

Guidance note for planning, contracting and effective backstopping of a Climate Risk and Vulnerability Assessment (CRVA)

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With input and comments from GIZ experts (see Annex)

1	For whom and why this guidance note?	2
2	The Vulnerability Sourcebook approach in brief	3
3	Before you design TORs - considerations for scoping and planning your CRVA.....	4
3.1	Step 1 Understand the context of the CRVA.....	5
3.2	Step 2 - Identify the objectives and expected outcomes	7
3.3	Step 3 - Determine the scope of the CRVA	10
3.4	Step 4 - Implementation	10
4	Consideration for good TORs	14
4.1	Background/context of the assessment	14
4.2	Objective and scope of the assignment.....	15
4.3	Competences required.....	15
4.4	Project governance	16
4.5	Responsibilities of the consultant(s) – Task and outputs	16
4.6	Duration	17
4.7	Responsibilities of GIZ.....	17
5	Consideration for Backstopping during implementation of a CRVA – Do’s and Don’ts	18
6	Evaluation phase, post CRVA phase.....	19
7	List of resources	20
8	Annex	20

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1 For whom and why this guidance note?

The aim of this guidance note is to support GIZ staff in planning, tendering and backstopping a Climate Risk and Vulnerability Assessment (CRVA).

Why do experts overseeing CRVA need (yet) another guidance? Project staff overseeing CRVA might need additional guidance because the task is relatively complex and involves several actors and stakeholders. Common questions raised during the planning of a CRVA include:

- How to write good TORs
- How to steer the project
- How to generate results most relevant for practical adaptation action
- How to ensure that the CRVA is being carried out professionally

The recommendations, tips and tricks given in this guidance are mainly referring to the approach for a CRVA presented by the GIZ Vulnerability Sourcebook¹, its Risk Supplement² and the latest guidebook on Climate Risk Assessment for Ecosystem-based Adaptation (EbA)³.



Figure 1: The Vulnerability Sourcebook, the Risk Supplement and the Guidebook on Climate Risk Assessment for Ecosystem-based Adaptation.

This guidance was compiled by Eurac Research contracted by the Sub-Working Group “Climate Change” of the Sector Network “Climate Change, Livelihoods and Natural Resource Management” (SNRD Africa). It is based on eight interviews (see Annex) with GIZ experts discussing practical experience with CRVAs based on the Sourcebook. Further inputs stem from experiences that Eurac Research collected over the years when developing the concepts of the Vulnerability Sourcebook and its follow-ups as well as when conducting CRVAs in different countries worldwide. The main guidance is structured into sections:

- 3) Before you design TORs - key considerations for scoping and planning your CRVA
- 4) Consideration for good TORs
- 5) Consideration for Backstopping during implementation of a CRVA – Do’s and Don’ts
- 6) Evaluation phase, post CRVA phase.

The bigger chapters 3 and 4 are summarized in boxes with key messages. Recommendations are highlighted in **bold** and in grey boxes for longer recommendations

¹ https://www.adaptationcommunity.net/?wpfb_dl=203

² https://www.adaptationcommunity.net/wp-content/uploads/2017/10/GIZ-2017_Risk-Supplement-to-the-Vulnerability-Sourcebook.pdf

³ <https://www.adaptationcommunity.net/wp-content/uploads/2018/06/giz-eurac-unu-2018-en-guidebook-climate-risk-asessment-eba.pdf>

2 The Vulnerability Sourcebook approach in brief

The CRVA approach of the Vulnerability Sourcebook and its supplement describes a framework suitable for different scales and contexts. Since their publication in 2014 and 2017 respectively they have been widely put to use for vulnerability and risk assessments in the framework of climate change adaptation planning from the local to the national level. The Sourcebook provides step-by-step guidelines to conduct robust vulnerability assessments. Its structure consists of the conceptual framework, the core guidelines with eight modules and individual steps within each module, and a brief chapter on monitoring and evaluation. In its concept the Sourcebook follows the concept of climate change vulnerability as described in the Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC). The Risk Supplement provides guidance how to use the Vulnerability Sourcebook's approach with the IPCC AR5 concept of climate risk.

The Sourcebook approach always starts with a scoping phase, is followed by developing impact chains and in a third highly participative step indicators suitable for quantification are being selected. The subsequently following steps are operational including data processing, weighing of indicators and aggregating of individual indicators to vulnerability components, aggregating of vulnerability components to vulnerability. The core outputs of such a Vulnerability Assessment are usually cartographic maps, graphs and impact chains showing the cause and effect relationships within a sector or thematic field of interest.

Overall Summary: A good CRVA...

- is targeted to the context of the project in which it is embedded (scale, sectors and topics, stakeholder, ...)
- is designed as an integral part of an adaptation process (clear link to adaptation planning and ongoing adaptation activities)
- takes time, in particular for stakeholder involvement and gathering data
- is organised in an interdisciplinary and participative manner involving international and local experts as well key stakeholder and decision makers
- is not only an assessment but also a capacity building activity
- considers vulnerable groups, gender issues, green solution (Ecosystem based Adaptation – EbA)
- is combining quantitative approaches with qualitative and expert based approaches
- is presented in a concise way to key stakeholder and decision makers with key messages and appealing visuals (impact chains, maps)
- is mainstreamed into and capitalized for national and local (adaptation) planning processes
- can serve as a requirement and motivation to access funding for adaptation (Green Climate Funds – GCF, national funds)

3 Before you design TORs - considerations for scoping and planning your CRVA

Key Messages: before you design TORs, do a proper scoping and consider...

- **Objective and outcome of a CRVA – what can you expect?**
 - a CRVA provides information and indication on causes and magnitudes of specific climate impacts and risks for a specific region, specific sectors and/or specific groups of people
 - a CRVA is an assessment, not a completely analytical and objective process.
 - the participatory assessment process itself should be an objective and a valuable outcome and can be considered as a capacity building activity
 - most important outputs are impact chains and maps on Vulnerabilities / Risks and their underlying factors.
- **A CRVA should inform and trigger an adaptation process**
 - define from the beginning how and when a CRVA informs the adaptation processes
 - consider planning the identification of adaptation options already together with a CRVA. If you do so, plan additional time and resources for this step.
 - consider Ecosystem based Adaptation as an explicit approach (see new GIZ guideline on that)
 - consider existing adaptation activities and achievements before you design TORs
- **A CRVA is a time and resource intensive process**
 - time required: a minimum for a very focused study (e.g. sub-national level, small number of spatial units, only one to two sectors) eight months. For a CRVA at the national scale at least one year, if possible longer. An extensive country-wide study covering several sectors will take three years or more
 - two major bottlenecks, reasons for time delays and possible solutions: Stakeholder integration took longer than expected; Data access and collection was much more difficult than expected
- **Who should be actively involved in the CRVA?**
 - a wide involvement of stakeholder and decision maker already in the planning phase before designing the TORs is key to achieve an accepted assessment and foster the adaptation process
 - relevant stakeholders (national studies): national environmental ministries and agencies, line ministries and agencies, national statistical offices, national meteorological services, national Universities, private sector
 - consider stakeholder as provider of data and information and include them in the assessment process
 - GIZ should facilitate the contacts between consultant and the various national ministries.
- **Which data and information are available?**
 - identify before the TORs are designed which data sources might be needed, who owns that data and whether the data will be made available
 - define which climate scenarios, which emissions scenarios have to be considered within the assessment
 - consider if future projections of socio-economic factors for vulnerability and exposure can be included
 - conduct a review of existing CRVA and adaptation projects in the region
 - consider qualitative approaches as an alternative and complementary way to get information
- **For larger projects: Consider a scoping or feasibility study before you start with the CRVA**

The first and most important step when designing a CRVA is a thorough **scoping** of the context and the objectives of the assessment itself. This step should be carried out by GIZ in cooperation with key stakeholders and decision makers **before the TORs are developed** and the assessment is tendered. Afterwards, a fine tuning and review of the scoping should be included in the TORs as a first step of the assessment (see chapter 3). **For larger studies it may be useful to design the scoping and planning phase as a project by itself (feasibility study)**. Major decisions how to conduct a CVRA are made in the scoping.

The scoping phase is described in detail in Module 1 in the Vulnerability Sourcebook. The following section adds several key points structuring them according to the four steps of Module 1.

3.1 Step 1 Understand the context of the CRVA

What can you expect from a CRVA? What are the most relevant outputs?

It is important to be aware that a CRVA is not a completely analytical and objective process. Risk and vulnerability cannot be measured like blood values in a lab analysis. Instead, a CRVA is a highly participatory process, resulting in indications of causes and magnitudes of specific climate impacts and risks for a specific region, specific sectors and/or specific groups of people.

Several GIZ experts that have backstopped CRVAs following the Sourcebook approach and that were interviewed for the purpose of this guidance stressed the fact that stakeholders and decision makers discussing potential climate impacts and the concepts of climate risk assessment, i.e. the participatory process, is already in itself a valuable outcome of the CRVA. Including all relevant stakeholders, experts and decisions makers throughout the process, discussing their understanding of causes and effects of climate risk and resulting in a common understanding are some of the key results of the CRVA. It contributes significantly to the motivation of stakeholders and decision makers to follow up with adaptation. As such, **a CRVA can and should also be regarded a communication and capacity building tool**. GIZ in this context often plays the role of a network and knowledge broker, by facilitating cooperation between experts, stakeholders and decision makers and making studies, data and information accessible to them.

Recommendation: Consider capacity building as part of the objectives of a CRVA and plan activities accordingly. For instance, **involve relevant stakeholder and decision makers throughout the CRVA implementation, include training on CRVA and related topics** to create awareness and enhance understanding of climate risks and adaptation options (e.g. GIZ Training Courses “L&D as part of comprehensive climate risk management”¹ and “Mainstreaming Ecosystem-based Adaptation into development planning”¹). Furthermore, plan an appropriate transfer of results and findings.

Most important outputs of a CRVA:

- **Agreed Impact Chains:** conceptualise causes and effects of specific climate risks and allow a first brainstorming and identification of appropriate adaptation measures (Figure 2). Impact chains are an excellent communication tool to define the problem and to discuss solutions.
- **Maps:** Maps help to understand the spatial component of risk and allow to identify local hot spots of climate impacts and risk (Figure 3). Maps showing individual risk influencing factors, i.e. climate, vulnerability or exposure, were already found useful. Aggregated maps showing specific risks are the main expected result and are very useful to compare regions and identify hotspots. However, the experience in practise is that they are more difficult to read and interpret. Higher aggregated maps, which for instance integrate more than one risk are an interesting complementary information but may lack useful information for adaptation planning. If available, maps showing climate risks together with adaptation measures already implemented are useful to highlight gaps.

Impact chains and maps also serve as a communication tool to facilitate discussions on **climate impacts, climate change and adaptation**. As visual outputs they make complex situations and relationships easier to understand.

To which extend adaptation options should already be an output of a CRVA depends on the context. As mentioned in the next chapter, **we recommend linking the two processes (CRVA and the national adaptation process)**. Having said that, planning adaptation measures is a time and resource intensive process on its own (see discussion in next section).

Impact Chains with first ideas for Adaptation Options

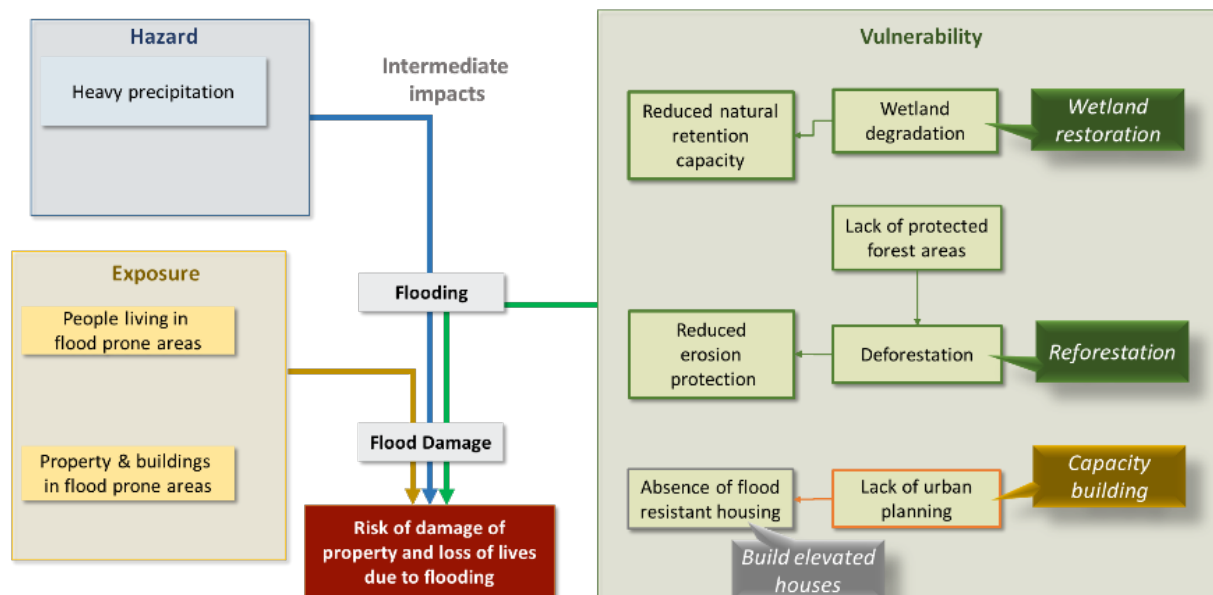


Figure 2: Example of an impact chain. Source: simplified from "Guidebook on Climate Risk Assessment for Ecosystem-based Adaptation"

Risk Map

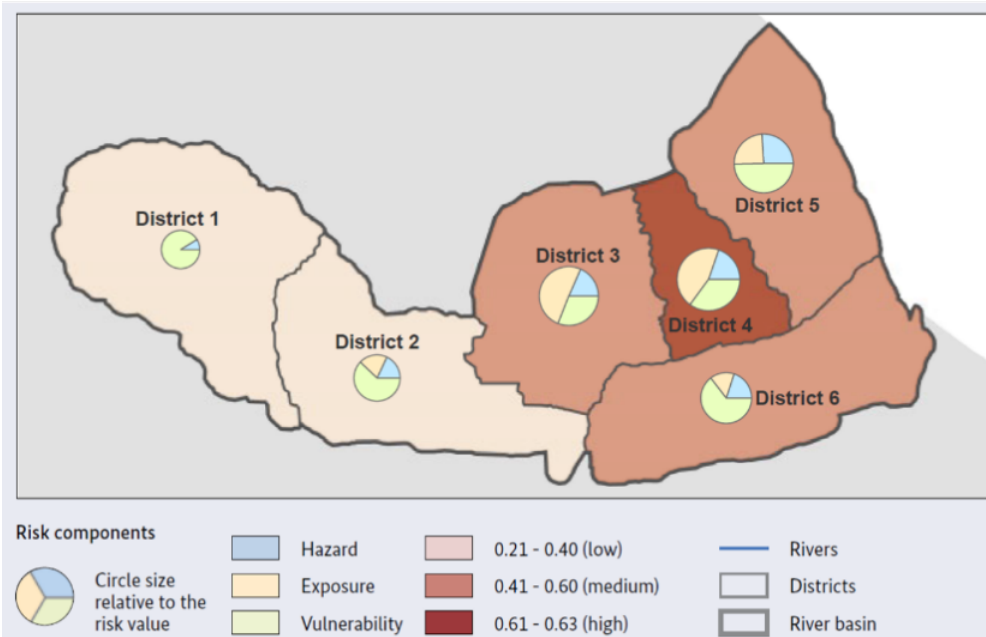


Figure 3: Example of a risk map. Source: "Guidebook on Climate Risk Assessment for Ecosystem-based Adaptation"

3.2 Step 2 - Identify the objectives and expected outcomes

How should a CRVA be related to adaptation planning?

CRVAs are an essential step in adaptation planning and implementation as well as for monitoring and evaluation of adaptation progress (see Figure 4).

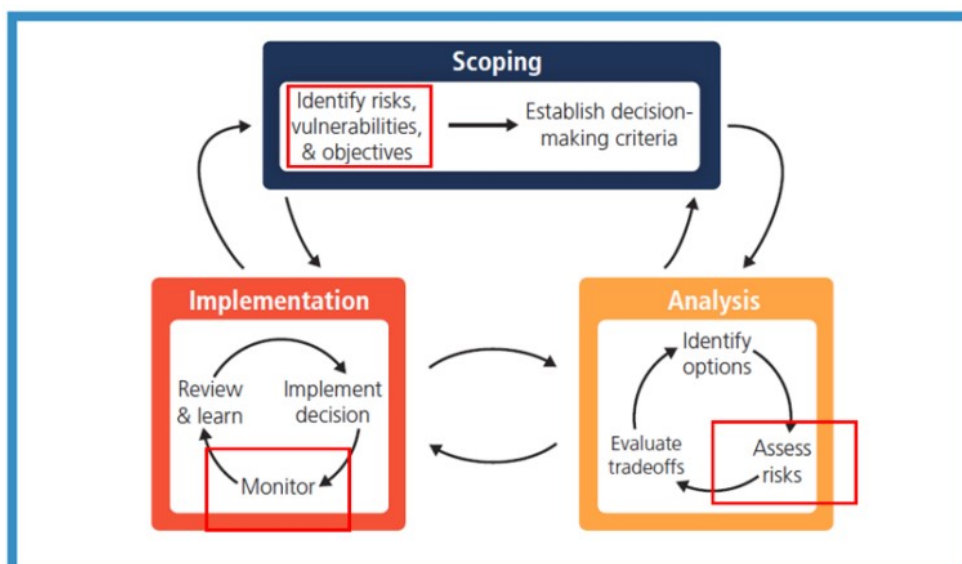


Figure 4: Climate-change adaptation as an iterative risk management process with multiple feedbacks. A CRVA can support all three phases of scoping, analysis and implementation. Source: IPCC AR5 WGII 2014

At the national scale, CRVAs are usually conducted as a necessary element of the National Adaptation Plan (NAP) process. However, in cases in which the NAP has already started at the beginning of a GIZ project aiming at or supporting CRVA, this process can also accompany initiatives that are already existing and related processes. On a local level, a CRVA can support the identification and the monitoring of appropriate adaptation measures. To achieve this goal, a **CRVA should be well embedded in the context of adaptation planning. Ideally, a CRVA is planned and implemented within the context of and together with the actors of the adaptation process. Define from the beginning how and when a CRVA informs the adaptation process.**

The communication between CRVA and the adaptation process should start before the CRVA implementation. For instance, the step of developing impact chains is a good moment to brainstorm and identify adaptation options lowering the vulnerability and the risk. For guidance on methods of adaptation to Climate Change see the GIZ publication “Adaptation to Climate Change”⁴

You could even consider planning the identification of adaptation options already together with a CRVA. However, since the Vulnerability Sourcebook does not provide instructions on how to do this, we recommend including this clearly within the title of the tender (e.g. “Climate Risk Assessment and Identification of Adaptation Options in country XY”). Be aware that **identifying adaptation options will not only require significant additional time and resources but also needs additional competences compared to a core CRVA.**

Even if a CRVA also serves as a communication tool to support the adaptation process, it **will not directly reveal all the necessary adaptation options.**

Further Recommendation:

- Regarding adaption options explicitly consider including Ecosystem-based Adaptation (EbA). With the new guidebook on Climate Risk Assessment for EbA⁵ a comprehensive framework exists.
- Prior to implementing a CRVA, review existing adaptation activities and achievements as a basis for the assessment.

Another way to include adaptation options and the effects of adaptation on risk reduction more explicitly into the CRVA is to follow a similar approach to the IPCC AR5 in its evaluation of “key risk”. Here, two separate risk level are indicated: **A risk with current adaptation (no additional measures) and a risk with a high level of adaptation** (Figure 5). A description of such an application in practise is included in the Annex of the Vulnerability Sourcebook (case study in Bolivia).

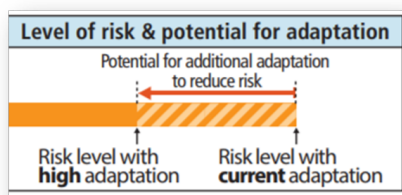


Figure 5: Explicit consideration of potential for additional adaptation to reduce the risk. Source: IPCC AR5 WG2 2015

⁴ <https://www.adaptationcommunity.net/publications/adaptation-climate-change-new-findings-methods-solutions/>

⁵ <https://www.adaptationcommunity.net/wp-content/uploads/2018/06/giz-eurac-unu-2018-en-guidebook-climate-risk-asessment-eba.pdf>

Is the CRVA part of a decision process for project funding?

In recent years, CRVAs are more and more intended to improve the selection process and decision-making for allocating funding of new projects under various streams of climate finance such as national funds and the Green Climate Fund (GCF). If this is the case in your context it is strongly recommended to study the selection criteria and requirements for funding and to consider this in the project design (see suggestions in chapter 6).

How data driven should the CRVA be?

The approach of the Vulnerability Sourcebook explicitly invites to apply a mixture of a quantitative, data driven approach with a qualitative, expert-based approach. Both have pros and cons (

Table 1). Needs and technical understanding of the target audience of the CRVA also need to be considered. Most of the CRVAs conducted that we analysed preferred a quantitative approach, however in several cases the underlying process was affected by time delays and incomplete results, which in some cases was due to a longer than anticipated process of sourcing the data needed (see section 3.4).

Recommendation: consider also qualitative approaches. Qualitative approaches can be very useful to cover important individual factors in an impact chain or even critical climate impacts and risks, which otherwise would be missing in the assessment. Furthermore, qualitative approaches are important in the aggregation process. To sum up and communicate results, a written interpretation of the complex aspect of an aggregated risk might be more precise and useable than a highly aggregated risk map.

For sub-national and local scale assessments qualitative approaches are often more suitable than solely data driven approaches. Local knowledge can often only be gathered using qualitative approaches. Furthermore, on the local scale descriptive and narrative information is of greater use than quantitative outputs.

Table 1: Quantitative vs. qualitative approaches

	Pros	Cons
Data Driven approaches and models	Detailed maps possible, easier repeatable, approach more 'objective' and transparent.	Data availability major bottleneck, normative decisions nonetheless necessary, time and resource intensive, only feasible for selected, very focused aspects.
Expert-based, qualitative approaches	Recommended for complex aspects, integrates local knowledge and narratives, assessment in one step	Difficult to be spatially explicit (maps), less repeatable, suitable knowledgeable experts needed, expert potentially biased

IPCC AR4 Climate Vulnerability or AR5 Climate Risk?

While the Vulnerability Sourcebook was based on the IPCC AR4 concept of climate vulnerability, the Risk Supplement gives guidance on how to perform a climate risk assessment following the current IPCC AR5 approach, which is closer to the risk concepts from the Disaster Risk Reduction community (DRR).

Recommendation: apply if possible the climate risk concept as described in the Risk Supplement. It is according to the recent IPCC AR5 concept and easier to link with potentially existing DRR strategies. This allows to also include sudden onset events/extreme weather events in the assessment. We suggest to run a training workshop in CCA, exposure, sensitivity, adaptive capacity and VA methodology at the outset of the implementation. There may be cases where it is necessary to apply the AR4 concept if existing assessments and strategies on a national level are using and preferring this approach. A consistent approach is important to allow comparability of results for monitoring purposes.

Nonetheless the AR5 climate risk concept has shortcomings and is partly work-in-progress. One major challenge is the common expectation that risk (in the DRR context) should follow a probabilistic approach (likelihood of a specific impact) while this is hardly possible in the CCA context. See also “dealing with uncertainty in climate risk assessments” in the Risk Supplement. In addition, the translation from a hazard in DRR to a climate trigger in CCA is not straight-forward and discussions how to deal with that are on-going (e.g. is a heavy rain a climate hazard? If yes, is a flood a hazard or already an impact?)

3.3 Step 3 - Determine the scope of the CRVA

What is the general set-up of your CRVA - scale, sectors, impacts, risk?

Here we can refer to Step 3 of Module 1 in the Vulnerability Sourcebook “Determine the scope of the vulnerability assessment” with the key questions:

- Which topics (sectors, groups) should the CRVA cover?
- Are there known key impacts and vulnerabilities/risks you want to assess?
- What is the scope – area(s), period – of your CRVA?
- To which time frame will the CRVA refer (past, current, future vulnerability/risk)?

Recommendation: Prioritise sectors, risks, geographic areas and time frames to be assessed. Too wide an approach will reduce the resources that can be used for single risks of relevance. Be aware that time and resources are limited. You need to calculate a sufficient buffer for unexpected hurdles. Therefore, it is strongly advisable to clearly focus on a limited number of key sectors, areas and time frames. It is better to start with a limited number of e.g. two sectors, two geographic areas and two timeframes (eg. 2050/2100) than to have too ambitious plans that are challenging to implement. Demands of stakeholders need to be balanced carefully, e.g. by exploring options for a stepwise extension of CRVA sectors.

3.4 Step 4 - Implementation

How much time should you plan for a CRVA?

A CRVA is a resource intensive process. Experiences in conducting CRVAs have shown that they very often take longer than expected and planned and that results are delayed. In many cases the time required for a CRVA is planned by estimating, when a CRVA needs to be completed to inform the NAP process. Frequently this leads to an underestimation of time required for a CRVA.

The real effort depends very much on the set-up (see above) such as spatial scale and reference units (e.g. CRVA on national level for 400 districts vs. a CRVA for one district only), on the number of sectors (e.g. 10 sectors vs. only for the agricultural sector) and to which extent data driven approaches (indicators, models) should be applied or if approaches are more qualitative (expert judgements). Also, the existence or non-existence of knowledge and information (studies, data) impacts the resources required.

Recommendation: Expect the minimum time required for a very focused study (e.g. sub-national level, small number of spatial units, only one to two sectors) to be approximately eight months. For a CRVA at the national scale plan at least one year, if possible longer. An extensive country-wide study covering several sectors will take three years or more.

Two major bottlenecks, reasons for time delays and possible solutions:

- Stakeholder integration took longer than expected → get all relevant stakeholders involved even before the study starts (see next chapter)
- Data access and collection was much more difficult than expected → conduct a data availability review in the planning phase before tendering the CRVA, consider a less data intensive (see below) and more qualitative approach (see above).

Who should be actively involved in the CRVA?

Since a CRVA is a political sensitive process, the success of a CRVA depends very much on the involvement and commitment of the right stakeholders and decision makers in the country or region under consideration. Also, the character of a CRVA as a capacity building process motivates a thorough stakeholder integration. See also the experiences of stakeholder participation in Adaptation to Climate Change in Germany⁶.

We recommend to involve the following stakeholders in national assessments:

- **National environmental ministries and agencies responsible for the NAP process.** In most cases, the direct responsible policy maker related to a CRVA is the environmental ministry or agency, which should be the main contact point for the assessment. Environmental ministries are also often the NDA (National Designated Authorities) for the GCF (Green Climate Funds). Involving the NDA is important to prepare GCF proposals on adaptation options as a follow up of a CRVA. Key persons from environmental ministries or agencies should be strongly involved in the planning and implementation of a CRVA.
- **Specialised ministries and agencies.** While environmental ministries are usually responsible for the coordination of climate change related issues, the implementation of adaptation lies in the hand of specialised ministries such as agriculture, water, tourism, spatial planning or civil protection. Depending on the scope of the study, these specialised ministries may be important data providers, have the necessary knowledge for the assessment and should be involved to guarantee commitment regarding the results of the CRVA and for the next steps of adaptation planning.
- **National statistical offices** are often important data provider, mainly for socio-economic data and are often responsible for managing and updating the results of a CRVA (maps, indicators, databases).
- **National meteorological services** are important for any climate and weather-related information. If not involved from the beginning (before tendering!) it might be difficult and costly to get the necessary information. In many countries, meteorological data is still sold by the national meteorological services. Therefore Climate data is one of the most important data sources and is often a bottleneck in CRVAs.
- **National Research Centres and Universities** can contribute significantly with knowledge on climate and climate impacts. Depending on the country context, universities might receive more

⁶https://www.umweltbundesamt.de/sites/default/files/medien/461/publikationen/climate_change_12_2013_stakeholder_participation_in_adaptation_to_climate_change_bf_0.pdf

but, in some cases, even less trust than external (international) consultants. We strongly recommend to consider already in the ToR local scientific institutions as implementation partners in the project.

- **Representatives of regional and local authorities** to be assessed should be considered either as experts for qualitative data or as beneficiaries of capacity building and “door opener” to data which is only available on a decentralized level.
- **Private sector.**
- involved. However, since climate impacts affect also the private sector such as agricultural cooperatives, tourist operators, constructions firms, food and beverage industry the private sector is essential to for the adaptation process and investments. A stronger involvement of stakeholders from the private sector is recommended.
- **Existing platforms / entities dealing with CC encompassing several sectors, public and private institutions as well as civil societies when they exist?** (to facilitate uptake and dissemination of results afterwards)

GIZ should facilitate the contacts to the various ministries by writing introductory letters for the consultants thus enabling access to different stakeholders and helping access to data.

Also, **for subnational assessments, National ministries may be relevant as data providers** (e.g. weather service). Furthermore, local studies often act as pilots and can trigger follow-up projects for upscaling and out-scaling to other region and/or they are relevant to inform the NAP process and complement coarser and wider CRVAs at the national scale. Therefore, **it is recommended to involve relevant national policy makers at least as observers also for CRVAs at the sub-national scale.**

Stakeholders in particular for the sub-national scale include local decision makers, local extension officers and representatives of different affected social groups.

Which data and information are available?

Not planning sufficient time for data gathering and data (un)availability have been identified as examples of main bottlenecks leading to time delays and incompleteness of results.

Therefore, we recommend **identifying early on**, i.e. in the scoping and planning phase before the TOR are published **which data sources might be needed, who owns that data and whether the data will be made available.**

Data sources that should be identified before CRVA implementation: climate data from national meteorological offices, climate scenarios from international data source (e.g. CORDEX data), socio-economic data from national and regional statistical offices as well from global data sources.

Define which climate scenarios, which emissions scenarios to consider within the assessment. Since for instance the CORDEX ensembles contain a range of scenarios and model runs, it might be for recommendable to select for instance two Representative Concentration Pathways - RCPs (e.g. 4.5 for rather optimistic and 8.5 for rather pessimistic case) and consider within each of this RCPs a range for instance the 15% and the 85% percentile.

Further critical questions are whether the required socio-economic data are available and whether **future projections of socio-economic factors exist** and/or should be considered at all. In reality, changes in vulnerability and / or exposure (e.g. increase in population) might be as important as climate change or even more important for future climate risks. In most countries where CRVAs have been applied, socio-economic scenarios did not exist. You should **discuss, if it makes sense to work at least with**

estimates about future development and how this estimate could be generated and considered in the assessment. Eventually you would need partners with competence in this field.

Furthermore, you should conduct a review of existing CRVA and adaptation projects in the region. In many countries local or even national risk or vulnerability assessments exist for specific sectors conducted with various methods and indicators. Since most of these studies have involved the same stakeholders who are interesting for your study, it is important to know the studies and results and discuss how and to which extent the results could be integrated with your study. However, it is often challenging if not impossible to harmonise results on a quantitative level. A qualitative integration and a reference to existing studies should be considered.

This data review can be part of the CRVA feasibility study – see recommendation at the beginning of chapter 3 and in chapter 4.

4 Consideration for good TORs

The process how to write good TORs in general is not subject of this guidance note. Here, standard TOR template of GIZ might be helpful⁷. In this chapter we highlight important recommendations and lessons learnt from CRVA backstoppers. The basic structure of this chapter follows a template for CRVA TORs developed by GIZ⁸. Regarding language of the TORs it is recommend to **have at least also an English version to reach a broader range of international consultants**.

The following structure and content is recommended:

4.1 Background/context of the assessment

- Background about the country, study area or community
- Expected climatic changes and impacts on community/ecosystems
- Link between CRVA and the objectives of the GIZ project in which it is being conducted
- Context of national or sub-national adaptation activities (e.g. NAP process).
- Existing activities, information and data on climate impacts, risk and adaptation.

Key Messages: A good and complete TOR structure and content includes:

- ***Background/context of the assessment***
- ***Objective and scope of the assignment***
- ***Competences required***
 - Consider good mixture of local and international experts
 - Consider experience in: project management incl. moderation and facilitation; CRVA; climate impacts (environmental science); assessment of vulnerability and exposure (social science); knowledge on selected sectors; spatial data management; adaptation measures (if adaptation is part of the CRVA); Gender expertise;
 - Good knowledge of target region
- ***Project governance***
 - Responsibility of Consultant: coordination of experts, national coordinator, frequent meetings
 - Responsibility of GIZ: Overall coordination, contact to key stakeholders (e.g. ministries), Institutionalization of the CVRA, eventually: hiring local experts
 - Install a national steering committee (GIZ, the consultant and national / local decision makers)
- ***Tasks and outputs***
 - Task 1 – scoping, Task 2 – development of impact chains, Task 3 – selecting indicators, Task 4 – data and information, Task 5: Assessment and aggregation, Task 6 – presenting CRVA outcomes, Task 7 Communication and Workshops
- ***Duration*** (see recommendation in chapter 3)
- ***Responsibility of GIZ***

⁷ <https://dms.giz.de/dms/llisapi.dll?func=ll&objaction=overview&objid=232230251>

⁸ <https://dms.giz.de/dms/llisapi.dll?func=ll&objaction=overview&objid=229457922>

4.2 Objective and scope of the assignment

Base this section on the output of the scoping and feasibility study from chapter 3.

- Concrete objective of conducting the CRVA within the context. Be specific, how should the CRVA inform the adaptation process
- Stakeholder to be involved as identified in the scoping
- users of the results of the CRVA (national/subnational decision-makers; urban planners, development practitioners, local community; organization, ...)
- Spatial scale, spatial units, time periods considered
- Areas and/or sectors that the CRVA will cover
- Methods to be applied (Sourcebook, AR4 or AR5, how data driven?)

4.3 Competences required

The required competences depend strongly on the scope of the study. **Required competences may include:**

- Experience in project management in an international context
- Moderation and facilitation of workshops
- Experience in Climate Risk Assessments / Vulnerability Assessments
- Climate science, interpretation of climate scenarios, climate indices
- Environmental science including statistical analysis and, if required, modelling (e.g. hydrological modelling)
- Competence in the assessment of vulnerability and exposure with a background in social science.
- Sectoral knowledge for selected sectors (e.g. agriculture, tourism, water, ...)
- GIS, spatial data management, cartographic competences
- Expertise in the integration of quantitative and qualitative data,
- Competence in identifying and planning adaptation measures, including EbA (if adaptation is this is part of the planned activities)
- Gender expertise such as have training experience on gender-related topics or local knowledge of gender issues in the country
- Good knowledge of political processes in the target region

The project team should consist of international and national / local experts including consultancy firms and universities. Decide, if local experts should be hired by the international consultant or by GIZ via direct contract. In some cases, **it may be recommended to contract local experts independently from the bidding process with international companies/experts** since local GIZ offices usually already have a network of reliable and accepted local experts. Nevertheless, this also means that the backstopping of the local experts will be expected from the GIZ team which is not always the ideal case in terms of workload and coordination of national and international consultants.

4.4 Project governance

- Overall coordination by GIZ
- Request for a national coordinator provided by the consultant who stays in the country or on-site of the study
- Install a steering committee which should include GIZ, the consultant and national / local partners and/or decision makers, especially representatives of the institution which is supposed to appropriate the CRVA once it is finished
- Establish frequent project meetings with the consultant and the steering committee.
- The contact to relevant ministries, key stakeholders and partners at national and subnational level should always be established through GIZ

GIZ experts recommend hiring, in certain cases, a second international consultant for training and backstopping on methodologies for climate risk assessment

4.5 Responsibilities of the consultant(s) – Task and outputs

Task and outputs can be structured in accordance with the modules of the Vulnerability Sourcebook

- Task 1: Scoping of the study, definition of methodological framework.
 - o Should be a fine tuning of the scope based on results from the internal scoping phase or feasibility study (see chapter 3)
 - o key questions see chapter 3.3
 - o Should include review of existing studies on CRVA and adaptation and existing data
 - o Perform workshop with stakeholders on scoping
 - o Should be performed with GIZ project team, steering committee.
 - o Should include a training of the project team, consultant team and steering committee on CRVA
 - o Methodology needs to be refined. Questions include (see also chapter 0):
 - AR4 or AR5
 - data driven vs. qualitative?
 - Potential data sources, which climate scenarios?
 - o Output
 - Description of scope
 - Description of methodology
- Task 2: Develop impact chains
 - o Should be a participatory process
 - o Consider here already a discussion on adaptation options
 - o Output: Impact chains
- Task 3: Selecting indicators
 - o Be realistic about data availability. Think about more qualitative indicators as an alternative approach.
 - o Output: indicators and method for populating indicators with information (data source, experts)
- Task 4: Data and information acquisition and management
 - o Since this is a bottleneck, **data acquisition should start right after the scoping phase**, plan sufficient time for this step.
 - o Extend to “data and information” and consider here also expert interviews, surveys, existing studies as potential sources of information.
 - o Work together with (national) data providers from the beginning
- Task 5 (Module 5-7): Assessment and aggregation

- The operational methods as described in the Sourcebook are just a proposal. In your context, alternative and less quantitative and arithmetic approaches for aggregation may also be considered.
- Task 6: Presenting CRVA outcomes
 - This should not only include a report but also workshops
 - Final communication and dissemination of results should be led by GIZ together with national partners (see next chapter).
- Task 7: Communication and Workshops
 - Frequent communication with GIZ and the steering committee
 - At least the following workshops should be planned
 - scoping (including data availability) and methods (including training on CRVA methods)
 - developing impact chains,
 - presentation and validation of results
 - final workshop (local and national level)

4.6 Duration

- See consideration in chapter 3
- Project should start “from signature of contract” instead from a fixed date to avoid delays due to late signature.

4.7 Responsibilities of GIZ

In general, **local GIZ project should have a very strong role in a CRVA**, mainly due to its complex interaction and participatory character with various stakeholders in the country. Activities and functions may include:

- Overall project coordination
- Contact with key stakeholder (ministries etc.) for instance CRVA Introduction letters for consultants to facilitate data access from stakeholders
- Support in coordination of workshops with a focus on the official elements (e.g. selecting relevant participant, sending invitation letters and material to participants, opening of the workshop)
- Eventually: Hiring local experts and monitoring the progress(see above)
- Leading member of the steering committee
- Review the reports provided by the consultants
- Progress sharing with the partner ministry

5 Consideration for Backstopping during implementation of a CRVA – Do's and Don'ts

Once the TORs are out and the project is contracted a permanent backstopping is important for an efficient CRVA. A CRVA requires for instance **permanent contact with partner ministries and stakeholders** which cannot be completely delegated to a consultant. Furthermore, decisions might have to be taken which need to be coordinated by GIZ (such as a refined decision which climate impacts should be considered, how pilot studies should be designed etc.). Also, solution needs to be found for bottlenecks such as missing cooperation of stakeholders or missing data. Here the major Do's and Don'ts are summarized.

Do's:

- Look at other GIZ CRVA's (a database can be found here⁹) and talk to other GIZ CRVA backstoppers
- Involve an expert of GIZ in the sector for the backstopping
- Consider training of the project team on CRVA as well as backstopping and supervision of external experts (see chapter on ToRs) to achieve common understanding and coherence within the project team.
- Regular exchange with the consultants (in order to get all the information and results consecutively and not all together and to validate main steps (impact chains, indicators, data collection tools, aggregation methods, ...)).
- Develop a detailed time plan with consultant and continuously check and offer support to consultants
- Keep in close contact with consultants during data collection in order to be able to overcome eventual blockades early enough
- Allow flexibility in the methods during the implementation phase (quantitative --> qualitative)
- Keep contact with key stakeholders (e.g. partner ministry) and keep them informed about the progress of the CRVA
- Do a result-oriented backstopping, ensure that results can be taken up by the target group

Don'ts/challenges:

- Do not get too broad. Take care to focus on key result. Often a CRVA tends to get too broad, with many results and many sub-products, which results in too many outputs to check and provide feedback on.
- Don't communicate results in a too technical way --> Complex, technical results need to be translated to the needs of the users.

⁹ <https://dms.giz.de/dms/llisapi.dll?func=ll&objaction=overview&objid=104345885>

6 Evaluation phase, post CRVA phase

To create the expected impact of fostering and informing the adaptation process a proper planning and backstopping of the activities after CRVA is essential from the beginning. In particular, a constant involvement of key stakeholders from the beginning is important. The main responsible for this phase is the GIZ project team itself. Key objective of this phase is to mainstream the findings of the CRVA into national institutions and processes. A final step could be to use a CRVA process to lever external funds for adaptation such as the Green Climate Funds (GCF).

Post CRVA-phase starts with dissemination activities immediately after the CRVA including:

- Workshops presenting the results
- Concise reports (summary for policy makers, not more than 20 pages) in national language for decision makers with informative visual material.
- Getting official commitment from decision makers (e.g. signing a document agreeing to cooperation's with institutions, financing measures, agreeing on the findings)

Options for a mainstreaming and institutionalization of results include:

- Integrate results (indicators, maps) in a national database e.g. within statistical offices or the Ministry of Planning.
- Involve Ministry of Finance and Planning in the allocation of budget for adaptation measures related to CRVA findings
- Make the CRVA a constant process for monitoring climate risk and adaptation success (e.g. propose a five-year update cycle). Integrating new aspects should be possible. Responsibility for triggering the update should be with national institutions.
- Help partner countries to mainstream adaptation into other strategy and planning processes such as spatial planning, city planning, tourism planning.

The role of CRVA to get access to Green Climate Funds (GCF) or national adaptation funds

With the GCF a potent mechanism for funding adaptation activities has been established. One requirement to apply for GCF funds for adaptation is to give evidence on an adaptation need. A CRVA can set the basis of such a proof. However, until now, not much experience exists how to exploit a CRVA for getting access to GCF funds. Some experiences:

- CRVA used for GCF readiness programme and NAP progress. However, the CRVA was not quantitative enough. GCF is more interested in loss figures (yield loss), material damages in monetary figures
- financing of national climate actions could also benefit from a local CRVA. Results of the CRVA could be defined during the scoping phase in order to get what is needed at the national level.
- You can find a good example from Grenada here¹⁰

¹⁰ <https://dms.giz.de/dms/llisapi.dll?func=ll&objId=229445376&objAction=browse&viewType=1>

7 List of resources

Guidance on CRVA methodology:

- Vulnerability Sourcebook: https://www.adaptationcommunity.net/?wpfb_dl=203
- Risk Supplement to the Vulnerability Sourcebook: https://www.adaptationcommunity.net/wp-content/uploads/2017/10/GIZ-2017_Risk-Supplement-to-the-Vulnerability-Sourcebook.pdf
- Guidebook on Climate Risk Assessment for Ecosystem-based Adaptation (EbA): <https://www.adaptationcommunity.net/wp-content/uploads/2018/06/giz-eurac-unu-2018-en-guidebook-climate-risk-asessment-eba.pdf>

Good practice example for CRVA commissioned by GIZ

- Example CRVA Grenada: <https://dms.giz.de/dms/llisapi.dll?func=ll&objId=229445376&objAction=browse&viewType=1>
- Database of CRVA commissioned by GIZ: <https://dms.giz.de/dms/llisapi.dll?func=ll&objaction=overview&objid=104345885>
- Template for CRVA ToR: <https://dms.giz.de/dms/llisapi.dll?func=ll&objaction=overview&objid=229457922>
- Generic template for ToR of GIZ: <https://dms.giz.de/dms/llisapi.dll?func=ll&objaction=overview&objid=232230251>

Guidance on Adaptation options:

- Adaptation to Climate Change - New findings, methods and solutions: <https://www.adaptationcommunity.net/publications/adaptation-climate-change-new-findings-methods-solutions/>

8 Annex

- Table with studies considered for this guidance note

Annex – case studies – key characteristics and recommendations

Country (interview partner)	Scale	Relation to Sourcebook/IPCC	Sectors	Aim of VA	Timing	Key recommendations for GIZ
<i>Bangladesh¹</i>	National (spatial reference: 492 sub-districts)	Sourcebook + AR4 AR4 choice of government, since NAP process was using Vulnerability concept	8 sectors and themes: human, agriculture, livestock, fisheries, health, infrastructure, water, biodiversity; + gender x-cutting)	<ul style="list-style-type: none"> - An integral part of the overarching national climate policy document ((e.g. Bangladesh Climate Change Strategy and Action Plan (BCCSAP update)) - Input for NAP - Funding allocation for climate finance - Baseline for M&E - An integral part of the Climate Check Tool (CCT) to screen projects with climate lenses - Input for the Planning Information System (PLIS). PLIS is a tool which provides the background information for CCT. - - 	Planned: 12 months Actual: 22 months 11/2016 – 09/2018	<p><u>Implementation:</u></p> <ul style="list-style-type: none"> - Involve all levels of administration, NGO, civil society in every step --- ensure understanding is given - Plan and do consultation meetings well – time consuming, but very important for authorities to own the CRVA - Run trainings on CCA, Exp. Sens., AC - Vulnerability concept wider used --- actors more comfortable with AR4 --- prefer not to mix VA with DRR <p><u>ToRs:</u></p> <ul style="list-style-type: none"> - Have an open bid to get the best experts - Prior to drafting of ToRs do a feasibility study (what needs to be done, who needs to be involved) --- in case of 1st CRVA
<i>Bolivia²</i>	Community/ farm level	Sourcebook + AR4	3 thematic areas: Watershed management, Water for Agriculture, Agricultural production and commercialisation	<ul style="list-style-type: none"> - VA + baseline for M&E - Potential impacts/Adaptive capacity/Vulnerability before and after measure 	4 months	<p><u>Implementation:</u></p> <ul style="list-style-type: none"> - Step 0: steering committee meeting to inform everyone - Additional time after the VA --- integrating the measures into budget; add what will be done after project is finalised - Identification of adaptation measures should be part of the VA and how to finance them - Capacity development should be integral to the project - Plan time for institutionalising the process - Pilot study beforehand - Approach VA as a planning tool and capacity development towards climate change tool - Signature as symbol for commitment at the end of VA - Include monitoring and planning tools <p><u>ToRs:</u></p> <ul style="list-style-type: none"> - Add spatial data management/mapping competency

					- Include training on CC impacts and adaptation
Brazil ³	Various National /subnational – processes being conducted in parallel	AR4 --- conceptual approach similar to Sourcebook – analysis mostly quantitative and data-driven process	Droughts, landslides, floods; but also territorial approach focusing on municipal scale.	To enhance understanding of climate risks and vulnerability and to develop indicators which show the vulnerability of the country's population as an input for elaborating adaptation measures to dealing with climate change in Brazil.	2014 ongoing. <u>Implementation:</u> <ul style="list-style-type: none"> - Provide continuous support in planning and implementing the VA process - Link initiatives and bringing together stakeholders at various levels - Consider integration of all relevant actors at some stage, including civil society and private sector - Assess "Status quo" – what is already existing? - Make sure that decision makers are sufficiently integrated in planning phase - Provide for short and precise results – summary for decision-makers - Include orientations / recommendation on how to use data and results <u>ToRs:</u> <ul style="list-style-type: none"> - Consider integration of adequate resources and knowledge of team members with respective academic background - Integrate knowledge of political and institutional processes at various governmental scales to make sure involvement of relevant stakeholders from all levels -

Madagascar 4,5	Three regions	Sourcebook- inspired + AR5	CRVA inventory study resulted in a selection of 4 sectors out of 7		Planned: 6 months Took: 8 months Should be: 9-10 months	<u>Implementation:</u> <ul style="list-style-type: none"> - Explain concept well at beginning to consultants and stakeholders - Scoping phase: Create an inventory of existing and CRVAs ongoing - Carry out initial data availability assessment - Re-orient VA based on feasibility and data availability studies - Consider a narrative/qualitative approach, also across sectors - Include private sector - Select relevant impacts <u>ToRs:</u> <ul style="list-style-type: none"> - Plan time for review process, assessing cost of adaptation - Clearer definition of adaptation part, M&E and climate proofing - Be very clear on objective and scope, describe context well - Qualitative approach should not be underrepresented - In English - Plan a national and regional coordinator - Define how 'data-driven' the CRVA should be - Costing of adaptation measures - Include how CRVA will be put to use
Mali ⁵	National	Sourcebook + AR5	Resource based approach: - water availability - vegetation cover - malaria	<ul style="list-style-type: none"> - for GCF - aliment NAP Process - furnish information for project indicators 	Planned: 6 months Actual: 12 months	<u>Implementation:</u> <ul style="list-style-type: none"> - Stock-taking what adaptation measures are already running - Detailed maps for each impact chain - Include NAP road map/action plan in CRVA - Ensure CRVA is repeatable by national partner at later point in time - Keep analysis simple - Talk to other GIZ backstoppers

Tanzania ⁶	Subnational Three catchments and sub-basins	Sourcebook- inspired + AR5	Stakeholders identified three thematic areas: Agriculture, Livestock, Tourism	<ul style="list-style-type: none"> • directly support anticipatory planning at local level • inform national-level decision-making processes and methods (CRA pilot in the framework of National Adaptation Plan (NAP) process) • generate practical experience that can be replicated in other areas 	Much longer than planned due to delay in contract and data collection taking longer	<p><u>Implementation:</u></p> <ul style="list-style-type: none"> - Status quo analysis - Integrate CRVA in Vulnerability projects already existing in country - Collaborate directly with administrations interested in using CRVA results, i.e. in order to get funding to implement measures - Develop methodology for each sector - Propose adaptation measures incl. implementation and maintenance costs and possibly financing options - Cause-effect relationships and understanding of factors that lead to damage more interesting than loss and damage figures itself - Participative process was benefit by itself --- awareness of cc impacts, thinking about adaptation and risk management (e.g. early warning, ...) measures - Keep method flexible, but at the same time structured in order to allow monitoring - Maps useful to make process and results transparent (for local decision maker) - Plan how to use the results and who they are for --- determines also which stakeholders should be included (so results are used) - Backstop the results by GIZ sector expert - Result-oriented backstopping --- ensure that results can be taken up by target group - Communicate uncertainties well - Follow-up! <p><u>ToRs:</u></p> <ul style="list-style-type: none"> - Start date: from signature of contract - Plan more time for data collection
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Thailand ⁷	National – Reference: 76 provinces	Sourcebook + AR5	Six sectors as to NAP	Supporting NAP process	Planned: 8 months Actual: 1 year	<u>Implementation:</u> <ul style="list-style-type: none"> - Risk easier to communicate, however climate risk difficult to understand - Use risk methods used in the sectors anyway - DRR approach for some sectors affected by CC not relevant - VA can be imperfect - CRVA as means of communication - Sector analysis can use specific scientific studies rather than national data - Incorporate narratives, expert opinions --- however problematic, experts biased towards what they know (impact chains help to get overall picture) - Essential to define reference system - Ensure easy repeatability and integration of new aspects - Monitoring of adaptation measures <u>ToRs:</u> <ul style="list-style-type: none"> - Add which climate scenarios and time periods to use to avoid long discussions - Define spatial level - Refer to specific context - Allow for flexibility
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¹Afjal Hossain; ²Claudia Cordero; ³Dennis Eucker and Ana-Carolina Câmara; ⁴Vanessa Vaessen, Alicia Zamudio; ⁵Solveig Schindler; ⁶Waltraud Ederer; ⁷Heinrich Gudenus