Call for submission on indicators of adaptation and resilience at the national and/or local level or for specific sectors[1]

We thank you in advance for filling out this template with concise, evidence-based information and for referencing all relevant sources. As you will see on the last page of the document, more detailed information on case studies, tools/methods and other knowledge resources for dissemination through the Adaptation Knowledge Portal is welcome, but optional.

Name of the organization or entity:

SNV Netherlands Development Organisation

Type of organization/entity:

Please choose as appropriate:

- ☐ Local government/ municipal authority
- ☐ Intergovernmental organization (IGO)
- ☐ National/public entity
- ☒ Non-governmental organization (NGO)
- ☐ Private sector
- ☐ Regional center/network/initiative
- ☐ Research institution
- ☐ UN and affiliated organization
- ☐ University/education/training organization

Scale of operation:

- ☒ Local
- ☒ National

Specific sectors addressed:

- ☐ Adaptation finance
- ☒ Agriculture
- ☐ Biodiversity
- ☐ Community-based adaptation
- ☐ Disaster risk reduction
- ☐ Ecosystem-based adaptation
- ☐ Ecosystems
- ☐ Energy
- ☐ Food security
- ☐ Water resources
- ☐ Gender
- ☐ Health
- ☐ Heavy industry
- ☐ Human settlements
- ☐ Indigenous and traditional knowledge
- ☐ Infrastructure
- ☐ Services
- ☐ Tourism
- ☐ Urban resilience
- ☐ Other (Please specify below)

[1] FCCC/SBSTA/2016/2, paragraph 18.

City(ies)/Country(ies)/Region(s) of operation (if appropriate):

Africa and Asia

Description of relevant activities/processes or research:

Please describe the activities/processes that your entity has implemented in relation to indicators of adaptation and resilience. In case your organization carried out research, please describe it.

Over the past number of years, SNV has been attempting to find appropriate global indicators for climate change adaptation and resilience within the organization. A difficult task by nature, it is further complicated by the uncertainty that dominates when addressing climate change issues. Defining indicators can be challenging especially as there has been a growing movement toward using "resilience" and a slight move away from the terminology of "vulnerability". However, many organizations are going through a similar process presently and are beginning to define what resilience means to them.

This paper discusses some of the complexities of climate change adaptation and resilience in the context of monitoring and evaluation that SNV has experienced in the recent past. It addresses the challenges that have arisen in trying to define conventional indicators for climate change adaptation/resilience programming across the organization, as well as lessons learned and ways to move forward.

SNV has recognized that climate change adaptation (CCA) programming is a complex, dynamic process that cuts across scales, sectors, and levels of intervention. CCA itself is characterized by many uncertainties, and it extends long past usual project, program and strategic cycles. Moreover, the evidence base of what works, where, and under what conditions is only beginning to emerge, but SNV is a good place to test out methodologies that work (or don't work). Project managers and evaluators within SNV are trying to learn to live with uncertainty in the context of climate change. Accepting uncertainty can help move from asking 'what is the most likely future?' to 'what kind of future do we want and what decisions do we need to make to get there?' (Pringle 2013)

In 2015, SNV decided to define appropriate indicators to measure adaptation and climate change resilience across projects. We looked at different options, including identifying potential process indicators, output indicators and proxy indicators.

- Process indicators capture progression towards the achievement of an outcome (e.g. 'resilience to drought'), but do not guarantee or measure the final outcome itself;
- Output indicators measure the quantity and quality of the goods and services delivered by an SNV project;
- Proxy indicators are (more) easily-measureable 'stand-ins' for concepts or variables for which data is unavailable. The proxy indicator would be highly correlated with what it is trying to achieve – even if it is not an exact measure of the concept or outcome itself.

With the above statements in mind, we undertook the following activities to be able to come to an organization-wide, harmonized indicator on climate change resilience:

1. Conduct a detailed literature review
2. Identification of barriers to measuring adaptation/resilience
3. Internal dialogue with SNV staff from projects across Africa and Asia on what is appropriate and implementable.

Literature Review

The aim of the literature review was to identify best ways to measure climate change resilience. Scientific, peer reviewed articles as well as best practices published by key organizations in the field of Climate Change Resilience such as the FAO, USAID, IFCCC and the IIED were taken into consideration. Several conclusions were drawn from the literature:

1. A Theory of Change approach to project design is useful for strategic planning within an evolving context.
2. View adaptation as an iterative, formative process, and use M&E as a means of checking progress against changing conditions.
3. Use process indicators to determine whether progress is on track, even if impacts cannot be determined yet.
4. Consider flexibility as a measure of success: use M&E processes to assess how an adaptation intervention can cope with unknowns or non-linear change.
5. It is also important that evaluators question original assumptions behind a project strategy: what seemed appropriate in 2010 might not be by 2020.
6. Internationally developed and tested tools could be considered for organization-wide application within SNV, such as the Tracking Adaptation Measuring Development (TAMD) developed by the IIED and the Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists (SHARP) developed by the FAO.

Identification of barriers to measuring adaptation/resilience

From the review of the literature, it was clear that many organizations are encountering barriers in defining the parameters for measuring resilience and adaptation outcomes within development programming. These have included understanding the levels of uncertainty that climate change presents, the lack of consensus in the literature, the feeling that adaptation is a "moving target" and the timeframes needed to measure pathways to resilience.

Within SNV, main barriers to measuring resilience across projects are firstly the wide variety of factors that contribute to people's climate change vulnerability and therefore also to their increased resilience. In our work in several West African countries, we find that interactions between farmers and pastoralists need to be addressed to improve resilience, whereas in our work with smallholder farmers in Uganda we find that information provision is crucial. Which of these factors should be included in a resilience measure?

Secondly, climate change is global, but adaptation is local. This means that efforts to build resilience and promote adaptation to the effects of climate change will vary radically from place to place, even within the same country. As an example, in Kenya we work in many different regions and contexts to strengthen the resilience of smallholders. Although both smallholder dairy farmers and pastoralists depend on livestock, they have very distinctive vulnerabilities and adaptation strategies. A cross-project resilience indicator would have to be able to cover the breadth of interventions, but still be meaningful.

Finally, how could an indicator address potentially harmful, unintended consequences? In our Voice for Change Project pastoralists explain that development interventions can sometimes undermine their collective resilience. For example, building water dams has meant that customary institutions that managed water across large landscapes are seen as not useful, yet when drought arrives such water dams are inundated with livestock and can't function as initially expected. Should and could an indicator take into account such negative consequences, so we can better learn what works in this new and complex field of practice?

The challenge was to navigate these barriers and develop a harmonized resilience indicator that appropriately frames and assesses adaptation progress and resilience to climate change over time.

Internal dialogue with SNV staff on what is appropriate and implementable

The next step was to engage SNV agriculture staff from various countries to discuss how to address the identified barriers to formulating and measuring a resilience indicator, and the extent to which existing tools to measure resilience could be applied across SNV. This internal dialogue led to several conclusions.

Firstly, projects that had worked with the TAMD and SHARP tools felt they are time and/or labor intensive to administer. The tools therefore require significant time and financial resources, as well as facilitation expertise from project staff (or partners) to carry it out. Not all projects are in a position to make this kind of commitment. Especially considering the fact that they are requested to contribute to the SNV harmonized indicators on an annual basis.

Secondly, working with a Theory of Change framework and using a process indicator was considered a useful approach to capture the evolving and large variety of contexts SNV projects work in. To be able to meaningfully report on climate change resilience it would be more useful to focus on incremental changes that projects would be able to achieve annually with target groups, rather than elaborate methodologies attempting to capture the many different facets of resilience. This fits in the wider SNV way of working on Planning, Monitoring and Evaluation, where flexibility and focus on steering and learning is key.

Finally, it became apparent that the SNV indicator on climate change resilience had to be easy to implement, flexible and as close to project activities as possible. This would allow for annual reporting towards the indicator by projects, while ensuring that the data collected for the indicator would also be useful for project implementation.

Taking the above conclusions into consideration, it was decided to follow the suggestion of the Overseas Development Institute (ODI). They recommend to focus on tracking progress on resilience capacities, of which implementing climate smart agricultural practices is one, as a first step towards better measurement of climate change resilience (ODI, 2015).[2] Therefore, the initial SNV indicator was formulated as:

The number of farmers that adopted at least 1 new climate-smart practice in the past 12 months.

A list of qualifying climate-smart practices was developed and made available to projects. It includes over 60 climate-smart practices ranging from crop and livestock management practices (e.g. intercropping, crop rotations, mulch, trees for shade/nitrogen fixing/buffers/alternative income source, etc) to water management practices (micro-irrigation, in-situ rainwater harvesting, rainwater storage etc) and also includes practices related to diversification, enhanced access to climate information and other value chain efficiencies. The practices are in line with climate-smart practices as recommended by the FAO and CCAFS, and are assumed to lead to farmers' climate change resilience. Since the promotion of these techniques is based on years of hands-on experience in the field of climate change, this was considered a reasonable assumption.

[2] ODI (2015). Resilience in SDGs: Developing an indicator for Target 1.5 that is fit for purpose. https://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9780.pdf

Description of relevant tools/methods:

Please describe the tools and/or methods that have been developed and/or used.

In the first year of working with the above SNV resilience indicator (2016), a quantitative approach was taken to establishing the number of farmers that had applied at least one new climate-smart practice on their land in the past 12 months. Each project working specifically in the field of Climate Change resilience would conduct an annual survey with (a sample of) farmers taking part in project activities. Enumerators would receive the list of qualifying practices (but not share this with the respondent), and would use active recall to establish which of the practices the respondent applies by asking: "*Which climate-smart farming practices have you applied on your land in the last 12 months?*" , followed by "*Did you apply this practice for the first time this year?*" Further probing would then take place by the enumerator until no additional practices were mentioned by the farmer. For the farmer to be counted towards the indicator, the mentioned practices would have to be on the qualifying list, and at least 1 of those practices would have to be applied for the first time in the past 12 months. Project staff would then calculate the number of farmers that are considered to have increased climate change resilience in their project and send this information to the Global Support Unit for aggregation across all relevant SNV projects.

While the process of developing the climate change resilience indicator and the methodology were underway, a parallel process was ongoing, in which SNV staff witnessed climate change affecting people throughout the many value chains we work in, across Africa, Asia and Latin-America. Climate change can severely thwart the livelihoods of smallholders as well as the effectiveness of the value chain development efforts. To pro-actively address these impacts throughout SNV's value chain work, we realized the importance of looking at projects through a 'climate lens' – from the design of the project up to its implementation and evaluation phase.

In order for projects to do so, SNV's climate team developed the Climate Risk Assessment Tool, depicted in Figure 1. Applied from the design and inception phase onwards, this tool helps to identify the main climate risks, and the actors, resources and processes along the value chain that are most vulnerable. It thereby ensures well-grounded and thorough implementation of adaptation strategies that can enhance the resilience of a large number of people.

The Climate Risk Assessment tool is a mixed methods tool. It makes use of secondary and primary quantitative data on projected climate trends and impacts, as well as inputs from value chain actors on vulnerabilities and best ways to address these within the project framework. The tool follows a series of interlocking steps that guide projects to suitable adaptation measures, aiming to increase the adaptive capacity and overall resilience of target groups and the value chain as a whole. By integrating climate adaptation into the project cycle, the tool assures project results are not undermined by the impacts of climate hazards ("climate-proofing").

Figure 1 provides an overview of the steps projects should take at their design or inception phase. In the first 3 steps of the Climate Risk Assessment Tool, information is collected on past and future climate hazards in the region and the vulnerability of relevant value chain actors to those climate hazards. These steps make use of both secondary scientific information, as well as primary data collected during fieldwork to adequately capture local circumstances and existing coping strategies.

Subsequently, visualizations are used to provide an overview of where in the value chain the highest risks occur, and what the underlying factors are that contribute to actors' vulnerability. When looking at the vulnerability of actors, a differentiation is made between groups based on gender and socio-cultural factors. In that way we can understand what makes certain groups, especially women and youth, particularly vulnerable.

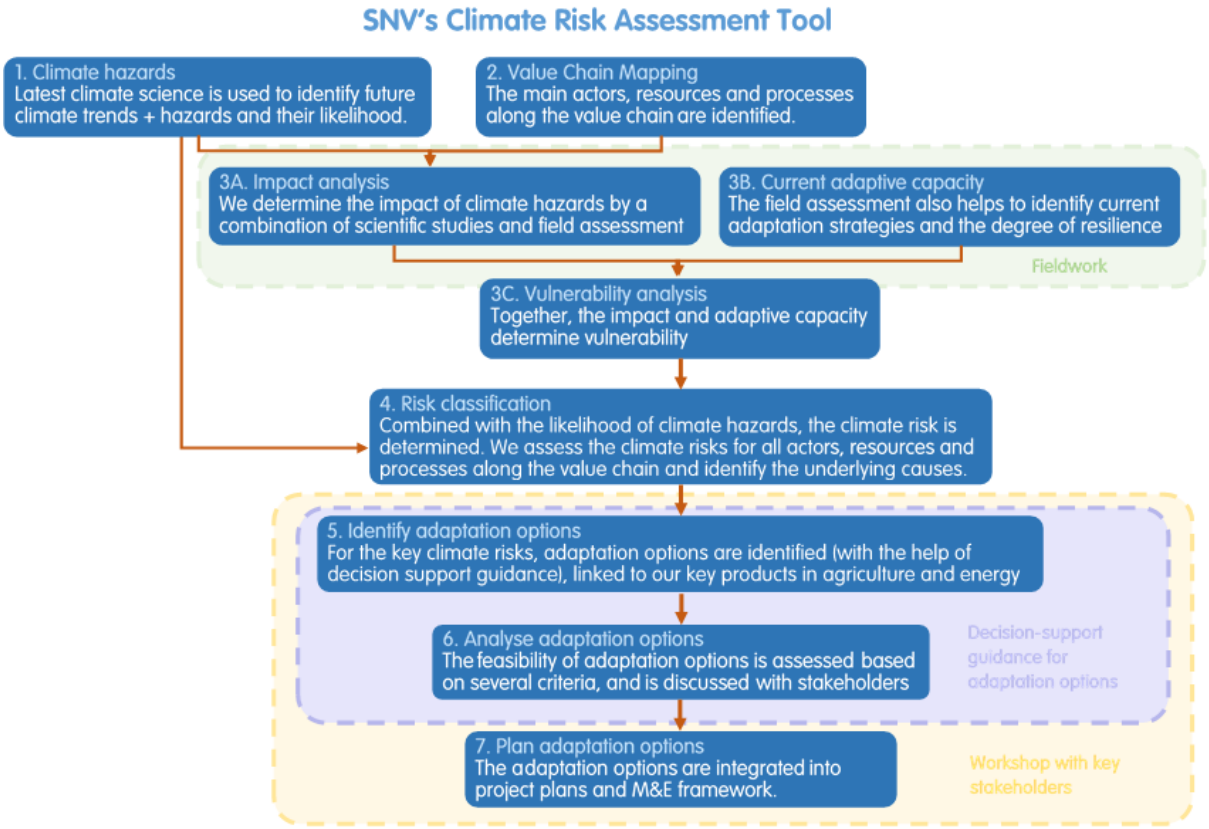

Figure 1. Steps in SNV's Climate Risk Assessment Tool

The two main visualizations that are used are a climate risk matrix, depicting key climate risks along the value chain, as well as a resilience score card (depicted in Figure 2), which ranks the different resilience dimensions for key actors. These dimensions (including knowledge of climate change, attitude towards climate change, access to information on climate change, offering of climate-smart products/services, current coping strategies, livelihood diversification, safety nets, income & savings, value chain linkages and assets) make it easy to identify weak spots in the actors' adaptive capacity and formulate effective adaptation strategies. The climate risk matrix and resilience score card are discussed and verified with relevant actors in a workshop. Together, a plan is then developed outlining how to integrate feasible adaption options into the project.

For the upcoming 2017 annual reporting round on the SNV harmonized indicator on climate change resilience, projects are required to hold annual stakeholder workshops and provide updated Resilience Score Cards for each relevant target group.

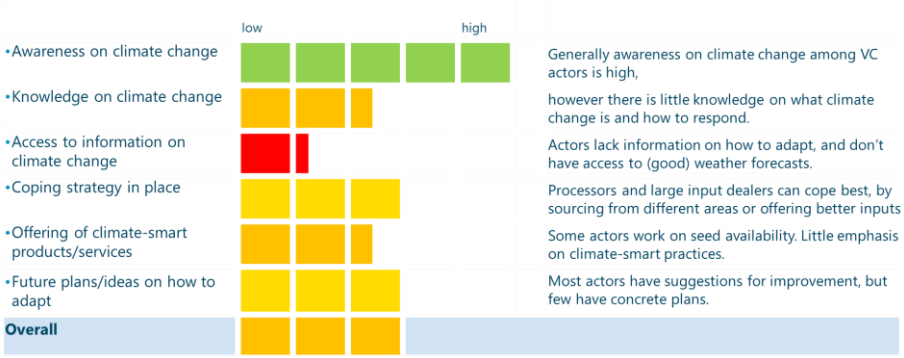

Figure 2. Simplified example of a filled out Resilience Score Card

Key outcomes of the activities/processes undertaken:

Please provide information regarding the outcomes of the activities/processes described above, and do not hesitate to add qualitative assessment and/or quantitative data to substantiate the information.

The resilience indicator was first implemented in 2016, as one of SNV's harmonized indicators used in the agriculture sector (next to indicators focusing on increased income and food security). 40 out of 183 agriculture projects reported on the indicator. This indicates that the indicator and the methodology were relatively easy to integrate into existing annual surveys. It therefore seemed to comply with the identified need for an indicator that was simple, easy to implement and close to project activities. However, it also indicates that the indicator in its current form covers a wider range of projects than just those with a specific focus on climate change adaptation, and could also be applied by those focusing on increased productivity. Therefore, it seemed to lose some of its meaningfulness as a measure of climate change resilience.

After this first year of implementation, we realized the methodology needed to be sharpened further. As will be elaborated on in the next sections, combining the resilience indicator with the Climate Risk Assessment Tool is believed to ensure that climate change is a core project focus, as well as capture if key climate risks are properly addressed.

The Climate Risk Assessment Tool itself was initially piloted across several projects, which helped to further refine and improve the methodology. Applying the tool during the inception phase of a project resulted in in-depth analyses of climate risks and underlying factors, properly capturing the local sensitivities and coping strategies, and ensured that any adaptation option built on these local realities.

Piloting the tool showed that guidance for projects was especially needed on assessing the underlying factors that contribute to high vulnerability to climate change, over the identification of actual climate risks. The Climate Risk Assessment tool therefore emphasizes the assessment of the dimensions contributing to people's climate change resilience – together with key stakeholders. This helps to provide clear insight into key weaknesses and therefore what should be prioritized when it comes to adaptation options.

Projects that have applied the Climate Risk Assessment Tool have witnessed a stronger engagement from SNV staff as well as project partners and stakeholders when it comes to climate change. Whereas this issue was initially often regarded as something abstract and hard to grasp, the climate risk assessment tool has helped to make climate change more tangible and adaptation options easier to identify.

By integrating it in the annual reporting cycle of the overall organization, the Climate Risk Assessment Tool can now also be used as a way to monitor progress on the adaptive capacities of key actors. The annual workshop facilitates discussion on what has been achieved so far and provides the opportunity to steer project activities to be more effective.

Description of lessons learned and good practices identified:

Please consider the following points when describing lessons learned and good practices: (a) effectiveness/impacts of the activities/processes (including measurability of the impacts), (b) efficiency in the use of resources, (c) replicability (e.g. in different locations, at different scales), (d) sustainability (i.e. meeting the current economic, social and environmental needs without compromising the ability to address future needs).

There are several benefits to using this current indicator (the number of farmers that have applied at least one new climate smart agricultural practice in the past 12 months) and active recall methodology. It was considered an effective way to measure progress as it directly links to project activities and monitoring data that is already collected regularly from the field. There is therefore little, if any, additional burden for projects to contribute to the SNV harmonized indicator. Moreover, focusing on the number of climate smart agricultural practices that farmers apply also means that the indicator is broad enough to cover the breath of CCA interventions SNV implements. Simultaneously, it is distinct enough to maintain a meaningful link to climate change resilience. Aggregation of figures across projects is possible as the indicator allows for adding apples and apples, despite the fact that there is a wide variety of climate smart agricultural practices promoted in SNV projects. And it does so without losing focus of the subject at hand.

In the process of establishing a harmonized indicator, a few essential steps ensured it is embedded in projects' ways of working and therefore sustainable to use over the long-term. Looking into the efforts of other organizations and their approaches to measuring climate change resilience is important, as it helps to avoid the re-invention of the wheel – saving valuable time and resources. However, possible tools and methodologies need to be checked with project staff to ensure they are feasible to use in practice. Moreover, project staff should be included in the development of the indicator to keep methodologies close to project activities. Collected data is then also relevant to projects (and not just for the overall organization), creating an incentive for projects to actively collect and also use the data. Finally, it is important to take that first step into measuring climate change resilience, recognizing that whichever method is used, it will probably not be perfect the first time around. Time should be taken to reflect on data collection rounds and continuously search for ways to adapt and improve upon the methods chosen. Figuring out how to measure resilience in such a diverse project environment as in SNV is difficult and will take time.

Description of key challenges identified:

Please describe the key challenges associated with those activities/processes or the use of those tools/methods, that policy-makers, practitioners and other relevant stakeholders should know about.

Reflecting on the first data collection round for the harmonized climate change resilience indicator in 2016, we found that the original indicator needed to be sharpened further.

A key challenge that we faced was that our initial assumption that the indicator would sufficiently represent projects working on climate change resilience did not uphold: the formulation was too broad. Agricultural projects with a main focus on increasing productivity, rather than climate change resilience, were also able to contribute to the indicator as they often promote one particular climate smart practice in order to achieve increased productivity levels. This lead to a large number of farmers reported to have increased resilience. Since no further justification was requested from projects to establish improved levels of resilience, it raised the question of whether the indicator is delineated enough and actually informs us on improved resilience. This is a common problem across M&E for CCA, as outlined in GEF's Good Practice Study.[3] The indicator should therefore have a higher threshold for projects to contribute (e.g. applying more than 2 or 3 climate-smart practices).

Another key challenge was that the process of establishing the number of farmers with improved climate change resilience was not an inclusive process. Instead of actively involving farmers or representatives of farmer groups on how they perceive their resilience and how this can be improved, the data used focused on project monitoring data that was collected by SNV staff and local

[3] Climate-Eval Community of Practice, 2015. Good Practice Study on Principles for Indicator Development, Selection, and Use in Climate Change Adaptation Monitoring and Evaluation.

implementing partners. After the first year review this was considered to be a flawed approach. One of the core features of SNV's M&E approach is the active involvement of stakeholders. It recognizes that implementing projects is about empowering participants, and that this should also be extended to their M&E capacities. Moreover, stakeholder input is crucial to be able to contextualize and better understand data collected. The methodology for measuring the indicator should therefore include stakeholder's feedback.

A final challenge was regarding the focus on the application of climate smart practices, which is closely related to project activities, as was the intention. However, we found that this reduces the measurement of increased resilience to an overly simplistic counting exercise. It does not provide incentives to project staff to (start to) measure specific aspects of or reflect on how to define climate change resilience. This hampers the creative process within SNV of finding new and better ways to measure resilience.

Planned next steps (as appropriate):

Based on this experience or research, have next steps been planned to address/study some of the identified challenges, scale up or scale out such activities/processes?

For the 2017 SNV harmonized indicator round, we have taken the following steps to address the main challenges identified above and open ways to keep evolving on this subject.

First of all, following feedback from SNV staff, it became apparent that most climate change resilience projects promote more than one climate smart agricultural practice in their project activities. The threshold for being counted as a farmer with increased resilience is therefore raised to at least two climate smart agricultural practices applied in the last 12 months.

Secondly, the lack of active involvement from key actors in the current methodology is rectified by the mandatory implementation of the Climate Risk Assessment Tool for those projects wanting to contribute to the harmonized resilience indicator. Specifically, projects are asked to annually hand in updated Resilience Score Cards for farmers, and other groups where relevant. This ensures that project target groups are being consulted and involved regularly, as well as builds in time to reflect with stakeholders on how adaptive capacities (and perhaps also priorities) are shifting and whether the project is moving in the right direction.

Finally, we keep the dialogue with project staff open to stimulate thinking on ways to improve the existing methodology. Several opportunities are already identified. For instance, the Resilience Score Cards (as part of the Climate Risk Assessment Tool) provides data on how (much) the adaptive capacities of key actors change over time, as well as which and how many resilience dimensions are being addressed. Going forward, this information could lead to additional criteria for the harmonized resilience indicator besides a minimum number of climate smart practices.