

CGE Training Materials for Vulnerability and Adaptation Assessment

Chapter 10 Communication of Vulnerability and Adaptation Assessment in National Communications

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10.1. Introduction

The preceding chapters of these training materials provide guidance to Parties not included in Annex I to the Convention (non-Annex I Parties) on how to plan and implement a vulnerability and adaptation (V&A) assessment as part of a Party's national communication. This chapter focuses on how to communicate the assessment results effectively.

Within the context of a Party's complete national communication, a compelling V&A section can achieve multiple complementary objectives, including:

- Satisfying the reporting requirements of the Convention
- Communicating key V&A findings to policymakers, especially identifying the most critically vulnerable areas
- Engaging international stakeholders, such as donors, non-governmental organizations (NGOs) and United Nations agencies;
- Contributing to climate change communication efforts;
- Promoting the mainstreaming of climate change adaptation.

This chapter provides suggestions for cross-cutting communication approaches relevant to developing all components of the V&A section of a national communication. It addresses communication planning (including consideration of the communication purpose, target audience, key messages and stakeholder outreach), writing the section, designing an effective format, and using graphics to convey information to readers visually. Special considerations for individual components of the V&A assessment – methods, vulnerability assessment results and adaptation strategies and measures – are included as applicable. This chapter also compiles examples from the most recently submitted national communications of non-Annex I Parties (i.e. national communications that have been posted on the United Nations Framework Convention on Climate Change (UNFCCC) website as of 1 April 2015).¹ The chapter ends with a communication checklist to help assess if the V&A section successfully meets key communication criteria.

10.2. Communication planning

The national communication can serve as a strategic communication tool for non-Annex I Parties to inform and engage multiple audiences on impacts and actions related to climate change. Non-Annex I Parties can choose to develop a formal communication plan for their national communication that guides the overarching communication objectives; audience analysis; development of key messages; selection of communication tools, platforms and channels; and an action plan related to the overall

¹ Available at: <http://unfccc.int/national_reports/non-annex_i_natcom/submitted_natcom/items/653.php>.

national communication and any associated information products (e.g. fact sheets, briefings).

If there is an overall communication plan for the national communication, is important to ensure that the V&A section of the national communication conforms to this plan. However, regardless of whether a national-level communication plan has been developed, the V&A assessment team can benefit from a thoughtful approach to how communication and outreach stemming from the V&A assessment can contribute to and coordinate with communication and outreach for the national communication as a whole.

Therefore, it is important for the V&A assessment team to thoughtfully plan the section to ensure that V&A results will be clearly described and visually presented in a way that communicates these findings effectively to readers. This involves understanding and defining the purpose of the V&A assessment (including how the assessment is intended to function within the national communication as a whole), and identifying the communication objectives, target audiences, key messages and stakeholder outreach and involvement approaches that will ensure this purpose is achieved. Sections 10.2.1–10.2.5 describe each of these aspects of communication planning.

10.2.1. Purpose of the vulnerability and adaptation section of national communications

The UNFCCC stresses the importance of ensuring that national communications address the requirements of the Convention in an effective manner. The purpose of the V&A section is to communicate the results of V&A assessments, including identifying the greatest vulnerabilities and the most urgent adaptation measures.

More specifically, by decision 17/CP.8 the Conference of the Parties (COP) adopted the revised, *Guidelines for the Preparation of National Communications from Parties Not Included in Annex I to the Convention*² (the UNFCCC guidelines), which provide specific requirements for the content of national communications. Important requirements for the V&A section outlined in the UNFCCC guidelines include:

Paragraph 32. Non-Annex I Parties are encouraged to provide information on the scope of their vulnerability and adaptation assessment, including identification of vulnerable areas that are most critical.

Paragraph 33. Non-Annex I Parties are encouraged to include a description of approaches, methodologies and tools used, including scenarios for the assessment of impacts of, and vulnerability and adaptation to, climate change, as well as any uncertainties inherent in these methodologies.

Paragraph 34. Non-Annex I Parties are encouraged to provide information on their vulnerability to the impacts of, and their adaptation to, climate

² Available: http://unfccc.int/national_reports/non-annex_i_natcom/guidelines_and_user_manual/items/2607.php.

change in key vulnerable areas. Information should include key findings, and direct and indirect effects arising from climate change, allowing for an integrated analysis of the country's vulnerability to climate change.

Paragraph 35. Non-Annex I Parties are encouraged to provide information on and, to the extent possible, an evaluation of, strategies and measures for adapting to climate change, in key areas, including those which are of the highest priority.

Paragraph 36. Where relevant, Parties may report on the use of policy frameworks, such as national adaptation programmes, plans and policies for developing and implementing adaptation strategies and measures."

As described in the preceding chapters, the V&A assessment team will design and implement its analysis to collect information that fulfils these requirements. Reporting on the V&A assessment requires a clear and concise description and synthesis of these results. The V&A section of the national communication should enable readers to interpret the results effectively, to understand which vulnerabilities are of greatest concern and to identify the most urgent adaptation measures.

10.2.2. Communication objectives

It is important to define one or more communication objectives that the V&A assessment should achieve. Why communicate the results of the assessment?

On a high level, the communication objectives can entail:

- Raising awareness, informing and influencing;
- Changing attitudes;
- Changing behaviour.

More specifically, an essential objective for communicating about the V&A assessment is to address the requirements of the Convention.

Examples of communication objectives include:

- Translate scientific information on climate change vulnerabilities into language and timescales that are appropriate for policymakers;
- Support in-country agencies as they implement adaptation strategies;
- Communicate at the international level through the processes set out by the UNFCCC;
- Share lessons learned with other non-Annex I Parties;
- Use the V&A results to educate audiences about climate concerns and how climate change may affect them.

Once the communication objectives have been defined, it is possible to determine target audiences, messages, and stakeholder outreach techniques.

10.2.3. Target audiences

The UNFCCC also stresses the importance of communicating to key stakeholders, providing maximum benefit to policymakers and promoting strategic and operational climate mainstreaming (see chapter 9). These stakeholders can include:

- Members of the team who are developing the national communications;
- The UNFCCC and the COP, including the national project coordinator, the thematic working group (TWG) on V&A to Climate Change, other relevant TWGs and other non-Annex I Parties;
- Governments (e.g. chief executive offices; ministries, including environment, finance and sector ministries; subnational bodies; and legislature);
- NGOs (e.g. civil society, academia, business and industry, environment organizations, academic and research institutions, general public and communities, and the media);
- Development actors (e.g. donors and NGOs);
- Other audiences that the V&A or national communication teams deem to be important.

It is necessary to consider target audiences when reporting on the V&A assessment because needs and perspectives of the audiences should inform the content, format and other important communication decisions, including selection of messages to use and tactics for delivering them. When identifying specific audiences, it is important to include those who:

- Can be affected by climate change and ought to be aware of the vulnerabilities they may face, as well as adaptation options;
- Need to understand the potential consequences of climate change as they make decisions on emissions of greenhouse gases;
- Can provide support for, or be a barrier to, implementation of adaptations.

The drafters of national communications can tailor the V&A section to their target audiences, communicating the results in ways that are meaningful to these audiences. This will typically involve serving the needs of both non-technical and technical audiences using synthesized information and technical appendices (UNFCCC, 2008). It is important to translate information on climate change vulnerabilities from scientific research into language and timescales appropriate for policymakers. This ensures clear communication at the international level (through formal UNFCCC and other processes), and supports in-country policymakers in the implementation of adaptation strategies.

Another distinction to consider when communicating V&A assessment results is the difference between national-level audiences and international audiences. National-level audience groups, such as leaders and staff of other climate- and non-climate-related government agencies, are essential participants in developing the integration and mainstreaming analysis section of the V&A assessment. As discussed in chapter 9, integration involves understanding the interrelationships between multiple climate and

non-climate sectors. Mainstreaming focuses on tools and approaches to incorporate V&A assessment outcomes in national planning – thus ensuring that climate change is considered in development priorities. Both considerations require communication and coordination among the national communication team and representatives from a wide range of government agencies, such as human health, energy, tourism, transportation and economic development agencies. Thus, developing the national communication requires outreach to these other agencies (see also section 10.2.4), as well as ensuring that the national communication translates information about integration and mainstreaming in ways that are relevant and clear to these audience groups.

International audience groups also represent a range of needs and perspectives. For example, a national communication provides information that is relevant to the achievement of the objectives of the Convention. Thus the V&A assessment content and messaging should address the needs of the COP. Another important international audience is non-Annex I Parties who are writing their own national communications and can benefit from seeing how other Parties are addressing these needs.

10.2.4. Key messages

Developing effective messaging entails identifying and appropriately highlighting salient findings about V&A that emerge from the V&A assessment, as well as considering how to monitor the effectiveness of V&A communication efforts in light of the specific objectives of a country's national communication.

It is also important to create consistent messages that are audience-specific, where appropriate. For example, some audience groups may have a better understanding of the scientific information presented, whereas others will need additional content that explains the scientific information.

Finally, it is essential to understand how the audience perceives the credibility of the results. The target audience needs to know that the results are trustworthy, provide transparency, and are based on evidence. Therefore, it is important to clearly articulate uncertainties, limitations and caveats associated with all the information presented in the V&A assessment, especially, for example, when describing: the use of data, analytic tools and methods; the findings; and the development of vulnerability assessments and adaptation options. V&A analyses are especially sensitive to uncertainty because they involve future changes in socioeconomic and climate conditions that cannot be predicted (see chapters 3 and 4).

Some good practices to follow when addressing uncertainties include:

- Be open about the consequences of uncertainty;
- Ensure that discussions of uncertainties are easy to find within the V&A section;
- Describe limitations, assumptions and other uncertainties clearly – and avoid complex or obscure language – so all audiences will understand the underlying issues;
- Consider the different information needs and perspectives of the various audience groups when discussing uncertainty;

- Be sure to emphasize what is known as well as what is not known. For example, it is unequivocal that the climate is changing and that this already has and will have future implications for society and the environment;
- Ensure the overall messages based on assumptions about uncertainty are useful and credible to the various audiences.³

10.2.5. Stakeholder outreach

International experience has shown the importance of using national communications as strategic public awareness tools. The UNFCCC stresses the importance of establishing institutional arrangements and stakeholder engagement as part of the overall national communications process (UNFCCC, 2013), and also when conducting a V&A assessment (UNFCCC, 2009).

Engaging with stakeholders during the national communication process can serve two important functions. First, including a broad range of national and international stakeholders in developing the national communication, including the V&A assessment, can help to ensure that all sectors are not only represented in the assessment, but accept the national communication, and have an incentive to act on it. Stakeholder engagement is important throughout the assessment process. It is very important to involve stakeholders:

- At the beginning of the process when defining objectives (e.g. focus on vulnerability or adaptation – see chapter 2);
- When selecting timeframes for analysis and socioeconomic and climate change scenarios (see chapters 3 and 4);
- When selecting sectors for analysis and determining how to conduct the analysis (see chapters 5–8);
- When, if appropriate, selecting regions or localities to assess in depth;
- When integrating results and examining adaptation (see chapter 9).

For instance, when assessing the lessons learned from its first national communication, an Indian project team found that high-level ownership of the project by policymakers from all sectors was essential. Their first national communication team sought participation from policymakers, researchers and industry across a range of national-level sectors. This stakeholder outreach helped to deliver broad acceptance of the national communication across all sectoral ministries, created a favourable environment for integrating climate concerns during sectoral planning, and helped to sustain support for the climate change process. The project team recommended that future national communications expand stakeholder participation to include participants from village, district and state-level agencies and the private sector (Bhattacharya, 2007).

³ Based on ClimateADAPT (Undated) and Klopogge, van der Sluijs and Wardekker (2007).

A second important reason to conduct outreach to stakeholders is to help educate audiences about climate concerns and how climate change may affect them. As described in section 10.2.4, the messages developed for the V&A section of the national communication should address non-technical audiences and other audience groups who can benefit from learning about climate V&A. It is also important to note that non-Annex I Parties have the opportunity to describe how they conduct public awareness outreach to their stakeholders in the Education, Training, and Public Awareness section of their national communications.

More specifically, stakeholder involvement results in many benefits, including to:

- Help parties (UNFCCC, 2013) to:
 - Meet their V&A assessment reporting requirements;
 - Build national capacities and ensure sustainability of reporting processes;
 - Inform national and international policymakers;
 - Assist in institutionalizing activities related to reporting on climate change;
- Strengthen national climate change policymaking by (UNFCCC, 2013):
 - Enhancing coordination and intersectoral-interagency dialogue;
 - Raising awareness among various stakeholders, including private and public institutions;
 - Facilitating consultation and establish relationships among stakeholders;
- Provide overall support for national communications and the V&A assessment, including (Tetra Tech, Undated):
 - Building trust and support for national communication processes and actions;
 - Sharing the responsibility for decisions or actions;
 - Helping to ensure that solutions will be adopted;
 - Leading to better, more cost-effective solutions;
 - Forging stronger professional relationships;
 - Enhancing communication and coordination of resources;
 - Helping to identify environmental justice and other critical concerns at an early stage.

Table 10-1 describes the basic steps of a stakeholder engagement process.

Table 10-1
Stakeholder engagement process steps

Plan and prepare
<ul style="list-style-type: none"> • Determine the engagement objective and goal • Identify stakeholders who need to be engaged • Identify existing platforms and networks through which stakeholders can be engaged • Define type of engagement (e.g. information sharing, consultation, collaboration, joint decision-making, empowerment) • Identify major themes that will be the focus of engagement • Determine how engagement will be conducted (e.g. personal contact, communication products) • Develop guidelines, processes, and timelines for the engagement process • Determine necessary human and financial resources • Establish mechanisms for conflict resolution • Include stakeholders throughout this planning process
Implement
<ul style="list-style-type: none"> • Discuss implementation process with stakeholders, and adjust as appropriate • Undertake planned activities, providing stakeholders the opportunity to comment on draft documents • Disseminate decisions, reports, and findings to stakeholders
Review
<ul style="list-style-type: none"> • Assess stakeholder engagement process performance • Adjust ongoing or new processes based on outcomes

Source: Based on Daviet, Mabel and Halverson, 2011, Box 1.

Table 10-2 presents several useful resources that provide general information about communication planning, stakeholder outreach and addressing communication uncertainty.

Table 10-2
Selected communication planning resources

Resource	Type	Description	Link
Clime-ADAPT: European Climate Adaptation Platform, How to Communication Uncertainty?	Website	Website addresses communication uncertainty in climate adaptation decision-making. Topics include lessons in communicating uncertainty, how to present uncertainty and how European national portals communicate uncertainty.	http://climate-adapt.eea.europa.eu/uncertainty-guidance/topic3 .
Communications Planning: Getting the Right Messages Across in the Right Way	Website	Website provides a step-by-step worksheet for creating a communication plan.	http://www.mindtools.com/CommSkill/CommunicationsPlanning.htm

Resource	Type	Description	Link
Community Toolbox: Section 1. Developing a Plan for Communication	Website	Website describes the key steps involved in writing a communication plan. Although written for community-based organizations, the information is useful for most organizations and agencies.	http://ctb.ku.edu/en/table-of-contents/participation/promoting-interest/communication-plan/main
A Draft Framework for Sharing Approaches for Better Multi-Stakeholder Participation Practices	PDF	Report by the UN-REDD (United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation) describes lessons learned about stakeholder participation practices. It is intended to help decision makers improve the effectiveness of such processes by learning from other partners' experiences and beginning to identify best practices.	http://www.undp.org/content/undp/en/home/librarypage/environment-energy/climate_change/a_draft_framework_for_sharing_approaches_for_better_multi-stakeholder.html
Template for Strategic Communications Plan	Website and PDF	Website provides access to a template to help create a strategic communication plan.	https://www.wkkf.org/resource-directory/resource/2006/01/template-for-strategic-communications-plan
Toolkit for non-Annex I Parties on Establishing and Maintaining Institutional Arrangements for Preparing National Communications and Biennial Update Reports	PDF	Toolkit provides information to help non-Annex I Parties establish and maintain national institutional arrangements to meet the reporting requirements for their national communications. It describes the importance of institutional arrangements and lessons learned from the national communication process.	http://unfccc.int/files/national_reports/non-annex_i_natcom/training_material/methodological_documents/application/pdf/unfccc_mda-toolkit_131108_ly.pdf
Uncertainty Communication: Issues and Good Practice	PDF	Report offers background information on uncertainty communication, and presents suggestions and guidance on how to communicate uncertainties in environmental assessment reports to several target audiences in an adequate, clear and systematic way.	http://www.nusap.net/downloads/reports/uncertainty_communication.pdf
Writing a Communication Strategy	PDF	Report provides a brief summary of how to write a communication strategy, including ten key considerations for the communication plan.	https://gcn.civilservice.gov.uk/wp-content/uploads/2014/04/Writing-a-communication-strategy-GCS-Guide.pdf

10.3. Presentation of findings

Once the V&A assessment has been completed, it is time to decide how to best present the findings. In terms of section content, the UNFCCC guidelines encourage non-Annex I Parties to:

- **Describe their V&A approaches, methods and tools.** The methods discussion should also outline the input data used; climate change and socioeconomic scenarios; limitations, uncertainties and assumptions; and any other information that can aid readers in interpreting the results;
- **Report on vulnerabilities.** The emphasis on presenting ‘key’ vulnerabilities implies that there has been a process undertaken to determine the relative vulnerabilities to climate change across sectors, perhaps undertaken through specific sectoral assessments (see chapters 5–8), or identified in key geographical areas. Methods and approaches to support this process are outlined in chapter 9;
- **Present identified adaptation strategies.** Parties should evaluate or rank adaptations according to possible effectiveness in their country-specific context.

The UNFCCC guidelines encourage countries to present this content in a consistent, transparent, comparable, well-organized and flexible manner. A selection of resources to assist in the presentation of findings is shown table 10-3. The remainder of this section also suggests potential approaches and useful tips for writing, formatting and presenting information visually within the V&A assessment section of the national communication.

Table 10-3

Selected resources on presentation of vulnerability and adaptation assessments and scientific findings

Resource	Type	Description	Link
The UNFCCC Resource Guide Module on Vulnerability and Adaptation	PDF	Document and its companion modules supplement the <i>User Manual for the Guidelines on National Communications from Non-Annex I Parties</i> . ^a It contains a section specifically addressing communication.	http://unfccc.int/resource/docs/publications/08_resource_guide2.pdf
A European Association for the Promotion of Science and Technology Website	Website	Workgroup on science communication was initiated in June 2009. Its main purpose is to share experiences and best practices in communicating topics from the ‘hard’ sciences and humanities with non-experts and a broader audience. The site includes tip sheets on a range of topics including consistency in design, reaching out to communities and stakeholders and using web 2.0 and Twitter.	http://www.euroscience.org/structure/science-communication-workgroup/

Resource	Type	Description	Link
The Vulnerability Sourcebook: Concept and Guidelines for Standardised Vulnerability Assessments	PDF	Resource offers step-by-step guidance for designing and implementing a vulnerability assessment that covers the entire lifecycle of adaptation interventions. It contains a module on presenting the outcomes of a vulnerability assessment.	https://gc21.giz.de/ibt/v/ar/app/wp342deP/1443/index.php/knowledge/vulnerability-assessment/vulnerability-sourcebook/

a. Available: http://unfccc.int/national_reports/non-annex_i_natcom/guidelines_and_user_manual/items/2607.php.

10.3.1. Writing

The drafters of the V&A assessment section should write with a focus on enhancing and facilitating reporting. This should include a clear description of data sources and methods used, a consistent and transparent use of terminology, a technically sound and policy-relevant elaboration of key vulnerabilities and adaptations and a sound representation of uncertainties (UNFCCC, 2009).

Drafters should be thoughtful about the level of detail used to present information. In particular, the discussion of methods should be concise and written in simple language so that a non-technical audience can understand it. A more in-depth description of methods can be placed in an appendix or made available in supporting documents downloadable from a Party's website. With all aspects of the V&A assessment, drafters should consider whether it will be better to collect all relevant information, or to provide summary information that links to additional information in other locations or documents.

Other suggestions for writing the V&A section of the national communication include:

- Write for clarity using simple language (UNESCO, 2006);
- Provide a definition the first time an unfamiliar term appears in the text, or refer readers to a glossary;
- Specify units consistently to simplify comparisons within the section and across national communications;
- Ensure the scientific and technical credibility of underpinning information;
- Prepare technical supporting material that can be placed on Parties' national communication websites;
- Translate V&A assessment findings into information products appropriate for different audiences;
- Collect and provide convenient access to related information products;
- Refer to other national communications for ideas on organization and presentation.

10.3.2. Formatting

In presenting results of V&A assessments in national communications, it is important to keep in mind paragraphs 34 and 35 in the UNFCCC guidelines. These paragraphs call for a 'clear, concise and accessible' description of key vulnerabilities and adaptation. Non-Annex I Parties should use basic formatting practices to ensure the V&A section of the national communication is easy to read and to enable readers to easily digest the information presented in the section.

The UNFCCC guidelines emphasize presenting 'key findings' resulting from a synthesis of assessment information. Effective formatting can prove useful in clarifying and highlighting to readers the sectors, issues and/or geographic areas that are most vulnerable and establishing adaptation options as high priority. Formatting can also be used to draw readers' attention to the unique or most interesting facets of the V&A assessment.

However, too many formatting flourishes can actually get in the way of clearly communicating with audiences. In many instances, relatively simple methods for reporting results can be the most effective.

Other suggestions for formatting the V&A section of the national communication include:

- Use summary boxes to highlight key findings and emphasize important messages;
- Use headings and subheadings to clearly delineate among topic areas;
- Employ techniques to help the reader navigate the document efficiently (e.g. internal links and bookmarks within the PDF document).

10.3.3. Presenting information visually

As the [drafting] team develops the V&A section of the national communication, it is important to reflect on the text and identify areas where readers' comprehension may benefit from presenting the content using graphics. Communication research shows that pairing words effectively with visual elements enhances attention, memory, recall and believability (Resource Media, 2013).

Approaches, methods and tools. Although this component of the V&A section may not always lend itself to visual presentation, the drafting team should still try to use scenarios and summary visuals (e.g. tables, lists, conceptual illustrations) to help attract readers' attention and foster comprehension. (See figure 10-3 in the Examples section of this chapter to see how Jordan's third national communication addressed this challenge.)

Vulnerability results. Vulnerability assessment results are often presented in national communications using a combination of descriptive narrative text, aided by selected summary tables and figures. Summary maps, tables and diagrams can often aid in communicating vulnerability assessment results. If presented well, these can provide powerful images of potential impacts. The key is organization, clarity and simplicity.

Photographs are another type of graphic that can prove useful in illustrating results. Although inclusion of any photographs will add visual interest to the format of the V&A assessment section, consider how photographs can be used to support the key findings. For instance, can photographs help visually demonstrate the climate change impacts that make adaptation necessary in vulnerable areas of the country? (See figure 10-1 for several examples drawn from national communications.)

Adaptation results. Unlike the presentation of vulnerability assessment results, adaptation results are often presented as narrative text. A clearer way of presenting adaptation results is to use tables or bullet point lists, which allow the reader to quickly see the key proposed adaptation options and strategies or to differentiate between sector adaptations. It also makes it possible for adaptations to be evaluated or ranked, which aid in integration and mainstreaming (see chapter 9).

General considerations for visual presentation. Table 10-4 summarizes additional suggestions for presenting information visually in the V&A section of the national communication. Table 10-5 outlines how to use different types of graphics to illustrate V&A assessment findings (e.g. when presenting geographical comparisons, use a map). The examples are for illustration purposes only.

Table 10-4

Tips for visual presentation^a

Visual element	Visual presentation tips
Selecting visual elements	<ul style="list-style-type: none"> • Identify the message you want to communicate visually. • Select an appropriate graphic. Remember that not every type of visual element will work in every context, so choosing the right type is crucial.
Using photographic imagery ^b	<ul style="list-style-type: none"> • Ensure relevancy to the non-visual content of the vulnerability and adaptation (V&A) assessment. • Include adequate description (e.g. who, what, when, where and why) in photograph captions. • Credit the photographer. • Select clear, well-focused images. • When working with digital photographs, use high-resolution images (i.e. at least 300 pixels per inch). • Remember that using an unclear image (either in terms of quality or subject matter) can hamper the clarity of your message.

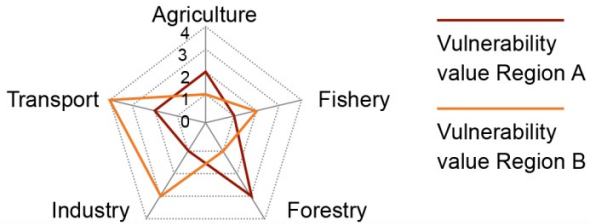
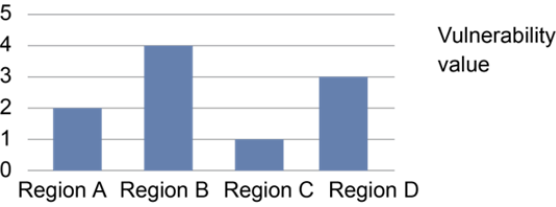
Visual element	Visual presentation tips
Designing high-quality visual elements	<p>Fonts</p> <ul style="list-style-type: none"> • Use readable fonts. Carefully consider font colour and style. Ideally, the size of the font should be no smaller than 8 point in a graphic. • Use fonts consistently. Do not use multiple fonts in visuals. San-serif fonts generally work best in graphics. <p>Charts</p> <ul style="list-style-type: none"> • Orient bar charts for minimal use of vertical text. • Make sure charts have a reasonable amount of data. Too much data can make the chart difficult to interpret. If there is a significant amount of data, consider dividing the chart into two parts or, if possible, increasing the size of the chart. • Ensure that charts can be clearly interpreted and are not misleading. • Always provide the source and year of the data underlying graphics. • Insert titles and captions or descriptive text with graphics. Keep in mind that not all readers will read the accompanying text, so ensure that the graphic designs also incorporate the information required to correctly understand them. • Use two-dimensional bar and pie charts. Three-dimensional bar and pie charts can sometimes make it difficult to interpret the numerical data. <p>Other^c</p> <ul style="list-style-type: none"> • Ensure that small tables do not break across pages. Repeat row headers for larger tables. • Explain all graphic elements in the main text of the V&A assessment section and use in-text references to point to the elements. • Use in-text explanations, captions, and/or other descriptions to ensure that the purpose of the element is completely clear to the reader. They can also be used to highlight how the visual elements support key findings or messages. • Use an appropriate resolution when inserting images into a document in order to ensure that visual elements do not appear blurry in the final version. For example, when using Microsoft Word, ensure that the program is not compressing inserted images when converting to PDF.
Producing visual elements	<ul style="list-style-type: none"> • Make graphics readable. • Ensure that visual elements are of sufficient size to read easily and have sufficient surrounding space to not feel crowded. • Ensure that text appearing on top of a graphic element has enough colour contrast to be visible. • Where possible, produce high-resolution PDFs.

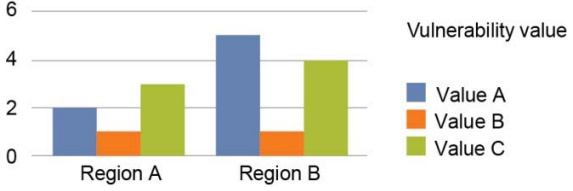
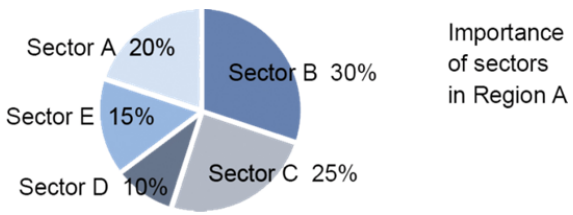
a. Some tips on this list drawn from GIZ, 2014.

b. Information adapted from USAID, 2005.

c. NPS, 2014.

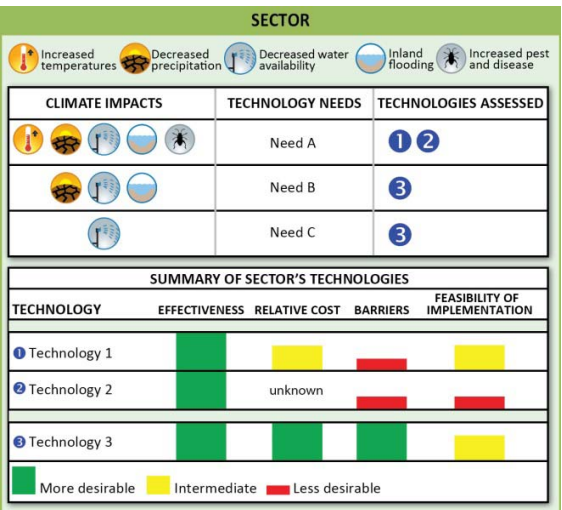
Table 10-5
Summary of types of visual elements

	Type	Scope	Example of use in vulnerability and adaptation assessment	Implementation tips
Radar chart	 <p>A radar chart comparing vulnerability values for Region A (red line) and Region B (orange line) across five sectors: Agriculture, Fishery, Forestry, Industry, and Transport. The chart has five axes, each labeled with a sector name and a scale from 0 to 4. Region A generally shows higher vulnerability values than Region B, particularly in Agriculture and Forestry.</p>	<ul style="list-style-type: none"> Illustration of complex (multi-dimensional) interrelations 	<ul style="list-style-type: none"> Illustrating different components of a composite indicator Illustrating vulnerability of sectors across different regions 	<ul style="list-style-type: none"> Can be cumbersome for the reader; reader may miss important variables Ensure all categories have the same weighting Use no more than five to seven axes for optimal clarity Use same orientation for all axes (best value inside or outside the chart)
Bar chart	 <p>A bar chart showing vulnerability values for four regions: Region A, Region B, Region C, and Region D. The vertical axis is labeled 'Vulnerability value' and ranges from 0 to 5. Region B has the highest value (4), followed by Region D (3), Region A (2), and Region C (1).</p>	<ul style="list-style-type: none"> Illustration of the frequency with which a variable occurs in different categories Useful for ranking lists 	<ul style="list-style-type: none"> Comparing vulnerability (or one of its components) in different regions or sectors Depicting a variable (such as literacy) in different regions 	<ul style="list-style-type: none"> Use horizontal axis for categories Use vertical axis for values/frequency

	Type	Scope	Example of use in vulnerability and adaptation assessment	Implementation tips
Grouped bar chart	 <p>Vulnerability value</p> <p>Value A Value B Value C</p>	<ul style="list-style-type: none"> Comparison of values in different categories 	<ul style="list-style-type: none"> Comparing impact on or vulnerability of different sectors in different regions Comparing different vulnerability components (e.g. sensitivity, adaptive capacity) in different sectors or regions 	<ul style="list-style-type: none"> Recommended for use instead of a radar chart Use readily distinguishable colours to help the reader comprehend the graph at a glance
Pie chart	 <p>Importance of sectors in Region A</p> <p>Sector A 20% Sector B 30% Sector C 25% Sector D 10% Sector E 15%</p>	<ul style="list-style-type: none"> Illustration of percentage shares of a whole 	<ul style="list-style-type: none"> Illustrating breakdown of a composite indicator Comparing importance of individual vulnerability variables Illustrating survey results (e.g. on adaptive capacity) Describing the importance of sectors, crops or other factors in a region 	<ul style="list-style-type: none"> Provide percentages for each segment Keep segments grouped together rather than separated from the whole or 'exploded', unless using an exploded segment to illustrate a finding

	Type	Scope	Example of use in vulnerability and adaptation assessment	Implementation tips
Stock chart	<p>Emissions Source</p> <p>Study</p> <p>Doe et al. (2005)</p> <p>Doe et al. (2009)</p> <p>Doe et al. (2007)</p> <p>Doe et al. (2012)</p> <p>-0.5 -0.25 0 0.25 0.5</p> <p>Estimated Forcing (W/m²)</p>	<ul style="list-style-type: none"> Illustration of ranges under different scenarios 	<ul style="list-style-type: none"> Illustrating different emissions scenarios 	<ul style="list-style-type: none"> Use readily distinguishable colours to help the reader comprehend the graph at a glance
Stacked bar chart	<p>Potential impact</p> <p>Impact A</p> <p>Impact B</p> <p>Region A Region B Region C Region D</p>	<ul style="list-style-type: none"> Comparison of summarized values Depiction of relative frequencies 	<ul style="list-style-type: none"> Illustrating aggregated values such as potential impact, which is here broken down into exposure and sensitivity; or the overall vulnerability in different regions showing the three vulnerability components 	<ul style="list-style-type: none"> Do not include too many variables; the chart becomes more confusing the more each bar is subdivided
Line chart	<p>Impact without adaptation</p> <p>Impact with adaptation</p> <p>1800 1900 2000 2100 2200</p>	<ul style="list-style-type: none"> Illustration of timelines and trends Illustration of functional connections between two elements Comparison of different prospective trends 	<ul style="list-style-type: none"> Illustrating trends in climate signals or socioeconomic variables over time Illustrating change in vulnerability (or one of its components) over time 	<ul style="list-style-type: none"> Can be used for a large amount of data points on the horizontal axis Good choice for continuous data (where an infinite number of values is possible)

	Type	Scope	Example of use in vulnerability and adaptation assessment	Implementation tips
Map	<div> <div> Current <p>Rainfall value High Low</p> </div> <div> Mid-century <p>Rainfall value High Low</p> </div> <div> End-century <p>Rainfall value High Low</p> </div> </div> <p>Figure. Rainfall amount ranges for the current and projected mid and end century</p>	<ul style="list-style-type: none"> • Illustration of spatially oriented information • Illustration of high-level views of data 	<ul style="list-style-type: none"> • Presenting information on key environmental challenges (e.g. water scarcity, soil degradation, loss of biodiversity) and existing infrastructure • Identifying 'hot spots' of vulnerability (i.e. areas with high potential impact and low adaptive capacity) • Effective for geographical comparisons 	<ul style="list-style-type: none"> • Side-by-side maps effectively demonstrate change over time • Provide a scale, legend, a north arrow and labels for key elements in maps to avoid misinterpretation
Infographic		<ul style="list-style-type: none"> • Illustration of important findings within data 	<ul style="list-style-type: none"> • Displaying a visual narrative of vulnerabilities • Illustrating key findings • Synthesizing information 	<ul style="list-style-type: none"> • Use infographic to emphasize key messages • Helps target non-technical audiences

	Type	Scope	Example of use in vulnerability and adaptation assessment	Implementation tips
Specialized ranking scale table	 <p>The infographic is titled 'SECTOR' and shows climate impacts (Increased temperatures, Decreased precipitation, Decreased water availability, Inland flooding, Increased pest and disease). It then lists technology needs (Need A, Need B, Need C) and the technologies assessed (Technology 1, Technology 2, Technology 3). A summary table evaluates these technologies based on effectiveness, relative cost, barriers, and feasibility of implementation. A legend indicates that green bars represent 'More desirable', yellow bars represent 'Intermediate', and red bars represent 'Less desirable'.</p>	<ul style="list-style-type: none"> Displays rankings according to quantitative or qualitative criteria 	<ul style="list-style-type: none"> Facilitating evaluation of adaptation strategies 	<ul style="list-style-type: none"> Consider not only the colour of bars, but also their height to help the reader easily compare options

Content in this table is adapted from GIZ, 2014.

Additional sample elements are drawn from:

Map: Uganda, 2014.

Infographic: USAID, 2014.

Specialized ranking scale table: ADB, 2014.

10.4. Examples

This section demonstrates the practices described above through examples from recent national communications.

Figure 10-1 provides examples of how to use photographs to illustrate key concepts and improve readers' understanding of the text.

Figure 10-1
Examples demonstrating guidance for use of imagery



Plate 7.2: Characteristic open channel irrigation in Nigeria

Incorporate scale in photographs. The image above shows an irrigation ditch. Including the person's leg provides a sense of scale to help the reader accurately assess the size of the ditch.

Before and after photographs can improve understanding of the text.



Bird's-eye view of the SSTEC in 2008. The original site comprised non-arable saline land and polluted water bodies.



Bird's-eye view of the SSTEC in 2014. The site has since been transformed into a green city with tree-lined roads and lushly landscaped housing estates.

Sources:
Left: Nigeria, 2014.
Right: Singapore, 2014.

Figure 10-1 (cont.)

Examples demonstrating guidance for use of imagery



Photo. Consequences of mudflow in the Khoroson area, Khatlon region.

Use photographs that show vulnerabilities in a clear way. Use caution with images that show human devastation. Make sure to display them in a proper context. Note that the lower left image shows flooding and the image on the right shows potential of flooding.



Photo. Urban settlements in Dushanbe



Photo. Typical rural settlement in mountainous area

Use photographs that improve readers' understanding of the text. The images on the left show the differences between rural and urban housing in Tajikistan.

Sources:

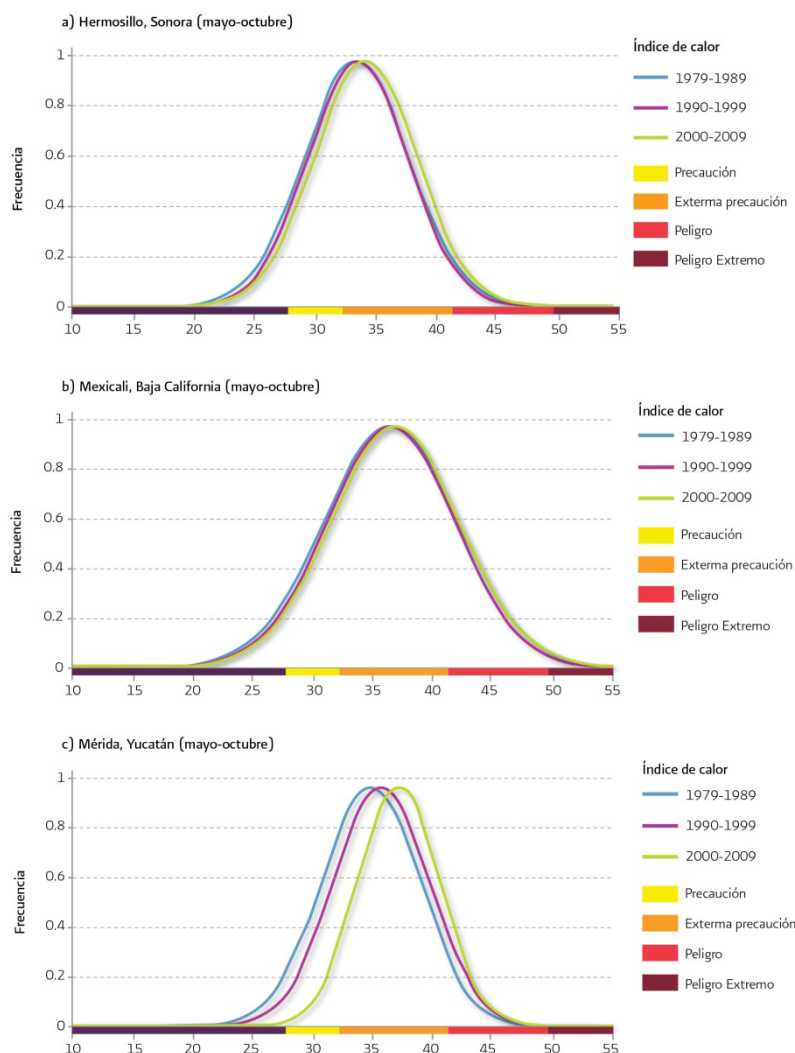
Top left/ right: Philippines, 2014.

Bottom left: Tajikistan, 2014.

Figure 10-2 displays a series of charts that use colour and other formatting choices to increase readability.

Figure 10-2
Example of use of colour to enhance readability of charts

Figura III.10. Índice de calor



Fuente: NARR, 2010.

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Source: Mexico, 2012.

Figure 10-3 displays a series of tables that contribute to effective presentation of methods.

Figure 10-3

Examples of effective presentation of information using tables**Table 4.7: Likelihood scale used to assess future climate projections**

Qualitative measure	Rare	Unlikely	Possible	Likely	Extremely likely
Description	Event not expected to occur, but possible (<5% probability of occurrence per year in 2050s)	Event unlikely to occur, but not negligible (5-33% probability of occurrence per year in 2050s)	Event less likely than not, but still appreciable chance of occurring (33-66% probability of occurrence per year in 2050s)	Event more likely to occur than not (66-95% probability of occurrence per year in 2050s)	Event highly likely to occur (>95% probability of occurrence per year in 2050s)

Table 4.8: Geographical magnitude scale used to assess future climate projections

Qualitative measure	Negligible	Limited	Significant	Very significant	Widespread
Description	<5% of the area is concerned	5-33% of the area is concerned	33-66% of the area is concerned	66-95% of the area is concerned	>95% Of the area is concerned

Table 4.9: Confidence scale used to assess future climate projections

Qualitative measure	Description
Very high confidence	> 9 out of 10 chance
High confidence	8 out of 10 chance
Medium confidence	5 out of 10 chance
Low confidence	2 out of 10 chance
Very low confidence	< 1 out of 10 chance

Source: Jordan, 2014.

Figure 10-4 displays a table that compiles adaptation-related information.

Figure 10-4
Example of a table of adaptation-related information

Table 3.3. Technologies that have been adopted to cope with the impact of climate change	
Technology	Description
Palay Check	Integrated rice crop management system which helps farmers to manage rice crops according to targets (right timing, synchronous planting, etc.) to avoid overlapping of insects and disease
Leaf Color Chart (LCC)	A tool to help farmers manage nitrogen fertilizer input
Palayamanan	A system which allows farmers to venture into vegetables, fish and livestock production to complement income from rice
Alternate Wetting and Drying (AWD)	Controlled irrigation depending on the water needs of the crop during its different stages
Site-Specific Nutrient Management (SSNM)	Management tool that allows farmer to "feed" rice with nutrients as and when needed
Farmers' Field School (FFS)	An extension service to provide farmers information/advice on the various technologies and how to use climate forecasts in farm management
Aerobic Rice	Technology which: uses inbred and early maturing rice line, direct or furrow-seeded on unflooded field; requires less labor, less water and less farm inputs (less production costs); is more tolerant to weeds and pests; and allows for two rice crops per year with as much as 7t/ha yield
GIS Mapping Technology	A tool to identify drought-prone areas for determining crops that can be planted in these areas to optimize land use
Low-Intensity Farm Mechanization	Use of a drum seeder (low seeding rate) using only 51 kgs of seeds to plant a hectare
Nutrient Farming Approach	An integrated farming system that allows for no chemical fertilizers and pesticides with two cropping seasons for upland rice with 3.25 t/ha yield
Controlled Irrigation Technology	Technology which gives a 16-35% reduction in water use without reducing yields

Source: Philippines, 2014.

Figure 10-5 displays a map that conveys information on climate threats related to drought.

Figure 10-5
An example of using maps to convey information



FIGURA 5.3. Índice de amenaza climática (eventos secos).

Source: Costa Rica, 2014.

Figure 10-6 displays an example of a conceptual illustration that depicts methods for evaluating risks related to food security.

Figure 10-6
An example of a conceptual illustration

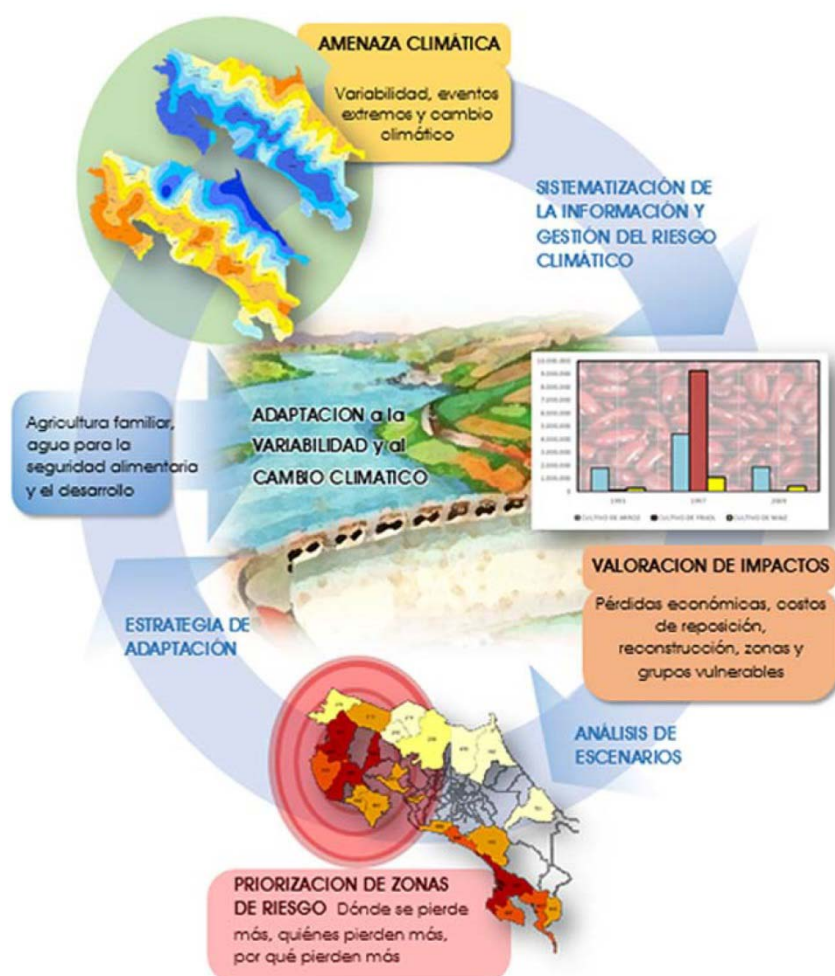


FIGURA 5.7. Esquema de la gestión de riesgo climático para medidas de adaptación.

Source: Costa Rica, 2014.

10.5. Checklist for the vulnerability and adaptation section of national communications

Table 10-6 below presents a checklist template to assess if the V&A section of a national communication successfully meets key communication criteria.⁴

⁴ Based, in part, on criteria developed for UNFCCC, 2008.

Table 10-6
Vulnerability and adaptation communication criteria

Communication topic	Key questions	Check (✓)
Purpose and content	Does the vulnerability and adaptation (V&A) section clearly communicate who and what is vulnerable to climate change?	
	Does the V&A section clearly define the V&A frameworks, methods, tools and models used?	
	Does the V&A section clearly show how vulnerability varies across time and geographic region and across different sectors?	
	Does the V&A section clearly describe where and when adaptation strategies are planned?	
	Does the V&A section clearly describe what needs to be done to ensure that implementation of adaptation strategies will be effective?	
	Does the V&A section clearly describe who will need to adapt to climate change?	
Communication objective	Have you defined one or more communication objectives that you want the V&A assessment to achieve? Is your definition of your target audience, messaging and outreach consistent with your communication objectives?	
Target audience	Have you identified audience groups who have an interest in the V&A section, are likely to provide support for or a barrier to the development of the V&A analysis and could be affected by the analysis?	
	Do audiences include both national- and international-level groups?	
	Do audiences include both technical and non-technical groups?	
Message	Are key messages targeted to your audience groups?	
	Are limitations, uncertainties and caveats of the findings clearly outlined?	
	Are any assumptions and context-specific interpretations outlined transparently?	
Stakeholder outreach	Have you included stakeholders in multiple levels and sectors?	
	Have you considered how to involve stakeholders in the national communication process?	
	Do you plan to conduct outreach about the results of your V&A assessment?	
Writing	Is the V&A assessment written clearly and simply?	
	Is terminology consistent and transparent?	
	Did you proofread and edit the document to ensure that the grammar and spelling are correct and all terms are defined?	
Formatting	Is the format for the V&A section consistent with the overall national communication?	
	Is the formatting simple and effective?	

Communication topic	Key questions	Check (✓)
Visual presentation	Did you use graphical elements that are appropriate for the type of information presented?	
	Did you review all final graphics to ensure they are clear, readable and include all text descriptions and captions?	

10.6. References

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