process, identify how best the VRA process can support and strengthen the existing state of affairs, with the continued ownership of communities and stakeholders.



From the 'headline' of a solution towards a more tangible proposal using ACCRA's Local Adaptive Capacity framework principles as guidance. VRA exercise in Bobirwa Sub-district, Botswana. Photo: Daniel Morchain / Oxfam

Table 11: Example questions to support building adaptive capacity in risk reduction and adaptation measures related to a proposed new enterprise for smallholder farmers

Characteristics of adaptive capacity, developed by the ACCRA	Example questions to support building adaptive capacity in risk reduction and adaptation measures
<p>Assets: refers to what would be needed in order to see a measure through to the expected output. For example, sewing as an alternative livelihood for women would require a sewing machine and training courses.</p>	<ul style="list-style-type: none"> • What assets, presently unavailable to all or certain population groups, are required by smallholder farmers (SHFs) for the new enterprise? How will different climate and development scenarios affect these assets? Who will manage these assets? • Have these new assets/technologies been selected considering not only technological and socio-cultural advantages, but also whether there is interest from SHFs in using them? And have SHFs been part of the decision making behind the selection (as opposed to having been ‘assigned’ a specific technology for the implementation of this enterprise)?
<p>Institutions and entitlements: refers to what kind of support is necessary in order to do the work.</p>	<ul style="list-style-type: none"> • Are there vehicles through which SHFs, including women SHFs, can voice their concerns and negotiate with authorities and other stakeholders involved in the project? Are these links reasonably expected to last after the project has been completed? • Is the land tenure of SHFs a settled issue? Do men and women have equal entitlements to land? Is there a fair system in place for SHFs to deal with disputes?
<p>Knowledge and information: refers to what kind of information is available and necessary as an input to the work, e.g. climate information, timing/seasonality of planting, what crops to plant, etc.</p>	<ul style="list-style-type: none"> • What support is required – and does the project provide it – for SHFs to ultimately analyse relevant information by themselves (e.g. to achieve the objectives of the project) and independently make well-informed choices based on that understanding? • How will SHFs gain an understanding of working with uncertainty and of reducing risks to disasters and slow-onset impacts?
<p>Innovation: refers to what new skills, technology, support, institutions and assets are necessary to be able to develop/improve or find new ways to better do/accomplish the expected output.</p>	<ul style="list-style-type: none"> • What changes are required to develop an enabling environment for SHFs, including women SHFs, to explore and experiment with innovative approaches? Will/has this project support/supported that goal?
<p>Flexible, forward-looking decision making and governance: refers to what steps, institutions and systems are needed in order to respond to future problems, and to cope with and adjust to shocks/climate impacts.</p>	<ul style="list-style-type: none"> • Does the project support the empowerment of SHFs and foster the creation of long-lasting links between SHFs and relevant stakeholders, including authorities? <p>For example, Giorgia Prati of the University of Southampton advises participants to ‘Make sure that the empowerment is not [to] the detriment of vulnerable social groups, such as women.’</p>

Throughout this process each measure 'headline' is further elaborated to include the identified desirable attributes of adaptive capacity. Each measure to be developed will have an absorptive, adaptive or transformative focus – or, often, a mix of them. 'Absorptive' refers to reducing the direct impact of hazards by decreasing exposure or sensitivity, e.g. disaster risk reduction (DRR) measures such as physical infrastructures that withstand the expected impacts of floods. 'Adaptive' refers to forward-looking measures that respond to expected trends, often with innovative approaches, e.g. drought-tolerant seeds or seaweed farming in water-stressed coastal locations. 'Transformative' refers to measures which alter or bring new elements to the system, resulting in new ways of thinking and doing, e.g. work on gender relations to alter care-related responsibilities that lead to a fairer split between household members and increase women's participation in other livelihood activities, or working with women to introduce innovation in agriculture systems and recapture traditional knowledge. A mix of the three strategies is necessary for resilient development planning.

As the 'headlines' turn to potential measures, they become more tangible and their potential impact and cost is made clearer. This will guide their prioritization with regards to their inclusion in development plans (at all levels).

Step 4: Aligning findings with opportunities

The final step of the VRA methodology aims to turn the work of the Knowledge Group into action.

Rather than a predetermined outcome, such as a 'VRA action plan', this step seeks to align measures resulting from Step 3 with existing opportunities. These opportunities could take a number of forms. A first example is the opportunity to inform ongoing development plans at local, municipal or district level on themes of land use, DRR, climate change adaptation, or development in general. In this case the VRA can provide a vehicle for the Knowledge Group to ensure the inclusion of these measures into plans at different levels of governance.

Second, the designed measures (from Step 3) can also be aligned with existing or upcoming funding opportunities at national or global levels, and as such provide evidence and justification for accessing funds.

Third, VRA findings have been used to inform programme design of development organizations (of Oxfam and International Rescue Committee and their partners in country) as well as research institutions in Ghana, Bangladesh, the Philippines, Armenia, Botswana and the Sahel, among others. Findings have also been used in developing a stakeholder-informed understanding of vulnerability that specifically addresses gender inequalities and women's roles and capacities. Similarly, VRA findings are being used to contribute to research and identify potential areas of future work in the context of the project 'Adaptation at Scale in Semi-Arid Regions' (ASSAR)⁶ in Botswana and Namibia.

Fourth, the VRA generates a number of 'soft' outcomes in the shape of strengthened stakeholder interaction and increased ownership of landscape-wide issues by stakeholders, as well as enhanced technical knowledge and, in some cases, capacity building of the participants in process-related skills (e.g. negotiation skills, facilitation).

Last but certainly not least, the VRA is an influencing tool. By raising awareness of local and landscape-wide issues among the Knowledge Group, many of whom may be duty-bearers, the VRA highlights and builds accountability of stakeholders and provides a base for stakeholders engaged in advocacy (e.g. NGOs, CSOs – civil society organizations) to launch or build an influencing position. It can also help to drive forward an organization's agenda. For instance, the implementation of the VRA in Armenia helped Oxfam collaborate with the United Nations Development Programme (UNDP) and the Ministry of Emergency Situations in designing a common approach to local-level risk management that was later implemented nationwide.

Box 7: Government representatives

It may be appropriate to invite a government representative of the Knowledge Group – e.g. the district planner – to initiate the discussion of Step 4 and explain the existing institutional arrangements. While not only existing schemes should be explored, this framing may better align the measures developed with tangible and timely opportunities.

Step 4 will not be completed during the two days of the VRA exercise. It is likely to be started then and continued later at different times, and include for each level (e.g. local, municipal, district) only a number of the stakeholders of the Knowledge Group. This is because more time is needed to identify and develop opportunities, and some may arise after the VRA is conducted. During the two-day exercise of the VRA, however, it is important for the Knowledge Group to spend some time brainstorming initial ideas, in as much detail as the circumstances allow.

The analysis and findings of the VRA can be a useful tool for influencing, for promoting greater accountability of both governmental and non-governmental decision makers, and for providing an in-depth, landscape-wide contextual understanding that facilitates addressing cross-cutting themes such as gender or biophysical issues.

Box 8: Understanding and responding to future vulnerabilities

Projecting future changes in a landscape (e.g. based on historical data and climatic data analysis) is key to understanding and responding to future vulnerabilities. That said, while historical weather data is generally obtainable by partnering up with national meteorological agencies, climate impact models and analysis of climatic information is often not available, not easy to relate to, or may not be overly contextually relevant. When such information is available, however, we recommend that it is considered in the Knowledge Group discussion.

Participatory tools that facilitate the analysis of historical weather data (such as the Participatory Integrated Climate Services for Agriculture – PICSA – from the University of Reading's Walker Institute) can help bridge the gap of insufficient relevant weather/climate information. Adding this type of external knowledge to the VRA process can help reduce uncertainty and foster more informed planning



The Knowledge Group splits and discusses aligning findings of the exercise with climate change adaptation and development opportunities in the Bobirwa Sub-district. Photo: University of Botswana

For the final activity of the two-day workshop – **concluding, summarizing and reflecting on the exercise** – an informal discussion involving Knowledge Group members and the Planning and Facilitation Team helps review the issues discussed, the process and the next steps for continued engagement and for further developing vulnerability reduction and resilience-building measures.

In the Botswana VRA in November 2015 in the Bobirwa Sub-District, for example, this final discussion helped bring the process to an even more personal level and brought to the surface a few important issues that had not been raised before. Some of the reflections of the group from the closing session are paraphrased below:

- 'We now have a better sense of what areas the government is addressing here, and the gaps. I've learned about the priorities that the government has in this sub-district.'
- 'It was like a dream having the opportunity to sit around this group of so varied people. When they contacted me on the phone to invite me to this exercise I thought this wouldn't take us anywhere, but now I believe it will.'
- 'I used to think my ideas weren't worthwhile. Now I think I *can* make changes in my life and I know it is possible.' (From an elderly woman who makes baskets from palm tree leaves.)
- 'At the beginning of Day 1, I didn't understand why Phane worm harvesters were sitting around this table; now it is clear.'
- 'Now I see that even our field assistants have something to contribute, so we have to listen to them.'
- 'People like to dwell on problems rather than focus on solutions. That's not what we did here. That's why I liked this workshop.'
- 'I've been thinking ... the next time we should invite ourselves to each other's meetings rather than wait for people to come from far to do it.'

- 'I've learned I don't have to keep waiting for the government to do something, but rather more proactively involve myself in finding ways forward.' (From an out-of-school youth.)
- 'This was an opportunity for different views to come together. Everyone was free to express themselves on any issue they wanted.'

Case Study 3: Collaboration for community resilience in Afghanistan

In October 2013, Oxfam in Afghanistan implemented a VRA in five villages in Badakhshan, a mountainous and hilly province, with the aim of developing strategies for the communities in this landscape to cope with natural hazards and ensure sustainable livelihoods. A Knowledge Group was assembled, including social group representatives, the Head and Members of the Community Development Council, food security experts, and representatives of the Food and Agriculture Organization of the United Nations (UNFAO), the Afghanistan National Disaster Management Committee and the Department of Agriculture, as well as Oxfam staff.

During the VRA discussions it was jointly decided that Oxfam would provide drought- and disease-resistant, certified rainfed wheat seeds to farmers, and the farmers contributed by providing transportation of the seeds from the partner office to their villages. The group also agreed that farmers would take an active role in coordinating and implementing rainwater harvesting efforts, including techniques such as terracing and trenching hilly land, with the support of Oxfam.

As a result of the water-harvesting techniques, flash flooding and soil erosion has come under control and 1.25km² of land that was bare is now under cultivation with rainfed sunflower seeds, which are grown as a cash crop. In addition, natural weeds have started to grow in the water-harvested areas, providing grazing land and fodder for livestock. Furthermore, following introduction of the certified seeds, farmers reported a 50 percent increase in wheat harvest and an 85 percent reduction in incidence of disease. In consultation with farmers, community leaders (*Shuras*) and the Department of Agriculture, it was agreed that after the harvest each farmer who had received certified seeds from Oxfam was to share to ensure that all farmers had access to the seeds. This is an example of how the VRA promotes inter-team collaboration and multi-actor dialogue to develop initiatives and reduce impacts, in this case, of climate change related hazards.

PART 3: STRENGTHS AND LESSONS LEARNED FROM IMPLEMENTATION

STRENGTHS OF THE VRA

The VRA tool has been implemented by Oxfam in 12 countries and in a few more by other aid and research organizations, such as the International Rescue Committee (IRC), the University of Cape Town and the University of Botswana. From mountainous landscapes in Afghanistan to coastal seascapes in the Philippines to semi-arid areas in Northern Ghana, the VRA is adaptable to different geographies, needs and available resources. Across a variety of contexts, Oxfam staff and partners have found the VRA to be an applicable, practical and effective tool.

'[The VRA] looks at all of the risks that may exist in the area of a project, [giving] a more holistic understanding of community vulnerability and potential, and the possible follow-up steps to improve their resilience.'

– Vadim Uzunyan, Economic Justice Programme Manager, Oxfam in Armenia

Reflecting on their experiences, practitioners who have implemented the VRA identify four core strengths:

- 1. The VRA employs a comprehensive, gender-sensitive and adaptable understanding of vulnerability.**

Practitioners very much value that the VRA takes a holistic approach to vulnerability, combining biophysical and socio-cultural aspects as well as trends and future impacts. Rather than simply listing the physical hazards and risks existing in a particular area, the VRA identifies specific social groups and livelihoods, and examines the biophysical, political, economic and social risks and hazards that impact them and make them vulnerable, as well as the capacities of those groups to respond and adapt to hazards. The VRA considers vulnerability at different spatial and temporal scales – within social groups and at community, regional, or global levels, depending on what best suits the specific context and helps to map future as well as present vulnerability.

Within this holistic approach the VRA pays special attention to gender by analysing the differentiated vulnerability of various social groups, which may include for example adolescent girls, pregnant women or widows. For example, while an entire community may be indiscriminately vulnerable to rising sea levels, existing social and political inequalities result in individuals or specific groups within that community facing distinct vulnerabilities.

The VRA methodology is adaptable and can be complemented by and feed into other vulnerability and structural analyses, such as gender analysis, power analysis and community-level PRAs. The VRA can be blended with other methodologies to produce a tailor-made hybrid. For example, in Tajikistan the VRA was blended with a PCVA process to support a broader contextual analysis. In such a situation it is better to conduct the local-level PRA first before other sector-specific assessments that will dig deeper in particular areas.

Box 9: Oxfam's PCVA methodology

Oxfam's Participatory Capacity and Vulnerability Analysis (PCVA) methodology has often served as a prior step to the VRA. Through existing or recently implemented PCVAs, the facilitation team of the VRA acquires detailed knowledge from several communities living in a landscape that subsequently inform the identification of hazards, issues, social groups and livelihood activities that form the basis of the analysis conducted during the VRA.

'VRA is an important tool in understanding the landscape-wide risks and issues. This was particularly evident when I was listening to the PCVA results presented by local government representatives. PCVA, because of the nature of the questions being asked as well as the sources of the primary data, is severely restricted if we are to appreciate the plethora of issues that a landscape approach seeks to address.'

– Dante Dalabajan, Economic Justice Programme Manager, Oxfam in the Philippines

2. The VRA reveals the root causes of vulnerability and leads to improved contextual and systemic understanding.

For Oxfam staff and partners, conducting the VRA has improved their understanding of the context in which they work and implement programmes. Not only does the VRA clarify *how* members of a community are vulnerable, but it also seeks to understand *why*. The ICE (Step 3), for example, provides an opportunity for a joint exercise to actually visualize vulnerability and the relationships between impacts at different levels. This step is valued for explicitly showing how the lives and livelihoods of a community at the local level are linked to and impacted differentially by issues at the regional and global levels. This explicitly brings to the surface the root causes of local issues and vulnerabilities and reveals power dynamics, identifying imbalances in power and encouraging stakeholders to consider how the power-holders in a given context could support, or act as a barrier to, a community increasing its resilience.

When vulnerability is understood as a systemic issue, programmes and projects can be designed and resources allocated to build transformative capacity, i.e. the capacity to address the systemic causes of vulnerability and risks, and build a more resilient future.

In order to uncover where existing structures perpetuate inequalities, the VRA process (and its facilitators) need to regularly question the status quo and explore through the Knowledge Group how this is shaping vulnerability of different social groups. Fidi Alpers, a community-based practitioner based in Namibia, suggests that throughout the VRA and then again at the end of it, the Knowledge Group reflects on the implications of the status quo and ensures capacity is developed at the local level to successfully challenge it.

One of the strengths of the VRA workshop in Botswana was how it enabled people to see the links between their activities and climate risk and responses. This understanding was built across levels from the local level of farmers, traders and phane worm harvesters to the village level of village development committee member, farmers committee, women's groups to the district level of planners, economic planner and district social worker. When the Assistant Council Secretary for Bobirwa Sub-District closed the meeting she said: 'I believe you will all go out from here as change agents and share with those who weren't able to spend time here. We all know this area is prone to disaster and diseases, but usually when we do our planning we consider issues like HIV and AIDS but rarely take into account issues of climate change. But this is the right time for us as we have just started our Chapter 8 District Development Plan and so we'll accommodate the issues that have been raised here. So we'll come up with a plan that is suitable to the district.'

– Report on VRA conducted in Bobirwa Sub-district, Botswana, in November 2015⁷

3. The VRA is a creative, participatory and analytical approach that promotes dialogue, strengthens gender and stakeholder relations, and builds capacity.

One of the main strengths of the VRA methodology identified by practitioners is that it combines a participatory and analytical approach with creative elements in a way which inspires participants, builds a sense of agency and increases buy-in, as noted by Gina Ziervogel, Salma Hegga and Kulthoum Omari of the University of Cape Town, in comparison for instance with key informant interviews.

The VRA opens a space for multi-stakeholder dialogue and discussion, encouraging consensus building between social group representatives, practitioners and decision makers. This promotes learning and allows for equal interaction and the strengthening of decision makers' accountability (Tschakert et al., 2013).

4. The VRA enables knowledge from different sources to be shared, valued and integrated and to shape decision making.

The VRA uses information from a variety of sources: academics share empirical findings or apply climate impact models relevant to the landscape; representatives from women's rights organizations and from, for example, fisherfolk groups share their perspectives on the impact of hazards on the groups they represent; local and district government officials may share their emergency response plans, budget streams and allocation of resources to risk reduction and climate change adaptation initiatives. Qualitative and quantitative data and scientific, indigenous and local knowledge is therefore integrated. By identifying and incorporating existing local knowledge and coping mechanisms into development strategies, the VRA contributes to community empowerment and ultimately to more equitable and resilient planning.

The VRA can and has been used as a women's empowerment tool. For example, in the Philippines, the VRA helped build the capacity of women affiliated with local NGOs and authorities through their active role in facilitation, note-taking, reporting and planning processes. In a focus group discussion in Kidapawan, the Philippines women mentioned that being exposed to facilitation roles builds their confidence for speaking in public and for engaging as equals in discussions with men. Furthermore, their participation in these types of discussion has allowed them to introduce specific actions targeted at reducing women's vulnerability, which had previously been disregarded in groups led by men (ref. Focus Group Discussion May 2014, Morchain, Kidapawan City, Mindanao, The Philippines⁸).

'This exercise will influence and contribute to draft our district development plan, particularly the activities related to climate change. Because of the useful outcomes the VRA generated, we will fund workshops like this in other parts of the district.'

– Pelaelo Master Tsayang, Principal Economist and District Planning Officer, Bobirwa Sub-District, Botswana

The VRA's participatory approach also enhances the credibility of decision making by practitioners and other stakeholders by actively involving social group members in the analysis. By the same token, the inclusion of representatives from local or municipal authorities in the Knowledge Group facilitates its legitimization with respect to more senior officials and decision makers.

5. The VRA informs inclusive programme design and decision making while building accountability.

By fostering a systemic understanding of the causes of vulnerabilities, the VRA facilitates the identification of power structures that need to change and stakeholders responsible for the required changes, such as identifying which governmental and private sector stakeholders should be targeted by the community youth group to act on a specific measure identified in the process. This leads to more inclusive, accountable decision making, whether it be to inform development plans led by local authorities, district-level planning, or investment plans of private sector companies operating in the landscape, or humanitarian sector programme/project design.

Figure 7: How the strengths of the VRA build up and ultimately inform decision making for enhanced resilience



So, in summary, what's so good about the VRA? Figure 7 plots the journey taken by VRA participants. The journey is underpinned by an acknowledgment of the rights and value of every person in the landscape, as well as the value of ecosystems. Reducing vulnerability and building resilience, then, requires carefully addressing the impacts faced by vulnerable groups. The participatory aspect of this process opens a space to discuss issues affecting vulnerable groups, thus creating awareness about them. The process also encourages a debate about what elements are needed for vulnerable groups to become increasingly independent and develop their capacities and potential, while on the other hand it contributes to enhancing the accountability of stakeholders and as such promotes a long-term view of development.

With this framing as a starting point, the VRA sketches out vulnerability as a narrative that not only reflects today's reality, but also explores what has shaped vulnerability to its present form and the implications for people in the landscape. This narrative necessarily explores gender relations and structural conditions that often exclude minorities and other vulnerable groups. By building consensus based on a holistic, critical understanding of vulnerability, and likewise by challenging the status quo in a multi-stakeholder arena when necessary, the VRA guides the Knowledge Group through a process that builds people's agency, while promoting informed, inclusive and accountable decision making and programme design.

'The VRA is not one person sitting at a desk and thinking about a community far away ... it involves a lot of experts, including community people, putting their heads together to think about the core vulnerability problem.'

– Abdul Latif Walizada, Poverty Reduction Programme Manager, Oxfam in Afghanistan

Case Study 4: Strengthening livelihood options for women in the Philippines

Amontay is a community of 135 households living in a former mangrove area in Marihatag, Mindanao, the Philippines. The community is frequently exposed to flooding and typhoons, with landslides occurring occasionally. Of households in the community, 47 percent have no land and many practise fishing as their livelihood, but just 36 percent of fishing households have access to either fishing boats or equipment. 17 percent of all households own land planted for rice and coconut, and some are engaged in small enterprises and employment.

During a PCVA exercise, the lack of fishing facilities was identified as a key problem for the community. A few years later, when conducting their VRA, the Knowledge Group identified more specifically that the lack of fishing facilities was leading to reduced income and negative coping strategies such as women leaving the community to work as home helps in cities. As a result of this, children were being left to the care of either grandparents or relatives, and in some cases dropping out of school. Furthermore, married couples were facing difficulties and potential separation due to long distance relationships.

The Knowledge Group concluded that the root of the problem would not be addressed by providing fishing equipment. Fisherfolk households would still be vulnerable to the impacts of climate change and governance issues, as made more evident during the exercise – namely damage to coral reefs and the subsequent negative impact on marine and fish resources from more frequent and intense typhoons, as well as rising ocean temperatures, and illegal fishing. The VRA process led to acknowledgement, therefore, that this is a long-term problem requiring long-term thinking and measures to address vulnerability, such as considerations around alternative livelihood strategies and sustainable fishing practices.

During the VRA, the Knowledge Group discussed the role of an organization of small fishers in Amontay, called BANAK (Barangay Amontay Nagkahiusang Mananagat Alang sa Kalambuan – Association of United Fisherfolk for Development). Together, the Knowledge Group and BANAK explored new livelihood options specifically for women in order to supplement household income. With village officials and support from Oxfam's local partner, the fishers' organization introduced vegetable gardening activities for women, building their individual capacity to earn an income within the community.

Under this initiative, BANAK engaged in the management and protection of the mangrove areas and the local partner facilitated the training of BANAK members as Local Resource Monitors, enabling them to monitor and manage the mangrove areas, and also determine the growth and presence of fish, shellfish and crustaceans in order to assess the potential of shell gleaning as a livelihood option for women. The fishers' organization has closely coordinated with the Barangay and municipal government in pushing for enforcement of policies on the protection of coastal/marine resources. The community has also begun negotiating with the municipal government on the boundaries of the fish sanctuary protection area. In addition, a local communication system to inform communities and fishers of weather forecasts has been enhanced, and a typhoon warning system for the community has been improved through the strengthening of DRR management councils.

This example of VRA implementation from the Philippines demonstrates how the VRA methodology can lead to meaningful outcomes for a community by strengthening their organization and building their capacity, including specifically women's capacity, to access more livelihood options and build their resilience.

LESSONS LEARNED

The VRA has evolved from its first implementation and every time we run it new ideas are incorporated, some bits are slightly changed, and new bits brought in. And it will continue to evolve organically, based on the needs of the users and their creativity.

This section describes three lessons learned from VRA implementation in a dozen countries by multidisciplinary teams. We hope the following learning points will be useful for those of you planning to conduct a VRA.

1. The VRA requires experienced facilitation that promotes inclusivity.

Effective and impactful implementation of the VRA relies as much upon the composition of the Knowledge Group as on how masterfully the facilitator(s) can bring out the Knowledge Group members' experience, knowledge, ideas and expertise in an inclusive and constructive way. These facilitation skills are particularly important to ensure that marginalized groups and Knowledge Group members who are unfamiliar with public speaking and official events feel that they can safely share their ideas.

In addition to these skills and to being knowledgeable about the VRA, the facilitator should be able to communicate the meaning of rather complex concepts simply and clearly to a diverse audience, such as the concepts of vulnerability, exposure, sensitivity and adaptive capacity. This, Moslem Abas of the Community Organizers Multiversity in the Philippines admits, 'is not always an easy or straightforward task'.

Communication obstacles have normally been overcome by facilitators by arriving at a joint definition of key concepts and by finding participatory, engaging ways to promote discussion. In Ghana, for instance, one facilitator used an innovative way to prompt discussions among Knowledge Group members to help them choose values for exposure and sensitivity. She used four wooden sticks of different lengths (each longer than the other) to signify values 0 to 3. She then asked about the level of exposure of a social group to a hazard, and any member of the Knowledge Group would initiate the discussion by choosing one stick and explaining why they chose that length (e.g. longest stick equals highest exposure); some would agree but another Knowledge Group member would choose a shorter stick and, with it in hand, explain their reasons for choosing that level of exposure. A lively debate would follow until consensus was reached on a specific level of exposure.

2. Outcomes of the VRA will depend on the composition of the Knowledge Group and its dynamics.

The findings and outcomes of the VRA – which include the set of measures identified to build resilience in the landscape, the new and strengthened relations between stakeholders across governance levels, and the empowerment of women through their participation in the analysis of vulnerability and the design of responses – will depend to a large extent upon the composition of the Knowledge Group. Selection of the Knowledge Group members is therefore crucial. While several implementers of the VRA highlighted the participatory nature of the methodology as a strength of the tool, Mohammed-Anwar Sadat Adam of Oxfam in Ghana rightfully suggests that if not balanced carefully, the process and subsequent outcomes have the potential to be 'skewed towards' bringing 'expert' knowledge into the landscape setting, with less attention paid to indigenous and local knowledge and adaptive practices.

It is, therefore, essential to recognize the importance of striking a delicate balance in combining inputs provided by vulnerable and marginalized groups (mostly 'internal' to the landscape) and external knowledge and perspectives that provide a wider view of the issues affecting social groups in the landscape. Understanding, assessing, sometimes reviewing and sharing local

'Having this wide variety of stakeholders sitting together as equals and coming up with joint ideas ... this I found very humbling.'

*– Professor Hillary Masundire,
Professor of Ecology,
Department of Biological
Sciences, University of Botswana*

knowledge, adaptive practices and coping mechanisms is fundamental in building social and environmental resilience in the landscape.

Combative and domineering Knowledge Group members can seriously damage the group dynamics. The facilitating team should try to intervene respectfully but firmly to prevent the exercise from deteriorating into business as usual, top-down, one-directional discussions that further alienate the most vulnerable and marginalized groups.

As emphasized throughout this guide, facilitation needs to ensure the process encourages and is genuinely open to the views of social group representatives. In addition, it is important to understand the VRA as a first step in the process of an increasingly integrated development of the landscape (people, environment, livelihoods), and as such the VRA workshop is the beginning of a long-term process with some of its outcomes materializing over time. In other words, patience and persistence will be important virtues, which must be accompanied by nurturing the relations formed during the work of the Knowledge Group. There is no ideal recipe for how this should be done, but it would normally be a mix of bi/multilateral collaborations and sometimes by maintaining regular meetings with participation from everyone in the Knowledge Group to keep the issues alive and those voicing them heard, especially those with least access to such channels. In Honduras, for example, a local NGO (AESMO – Asociación Ecológica de San Marcos de Ocotepeque) is the unifying thread of a multi-stakeholder group that has been regularly meeting over the last 14 years to openly discuss and act on landscape-wide issues affecting the Hondo River Basin.

3. Thoroughly incorporate social aspects of the landscape into the analysis.

When the VRA was first developed, the focus of the analysis – as in Armenia in April 2013 – was mostly on the vulnerability of particular crops and livelihoods to various hazards. However, as the tool has evolved and been applied in a variety of contexts – and shaped by the Knowledge Group in each instance – social aspects of the landscape have been increasingly incorporated into the analysis, starting from the careful identification of social groups and livelihood activities, and the initial step of assessing vulnerability (IVA), and then particularly through the ICE step. It is the experience of implementers of the VRA that by examining the impact of hazards on social groups, alongside livelihoods, the root causes of vulnerability and how it is experienced by different people is understood more comprehensively than if people's vulnerability is merely a reflection of that of livelihood activities and crops. Moreover, paying attention to the people and governance aspects of a landscape ensures that the existing capacities of different social groups are identified and strengthened. This approach reflects a more holistic, locally driven and locally appropriate way of reducing vulnerability that is key to 'doing development right'.

'The VRA ... brings further insights on the likely impact of vulnerabilities and risks associated with climate change on the lives and livelihoods of the community in question. We are then better informed when making decisions relating to the support we provide to communities ... the VRA helps ensure our support – aiming for more transformative livelihoods – is better placed.'

– Mohammed-Anwar Sadat Adam,
Economic Justice Programme and
Campaigns Manager, Oxfam in Ghana



Knowledge Group members and facilitators walk around one of the communities in the landscape to look at specific impacts of hazards. Photo: Oxfam in the Philippines

4. To be truly inclusive, the VRA requires working hard at the preparation stage.

A VRA can be implemented in a very short space of time. However, on reflection, some practitioners regret not dedicating enough time to the preparation stage to ensure their VRA processes were sufficiently inclusive. Incorporating an understanding of vulnerability ‘adjusted’ to the reality of the community and the different actors in the landscape requires time *in advance* of the workshop to ensure the *active and effective* participation of Knowledge Group members representing particularly marginalized and vulnerable groups. This means three things: ensuring that these groups are represented in the Knowledge Group; that any barriers to these Knowledge Group members are removed as far as possible; and that – ahead of the VRA – opportunities are created for the voices of these vulnerable groups to be heard by their respective Knowledge Group member.

Some barriers are deeply entrenched and others are slightly more straightforward to address. For example, on the latter, as Janice Ian Manlutac recalls, ‘I remember once I had a participant from a rural area attending a big workshop in the city and she was so overwhelmed by the elevators, high tech toilets and newness of the urban setting that it affected her confidence level in the actual workshop.’

In some cases, representatives of vulnerable social groups may already have some experience of workshops in their previous work with local NGOs, but where that is not the case, think about if and to what extent they will feel comfortable with the VRA methodology and, in particular, speaking about their issues in front of other members of the Knowledge Group. Spending time preparing those representatives ahead of the VRA (e.g. holding mock VRA exercises) will help to mitigate anxieties and ensure all voices are heard. Remember, for the VRA to inspire transformational outcomes, power imbalances need to be actively addressed, even if initially just temporarily during the two-day workshop, so that the disempowered are empowered and can effect change.

Box 10: Tools and methodologies to complement the VRA

The Planning and Facilitation team may consider adding new elements to the VRA methodology to further strengthen the outcomes – whether this is done immediately before, during or after the VRA itself. Examples include:

- Net-Map as a way to identify key stakeholders and understand the ways in which they are and are not interacting, and build strategies for influencing
- PCVA for a better understanding of community-level context and a smooth transition to the landscape-level analysis
- Rapid Care Analysis to enhance the Knowledge Group's understanding of care-related activities and impacts on women
- The ACCRA climate resilience game to enhance understanding about the principle of flexible and forward-looking decision making
- PICSA (Participatory Integrated Climate Services for Agriculture) to better inform the assessment of vulnerability and the design of responses

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NOTES

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