ADAPTATION MRE GUIDELINES

CENTRAL ASIA REGIONAL CENTRE FOR CLIMATE ACTION TRANSPARENCY (RECATH)

FEBRUARY 2024

DISCLAIMER

PREPARED UNDER

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TABLE OF CONTENT

1. Background and objectives

1.1 MRE definitions

While "MRV" (Measurement, Reporting and Verification) is the most commonly term used when tracking mitigation actions, "M&E" (Monitoring and Evaluation) is still preferred when referring to adaptation actions. Climate change M&E for adaptation refers to mechanisms put in place at different scales to respectively monitor and evaluate efforts to adapt to the impacts of climate change with the aim of systematically identifying, characterizing and assessing progress over time[1].
In general, both terms (MRV and M&E) are still widely used either for mitigation and adaptation even if definitions and scopes are significantly different: the different components of MRV and M&E concepts are summarized in the figure below[2]. Adaptation M&E still differs from mitigation MRV: due to the lack of common methodologies and of quantitative metrics on adaptation, the *Measurement* component as well as the corresponding *Verification* component have not been widely considered so far for adaptation.
MRE (Monitoring, Reporting and Evaluation) is progressively replacing the M&E concept for adaptation – particularly within European Union countries[3], in a context of increasing reporting requirements on adaptation (through UNFCCC processes as well as through National Adaptation Plan processes).

Figure 1. MRV and M&E definitions

Monitoring A continuous and systematic process of tracking the progress made in planning and implementing a climate change adaptation policy, program or other intervention, taking into account its specific objectives and inputs. Monitoring is often based on the use of a specific set of indicators, which consider the context in which adaptation occurs.	***Evaluation*** The systematic, transparent and objective process of assessing the effectiveness of a climate change adaptation policy, program or other intervention in terms of its specific objectives, usually in terms of its impact on reducing vulnerability and increasing resilience. Evaluation may use both quantitative and qualitative data from a range of sources, including those gathered through monitoring processes.
Measurement "The process of data collection over time, providing basic datasets, including associated accuracy and precision, for the range of relevant variables. Possible data sources are field measurements, field observations, detection through remote sensing and interviews." (Source: UN REDD)	***Reporting*** The communication of the information collected about the progress or the impact of a climate change policy, program or other intervention. This process might take place internally within an organisation or country when associated with a specific monitoring or evaluation scheme, or be a requirement related to some international procedures (e.g. National Communications of the UNFCCC, Monitoring Mechanism Regulation (MMR) of the European Union).

Verification
"The process of formal verification of reports, for example, the established approach to verify national communications and national inventory reports to the UNFCCC." Source: UN REDD)

Monitoring and evaluation are closely linked processes and are often mentioned together when referring to adaptation policies and to reporting requirements.
However efforts are underway to establish integrated frameworks for tracking and reporting climate action under the Enhanced Transparency Framework (ETF) of Paris Agreement, what may lead to use

[1] IPCC, Global Warming of 1.5°C - Glossary, 2018
[2] Definitions adjusted from EEA, Indicators for adaptation to climate change at national level - Lessons from emerging practice in Europe, 2018
[3] Ibid.

"climate transparency" (see box below) as the transverse concept combining mitigation MRV and adaptation MRE.

Climate Transparency?
As introduced in the Paris Agreement / art. 13, in order to build mutual trust and promote effective implementation, an enhanced transparency framework (ETF) of climate action is created, with some flexibility, which takes into account the different capacities of Parties. Each Party is expected to regularly provide the following information[4] – including through Biennal Transparency Reports (BTR):
a) A national inventory report of anthropogenic emissions by sources and anthropogenic removals by sinks of greenhouse gases;
b) Information necessary for monitoring the progress made by each Party in the implementation and achievement of its nationally determined contribution;
c) Regarding adaptation, each Party should provide information on the effects of climate change and on adaptation to such changes, as appropriate.
d) Information on support (needed and received[5]) should also be monitored covering financial, technology transfer and capacity-building support.
Detailed information on ETF requirements is provided in this report (see 3.1).

1.2 Developing adaptation MRE guidelines in Central Asia

1.2.1 Rationale for developing a Transparency System in Central Asian countries

Better policies and investments choices driven by quality data are what it takes to turn climate action and particularly NDCs to ground actions. Therefore, measurement, reporting and verification (MRV) as well as monitoring and evaluation (M&E) systems must be core components of any successful climate policies. It is a systematic way of instilling the culture of transparency and being accountable when implementing climate change programs. With MRV/M&E, it is possible to improve climate policy choices by evaluating potential effects of actions, tracking implementation progress, assess impacts of climate actions. MRV/M&E system can also facilitate domestic and international reporting using good quality data, rigorous methodology and protocols for accounting and tracking, what in turn improves access to climate finance.

Through the ReCATH project, Central Asian countries have recognized the necessity for a suitable process to monitor and evaluate mitigation and adaptation policies and measures to track progress toward achievement of objectives. Support is needed accordingly to help design national climate transparency system aligned to UNFCCC reporting requirements – taking account national circumstances and building on what has already been done at country level. For countries located in the same geographical region and having similar national circumstances, applying a joined effort in enhancing their climate MRV systems may indeed prove to be a more economically feasible and technically more effective way to strengthen their systems. That is why this project is focusing on establishing a cooperative regional Climate MRV Hub in Central Asia to maximize the effects of collaborative efforts of the international and regional experts and officials toward improving their MRV systems.

[4] See UNFCCC, 2018, Decision 18/CMA.1 Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement
[5] Developed countries are also expected to provide information on support provided and mobilized.

1.2.2 The adaptation component

While a number of initiatives on adaptation are in place at country level, common tools and methodologies are needed for gathering and processing data with a view to monitor and evaluate actions as well as to report on it – in alignment and consistency with national and international policy and reporting frameworks. The development of common tools and methodologies will play a critical role for lessons drawing and knowledge sharing – more particularly to assess results and avoid maladaptation. Specific attention is needed on the development of indicators.

To address the adaptation tracking issues, methodological recommendations are provided in this document. They can be used by the national teams as a supporting guidance when developing their adaptation MRE system – which should take place through their NAP process (see table below). Those recommendations are consistent with international guidelines under development – more particularly with provisional findings linked to the preparation of the UNFCCC Global Goal on Adaptation.

Table 1. NAP process: status of implementation at country level (June 2023)

Country	Status	Institutional arrangements	Comments
Kazakhstan	Planned	In cooperation with USAID, **the Ministry of Energy** is drafting amendments for the environmental code to clarify the responsibilities for various steps within the planning, implementation and M&E phases	
Turkmenistan	Ongoing (expected to be completed in 2023)	**Inter-Sectoral Commission on Environmental Protection (ICEP)**: can initiate and drive the NAP process. According to the NSTCC (2019), to accelerate its implementation, it is necessary to also create a **permanent Secretariat for the provision of technical support to the ICEP**.	
Uzbekistan	Ongoing	There is currently no single institution charged with coordinating climate change adaptation. The development of the NAP is carried out within the framework of the UNDP / GCF project "Sector driven National Adaptation Plan to advance medium- and long-term adaptation planning in Uzbekistan".	
Tadjikistan	Adaptation strategy adopted (2019)	The **Committee on environmental protection** under the Government of the Republic of Tajikistan is in charge of the implementation of the strategy.	It is a strategic document to accomplish the Paris Agreement. It summarizes the information needed to identify risks, threats and adaptative measures related to climate change. 4 sectors prioritized that are both climate sensitive and development priorities: i) energy; ii) water; iii) transport; and iv) agriculture.

Country	Status	Institutional arrangements	Comments
			7 cross-cutting areas were also highlighted: (1) health, (2) education, (3) gender, (4) youth, (5) migration, (6) environment, and (7) emergencies.
Kyrgyzstan	Ongoing	Under the chairmanship of the Chairman of the **Cabinet of Ministers** of the Kyrgyz Republic, a new coordination structure under the **Coordination Council on Climate Change, Ecology and the Development of a Green Economy** with a broader scope of climate issues was formed. It is designed to fulfill the tasks of ensuring the overall coordination and integrated strategic management of the processes of fulfilling the obligations of the Kyrgyz Republic to achieve the SDGs, measures to mitigate and adapt to climate change, as well as the development of a «green» economy in the Kyrgyz Republic. The commitment and ambition of actions in the field of adaptation to climate change while updating the NDC is underlined by the process of updating the National Adaptation Planning (NAP) in the Kyrgyz Republic by the Cabinet of Ministers jointly with UNDP with the support of the Green Climate Fund.	Adaptation measures are designed and presented in accordance with the three global adaptation goals of the Paris Agreement (Article 7): (1) strengthening adaptive capacity, (2) strengthening resilience to the negative impacts of climate change and (3) reducing the vulnerability of populations and systems to the impacts of these influences. The section includes sectoral and cross-sectoral measures that prioritize adaptation investments. They are developed through a risk and vulnerability assessment, a review of national and sectoral development policies, and a broad consultation process involving stakeholders from all sectors, involving the private sector, civil society, academia, women's associations, and youth NGOs. **The developed measures of the NDC will be the basis for the ongoing NAP process**, the results of which will be integrated into the next NDC in 2025. In this regard, the time horizon for NDC adaptation measures is set until 2025.

1.3 Scope and content of the guidelines

Building on preliminary findings on current practices on adaptation MRE at country level - and of potential synergy and integration under the national planning and reporting systems[6], those guidelines have been developed with a view to improve adaptation tracking at national level and to pave the way towards ETF compliance.

Methodological recommendations have been presented and discussed with stakeholders during the workshop held in Achgabat / Turkmenistan (October 2023); results from this consultation are taken into account in the recommendations.

[6] See the report "Gaps and Needs Analysis" prepared during the first phase of the ReCATH project (June 2022)

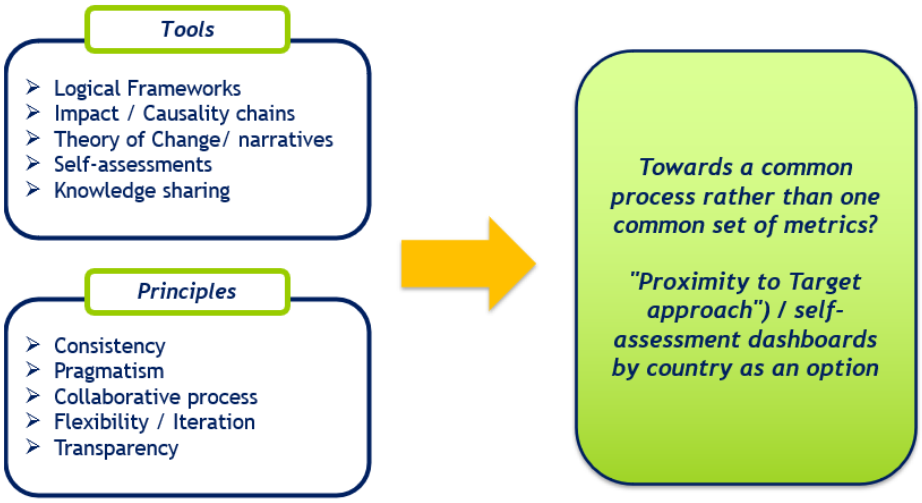
2. Our proposed approach for developing an adaptation MRE system

2.1 Developing a logframe-based MRE system

2.1.1 Overview

As highlighted by the most recent publications, lessons can be drawn from 15 years experience on adaptation MRE at national and international levels: a number of M&E pilot systems have been developed to support the first generation of NAPs, effort has been drawn on knowledge sharing with a view to define a Global Adaptation Goal through the Paris Agreement. While there is still no agreement on common metrics, recommendations are provided regarding common tools and methodologies, with a view to promote a "proximity to target approach"[7]: as highlighted in the figure below, the development of a MRE system should be informed through a step-by-step approach, using tools as impact chains and logical frameworks.

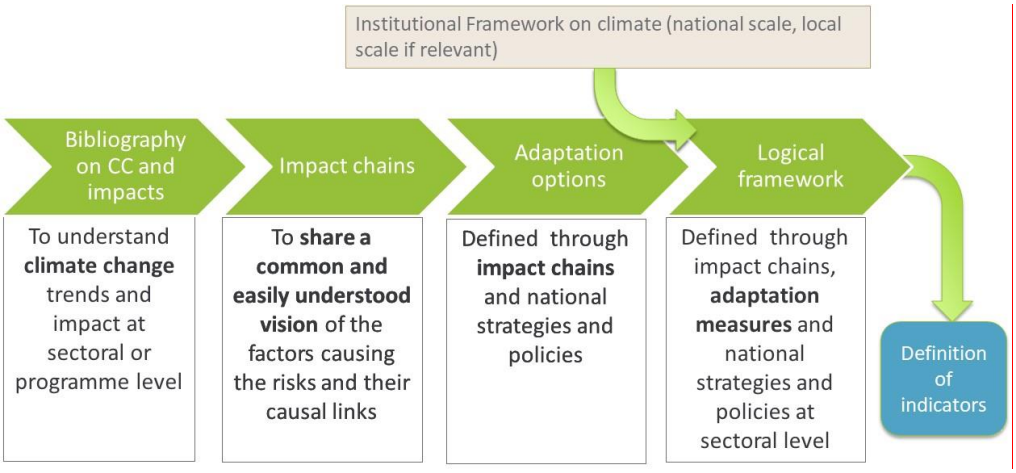
Figure 2. Towards a common methodological process on adaptation MRE



Building on these recommendations, we propose a methodological approach as summarized below.

Figure 3. A step-by-step approach

[7] See the technical papers from the UNFCC Adaptation Committee; Approaches to reviewing the overall progress made in achieving the global goal on adaptation, 2021

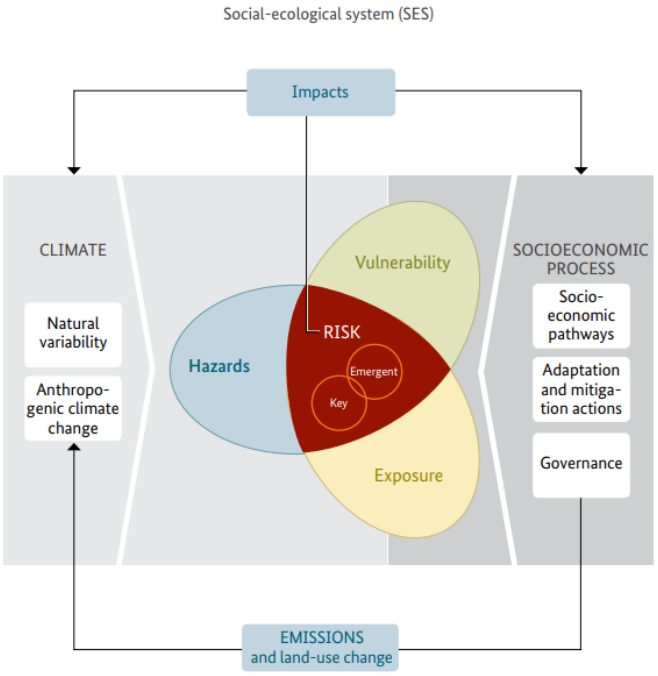


It is to be noted that, depending on practices currently used in the country for planning, monitoring and reporting, the logical framework approach may be strengthened by a more complex approach – usually referred to as theory of change approach.

2.1.2 Building impact chains

An impact chain, or causality chain, is an analytical tool that helps to better understand, systemize, and prioritize the factors that drive risks in the system of concern. Impact chains are developed according to the notion of risk as discussed in the Fifth Assessment Report (AR5) of the Working Group II (WGII) of the Intergovernmental Panel on Climate Change (IPCC, AR5 Glossary, 2014) (figure below).

Figure 4: Illustration of the risk concept



Source: (GIZ, 2018)

Climate risk and impacts (IPCC, AR5 Glossary, 2014)

- **Risk** is often represented as the probability of occurrence of dangerous trends or events that are amplified by the consequences of such phenomena or trends when they occur. In AR5 reports, this term is used primarily to refer to the potential, when an outcome is uncertain, for adverse effects on people, livelihoods, health, ecosystems and species, economic, social, and cultural heritage, services (including environmental services), and infrastructure.

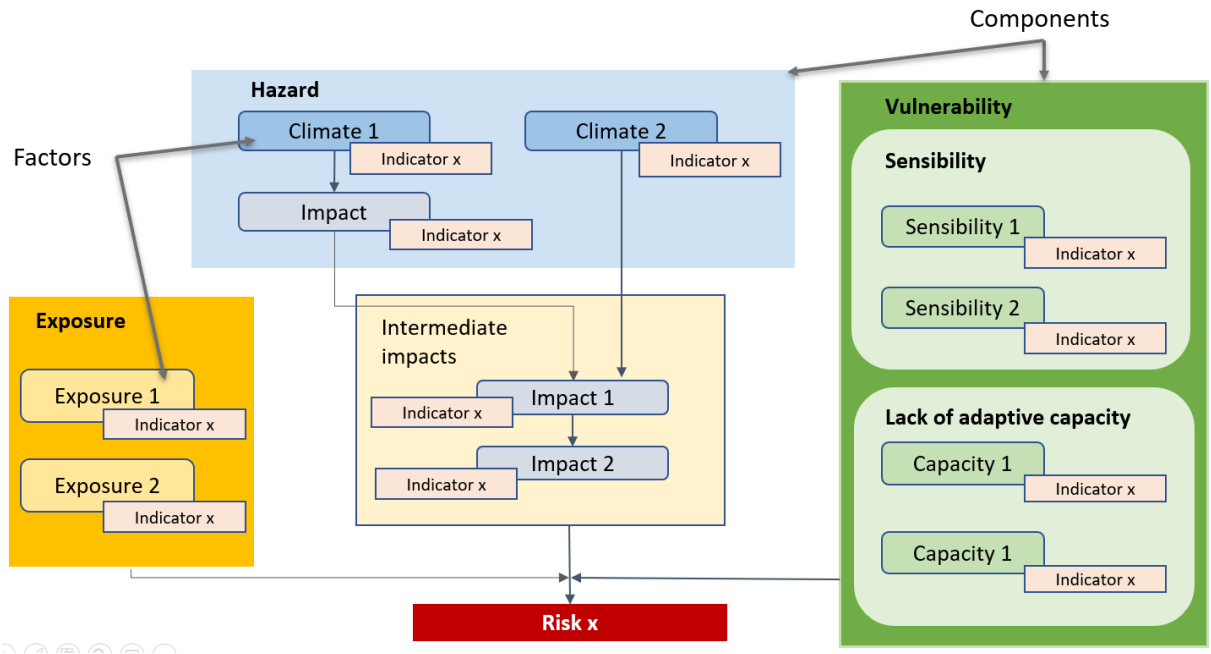
- The term **impact** is used to refer to the effects of extreme weather and climate-related events and climate change on natural and human systems. It generally refers to the effects on the elements exposed to the risk mentioned above, considering their interactions with climate change or hazardous climate events occurring over a period of time, and the vulnerability of the exposed society or system. The impacts of climate change on geophysical systems, including floods, droughts, and sea level rise, are a subset of impacts called physical impacts.

An impact chain is built with the components of the risk presented above and shows the interaction between these components. For each of these components, the impact chain presents factors related to:

- Climate signal for the hazard component,
- Sensitivity and lack of adaptive capacity for the vulnerability component,
- One or more exposure factors for the exposure component.

A **risk chain** may also represent a last component: intermediate impact. This auxiliary component helps to better understand the cause-effect chain leading to the risk.

Figure 5: Risk Chain Model



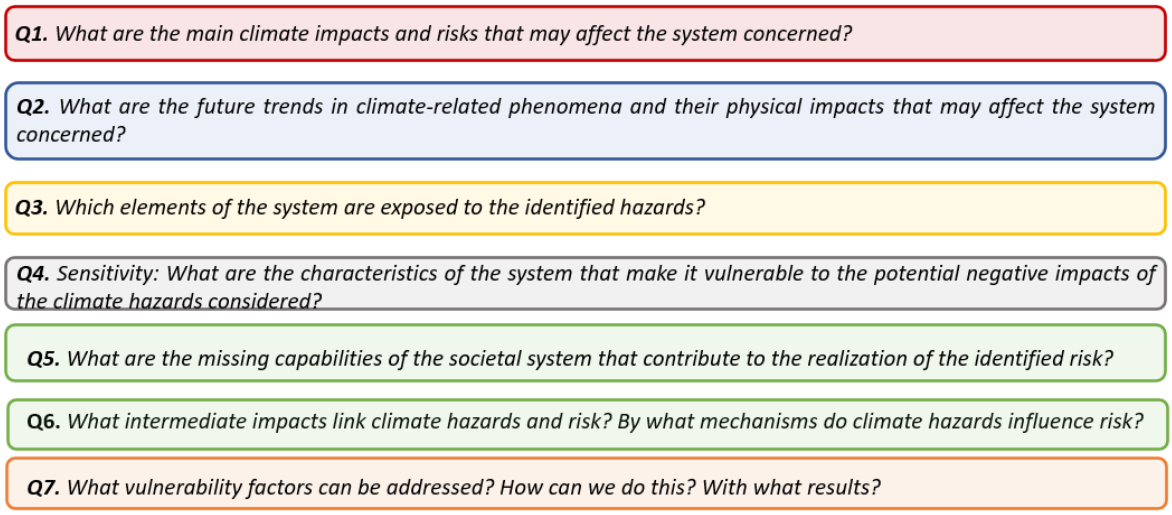
Source: ACTERRA according to (GIZ, 2018)

Finally, the added **value** of developing impact chains is to:

- Visualize the **components** of risk (hazard, exposure, sensitivity, lack of adaptive capacity);
- Develop a simple and shared understanding of **relationships** between components of risk;
- Visualize where stakeholders can put efforts to **decrease risk** and **increase resilience** to climate change (adaptation);

- Facilitate the design of a logical framework and the **identification** of relevant indicators.

The development of an impact chain is a collaborative approach: once the scope is defined (specific sectoral impacts to address), the different components of the chain have to be developed following the questioning as follows:



For more information on the development of impact chains: methodological support has been provided during the workshop help in October 2023.

2.1.3 From impact chains to Results-Based Management framework (RBM)

From the impact chain exercise and consequent findings, the objective is to develop a RBM – following common methodological practices on RBM and logical frameworks.

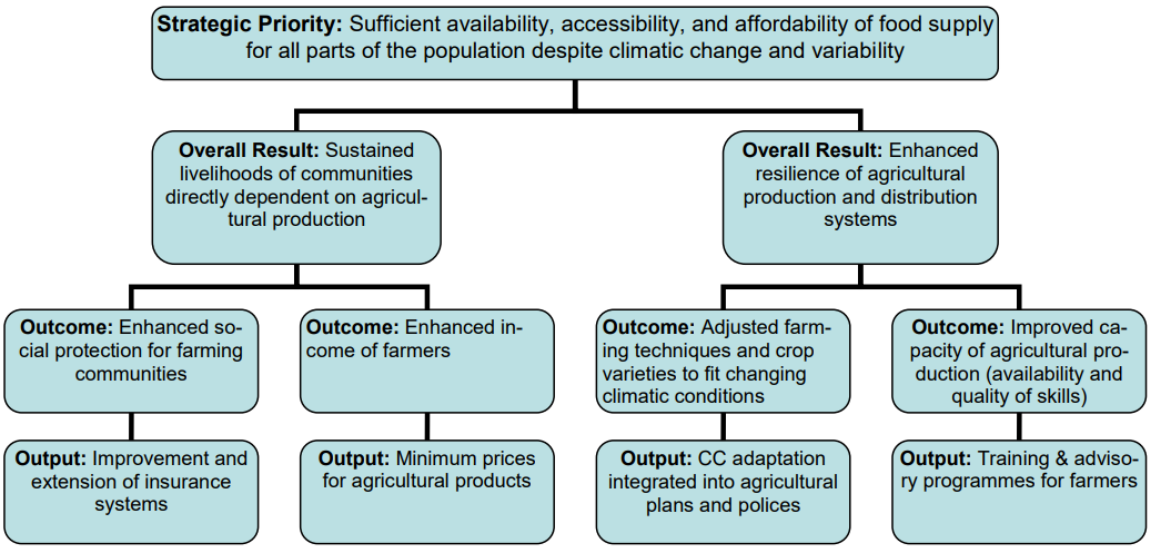
Specific guiding questions are as follows[8]:

- What is the adaptation goal you wish to achieve in the sectors? What are the outcomes and outputs? What is the role of the sector in reaching national adaptation goals?
- What are the different pathways towards the final adaptation goal (they may already be articulated in e.g. the Agriculture Development Strategy, National Climate Change Strategy, NAP or other development or sectoral policies)? Determine the level of the 'goal – national or sectoral´
- How can the current policies, plans and program portfolio within the sector help achieve the goal? Where are the bottle-necks to achieving the goal?
- What are the barriers to achieve the adaptation goal?
- What assumptions are you making?
- Have you considered how pathways differ for different groups including those of different genders
- Have you identified outputs, outcomes and impacts where relevant, and located these on the pathway?

The objective is to use the findings from the impact chain to develop a logical framework (or results chain) at the sectoral – or programme level. This logical framework will be the starting point for the identification and selection of indicators. An illustrative logical framework is proposed below (agriculture sector).

[8] Adjusted from FAO, THE M&E OF ADAPTATION TRAINING PACKAGE, 2021 – module 6

Figure 6. Illustrative logical framework (agriculture sector)[9]



2.2 Focus on the development of indicators

Different tools and methodologies exist to help select relevant lists of indicators, including sectoral ones. Databases on adaptation indicators, when they exist, provide reliable sources of information for the identification of sets of indicators.

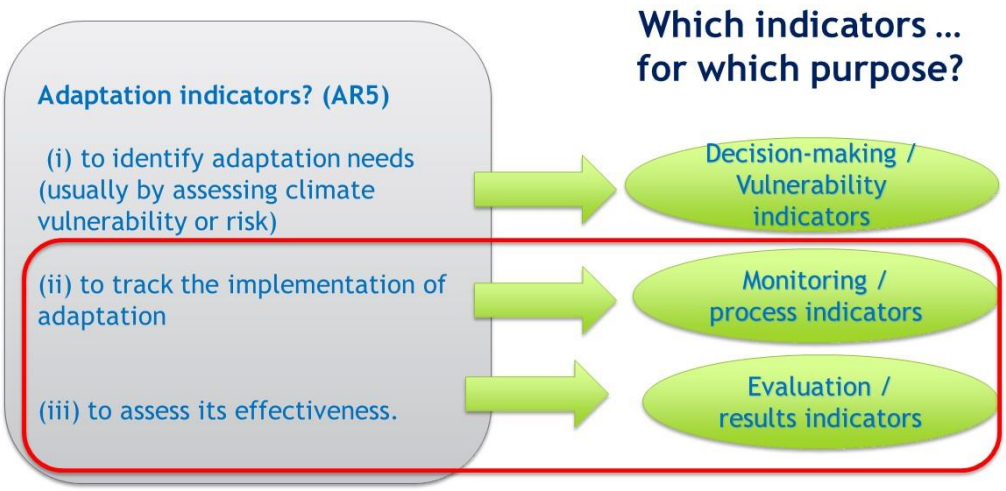
However further processing is needed to be fully relevant to the priority challenges to address and the specific MRE purpose. With the objective of defining a set of indicators to be managed at national level (sectoral scale), our proposed approach is a step-by-step process based on the development of a RBM framework based on impact chains – as presented above. *If the full process cannot be implemented, the identification of indicators can be based on the results of the work done on impact chains – as has been done under this project.*

2.2.1 Conceptual background on indicators

Climate change indicators are aggregate measured values used to monitor and assess interventions and changes in complex environmental phenomena. They are obtained on the basis of quantitative or qualitative data collected in a previous, preferably longer period of time, and they help monitor and assess changes that affect nature and society. Countries may use adaptation indicators for a number of purposes: t**he IPCC Fifth Assessment Report (AR5) mentions three complementary uses of adaptation metrics: (i) to identify adaptation needs (usually by assessing climate vulnerability or risk), (ii) to track the implementation of adaptation, and (iii) to assess its effectiveness.** From an adaptation MRE perspective, the specific purposes of indicators should focus on tracking and assessing actions – as summarized in the figure below.

Figure 7. Different indicators for different purposes

[9] GIZ, 2013



Key highlights on the different types of indicators are provided below.

Indicators to identify (and monitor) adaptation needs

To identify adaptation needs and design actions accordingly, the specific vulnerability of the considered system has to be analyzed and potential climate-related impacts have to be assessed. Indicators can be defined under that process to characterize the vulnerability drivers of the system; they may include indicators on climate parameters (change in precipitations and temperature, occurrence of extreme events), physical (e.g. soil characteristics) and socio-economic factors (e.g. level of income of households), a well as political aspects (e.g. conflict-prone areas). Those indicators are very context-specific and may be addressed at different scales depending on the issues addressed. They may be monitored under an "observation" dashboard to be used by decision-makers and evaluators. Compared to indicators for monitoring an evaluation, it is not possible to set up targets for those indicators: they refer to changes that will not be impacted by adaptation actions (effective changes will derive from mitigation achievements).

Those indicators are not intended to help track the implementation of action but rather to inform the decision-making process and/or evaluation studies. Baseline values may be defined and regularly revised but no targets are defined; except if they are integrated in a composite resilience index. ***In our approach, they are addressed as "observation" indicators***[10].

Indicators to track the implementation of adaptation action (policies & measures)

The design of adaptation actions is embedded in projects/programs/policies and should provide information enabling to assess the progress in the implementation of the activities and the deliverable of outputs, including indicators with baseline value/description and targets to be achieved at the end of the implementation. Indicators to track progress in the implementation of the measures are generally provided in the description of the policy or measure (*output indicators*) – with baseline and target values, through a logical framework or other format.

[10] Observation of climatic and non-climatic variables is one component of the adaptation process as described by the FAO in the publication: Tracking adaptation in agricultural sectors (2017)

Process-oriented input and output indicators have been the most common to date[11]. While it helps to assess what is being done to advance adaptation (input and output), it has to be combined with outcome-oriented indicators to be able to paint a picture of adaptation progress[12].

Indicators to assess the results towards adaptation /resilience

When assessing the results of an adaptation action, different dimensions may be addressed as highlighted in the UNFCCC documentation[13] : not only effectiveness but also adequacy and sustainability of results (and related actions) must be assessed, with particular attention on potential mal-adaptation. The adaptation community is still struggling in providing guidance accordingly, given the potential multi-faceted, context-specific and long-term characteristics of adaptation measures; avenues are currently explored through the GGA process.

Common practices define performance / outcome / impact in relation to a Results-Base Framework or Theory of Change in order to track progress towards pre-defined objectives – usually defined either at sectoral level or at programme level. Contribution to broader development indicators (more particularly contribution to SDGs objectives and related indicators) is also often tracked as impact indicators. Specific attention is recommended on governance aspects – as a key component for the assessment of the country's readiness to address climate change effects (see box below).

Governance indicators

The level of maturity of the adaptation planning arrangements (and whether planning is appropriate in light of risks and vulnerability) is a key criteria from a readiness perspective. The development of metrics accordingly is recommended by Ngwadla and El-Bakri[14] - to help assess global readiness to address risk. Illustrative examples are i) the EU adaptation preparedness scoreboard (step-by-step indicators informing the policy-making process with a scoring grid to assess progress on 30 indicators), ii) the two-pronged monitoring and evaluation framework in Cambodia - based on the TAMD approach, including one part on institutional readiness indicators with a scoring grid (a "maturity scale").

As previously commented, the rise of concerns about climate change has given rise to the notion of resilience, which is particularly relevant from an outcome assessment perspective: while the concept of adaptation is the process of changing a system towards a desired state, *resilience* describes the state of the system and can be considered an outcome of adaptation[15]. Such a *resilience screening* is a field for the development and the experimentation of tools and methodologies such as the WB Resilience Rating System[16], including a number of initiatives focusing on the development of composites indices (see box below).

Composite indices

The construction of composite indices on adaptation and resilience takes into account the multidimensional nature of the situations to be assessed. Index scores are often used to visualize trends, differences on maps (e.g., vulnerability maps) or to compare countries, target populations or entities. Their design requires multiple normative and country-specific choices, ranging from

[11] UNFCCC, 2021, Approaches to reviewing the overall progress made in achieving the global goal on adaptation_Technical paper by the Adaptation Committee
[12] Leiter T and Pringle P. 2018. Pitfalls and potential of measuring climate change adaptation through adaptation metrics. In: L Christiansen, Martinez G, and P Naswa (eds.). Adaptation metrics: Perspectives on measuring, aggregating and comparing adaptation results. Copenhagen: UNEP DTU Partnership. pp.36
[13] UNFCCC, 2021, Approaches to reviewing the overall progress made in achieving the global goal on adaptation - Technical paper by the Adaptation Committee
[14] Ngwadla X and El-Bakri S. 2016. The Global Goal for Adaptation under the Paris Agreement: Putting ideas into action. London, UK: Climate and Development Knowledge Network. Available at: https://cdkn.org/wpcontent/uploads/2016/11/Global-adaptation-goals-paper.pdf
[15] ODI, 2021, Technical paper The Global Goal on Adaptation: a SIDS Perspective
[16] WB, 2021, Resilience Rating system: a methododology for building and tracking resilience to climate change

composition and weighting to calculation method and data requirements; each of these choices influences the index results, so that indices that claim to measure the same subject can lead to very different results, as can be seen in national vulnerability indices. Insight into innovative composite resilience indicators will be provided as an exploratory approach.

2.2.2 Our recommendations for the identification and selection of indicators

As previously commented, a number of databases are available on adaptation indicators, which can be very exhaustive given the wide and multi-faceted range of adaptation measures/policies/projects (e.g. a total of 394 indicators identified in the database for climate smart agriculture developed by FAO under a CGIAR project). While they provide reliable sources of information for the identification of indicators, further processing is needed to focus on a set of indicators fully relevant against the priority challenges to address, the specific purpose and scale of the MRE process.

Recommendations to establish a set of indicators are as follows:

- A database of adaptation indicators applicable to the sector is developed, building on existing database (including international and national databases).
- From this database, a "long list" of indicators is prepared in relation with the RBM previously developed (or with the impact chain if the full process cannot be implemented), differentiating potential indicators at impact/objective / outcome/output level – taking into account input from stakeholders (e.g. discussion on impact chains during sectoral workshops).
- A prioritization exercise is proposed – with the objective of selecting 20 to 30 indicators per sector - through on-line survey or workshops, asking stakeholders to assess indicators against the following criteria[17]:
    - Relevance: the indicator relevance in the context of the country
    - Feasibility: Data availability for the indicator
- Processing and reformulation is done to ensure I) overall consistency against the pre-defined logical framework and the different MRE components, ii) synergy with existing indicators (national and international).
- Once a prioritized list of indicators is "validated", each indicator (impact, objective, outcome levels) is briefly described in a common template, including recommendations for calculations and data sourcing. A number of iterations with potential data providers as well as with relevant stakeholders is necessary to help improve and tailor the definitions of the indicators; indicators may be adjusted and reformulated at this stage.
- Final step for informing the indicators' description is the provisions of values (baseline and target values) based on available documentation in the country, i.e. referring to policy objectives if existing or to research programs etc.

[17] We propose a simplified approach (2 criteria) – adjusted from more complex approaches (SMART or RACER criteria).

3. Towards an adaptation results-based management (RBM) framework: provisional results for central Asian countries

Through the ReCATH project, the proposed approach has been partly applied to the countries for some key sectors (agriculture, water, health, energy):

- prototype impact chains have been developed – at regional level,
- long lists of indicators (indicative) have been provided with a view to help identify a preliminary list of indicators at country level – based on participants' feedback.

3.1 Sectoral impact chains: provisional results

3.1.1 Overview of the implemented process

Building on a desk study on Central Asian countries – including information gathered for the preparation of the gap and needs report, we prepared climate profiles for each country which highlighted key potential impacts to be addressed from an adaptation perspective.

Those findings were presented and used during the workshop conducted in October, together with a methodological training on impact chains. Prototype impact chains were prepared at regional level (one for agriculture and one for water) taking into account feedback from stakeholders; for the health sector, one prototype impact chain was discussed during a follow-up virtual meeting. Regarding the energy sector, one prototype impact chain was prepared as a complementary input.

The development of impact chains as conducted during this project must be considered as a pilot exercise. Further effort is needed to develop fully-informed impact chains at national level – if consistent with the country adaptation institutional framework.

3.1.2 Sectoral impact chains (provisional results / regional scale)

Sectoral impact chains prepared during the project are presented below. As commented, they have been developed as pilot exercise – at regional scale; they provide provisional findings, which can be further developed by the country teams to better match national circumstances.

Figure 8. Impact chain for the agriculture sector

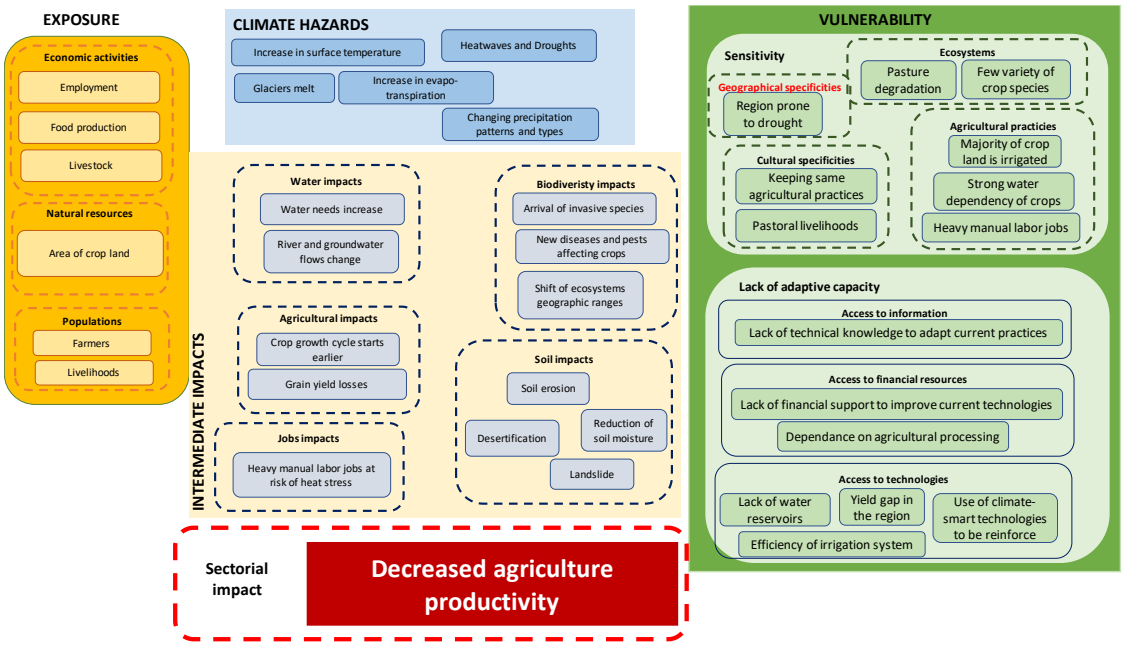


Figure 9. Impact chain for the water sector

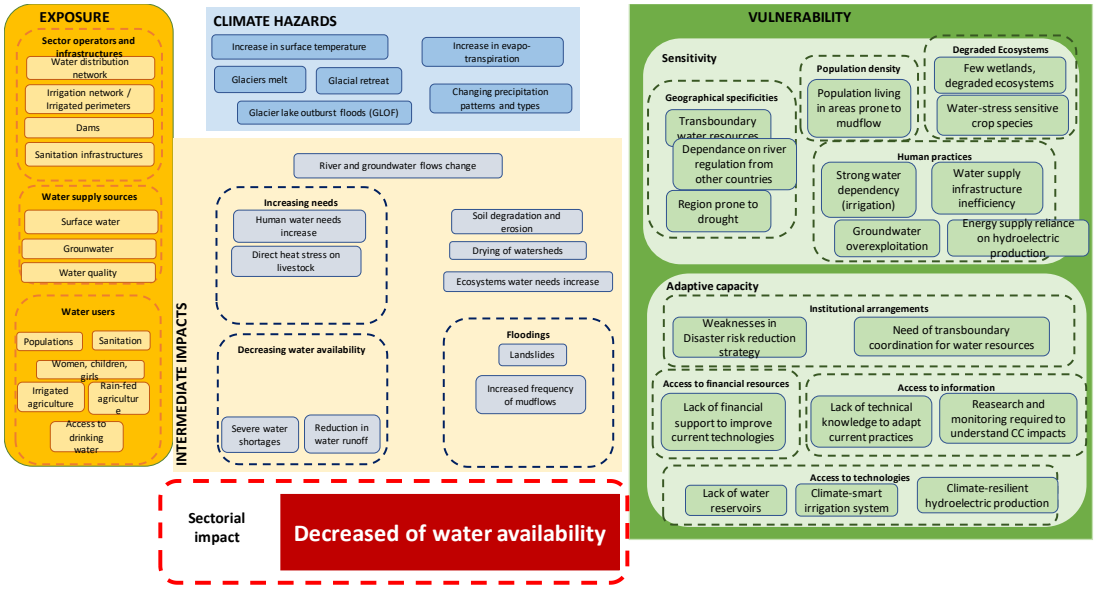


Figure 10. Impact chain for the health sector

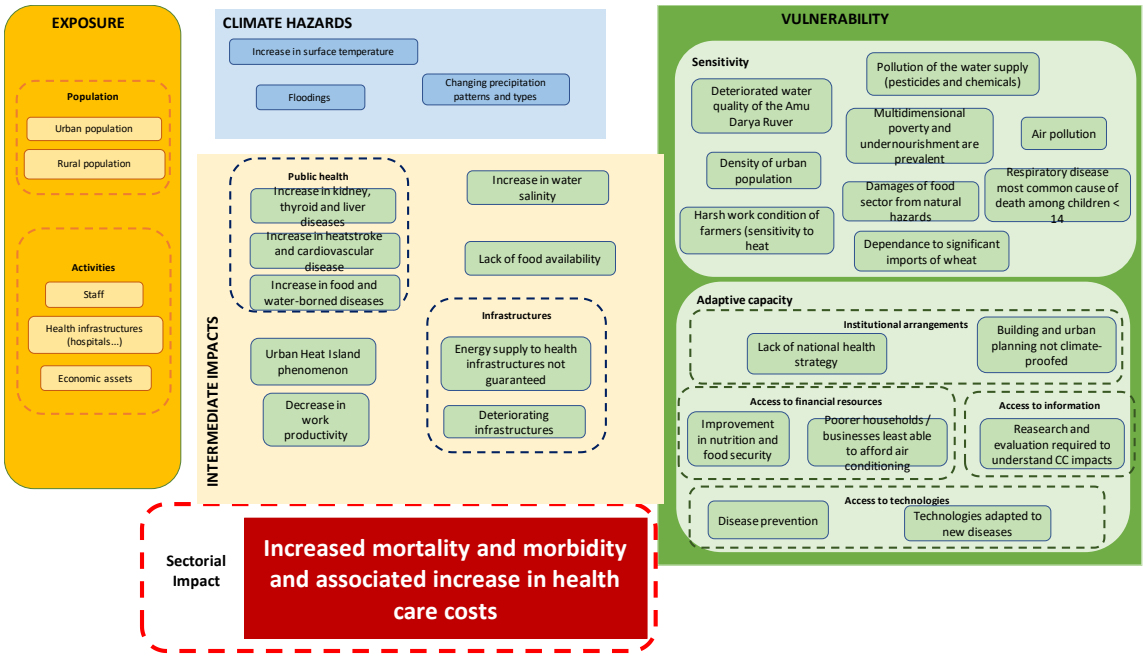
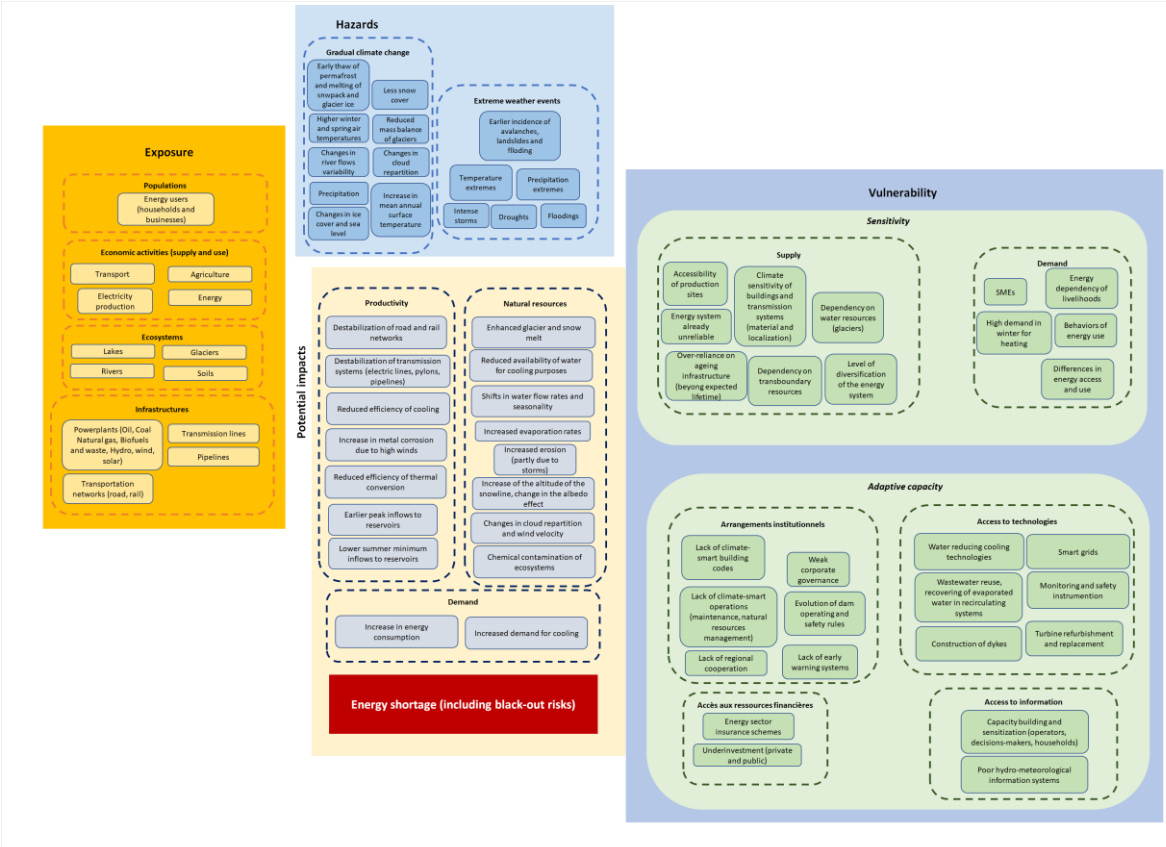


Figure 11. Impact chain for the energy sector



3.2 Sets of indicators: provisional results

3.2.1 Overview of the implemented process

As part of the overall methodological process presented during the workshop conducted in October 2023, long lists of indicators have been provided (one per sector).

Participants were asked to identify a set of relevant indicators at country level, building on the collaborative work done on impact chains: a scoring exercise was proposed using a set of criteria as follows[18]:

FEASIBILITY? Please score from 0 (no feasibility) to 5 (high feasibility)	***RELEVANCE? Please score from 0 (no relevance) to 5 (high relevance)***	***AVAILABILITY? Please score from 0 (no availability) to 5 (high availability)***

The identification of indicators as conducted during this project must be considered as a pilot exercise. Further effort is needed to develop fully-informed lists of indicators at national level – if consistent with the country adaptation institutional framework.

3.2.2 Lists of indicators

Lists of indicators provided to the participants are annexed to this document. Those lists have been developed by Citepa, based on in-depth analysis of current documentation, mainly sectoral guidelines, NAPs and NDCs.

4. Way forward

We provide thereafter some generic recommendations for the operationalization of an adaptation MRE system – embedded in a full climate transparency system. Country-specific arrangements have to be developed in consistency with national planning and reporting processes.

4.1 Implementation arrangements

4.1.1 Human and financial resources

Monitoring and evaluation of adaptation action is flagged as a critical challenge for all countries – usually addressed through the NAP process. It is expected that M&E teams in the different institutions will be mandated to mainstream adaptation reporting in their activities, what may require adequate capacity building on adaptation M&E and on how to use tools and methodologies. To help track adaptation actions, it is recommended to set up a centralized system for gathering and processing information – connected to systems in place in the country.

[18] This is a simplified approach (adjusted from the SMART approach).

Capacity building

Support on MRE adaptation should be recurring (once in a year) with new developments over time; post-training follow-ups are essential to see that to what extent they are applying M&E in their respective teams departments.

It is difficult at this stage to assess the human and financial resources necessary for maintaining a fully operational adaptation MRE system at national scale. To be noted: in some countries, 25% of the whole NAP process (budget) is dedicated in activities related to M&E aspects. As an illustration, the table below provide some first estimate of human resources for climate action related transparency: for small to medium-sized countries, a permanent staff of 8-12 persons is recommended on the adaptation component.

Table 2. Estimate of basic human resources for climate action transparency systems for small and medium-sized countries (e.g. 300 000 – 30 M inhabitants)[19]

Transparency area	Number of people and workload (% of time)	Resource: FTE	Additional 30% FTE for backup and succession
Transparency system administrator	1 at 50%	0.5 FTE	0.2 FTE
Adaptation			
Adaptation MRV coordination	1 at 100%	1 FTE	0.3 FTE
Climate data	3 at 35%	1 FTE	0.3 FTE
Vulnerability, risks, loss and damage	10 at 30%	3 FTE	1 FTE
Adaptation action[11]	15 at 20%	3 FTE	1 FTE
Mitigation			
Mitigation MRV coordination	1 at 100%	1 FTE	0.3 FTE
GHG inventory[12]	5 at 50%	2.5 FTE	1 FTE
Projections	3 at 50%	1.5 FTE	0.3 FTE
Mitigation action	15 at 20%	3 FTE	1 FTE
Investment (climate finance and support)			
Investment and support	1 at 50%	0.5 FTE	0.2 FTE
Total	**30–55 stakeholders**	**17 FTE**	**6 FTE**

4.1.2 Policy and legal framework

To ensure the effective integration of adaptation in institutional MRE activities at different scales, corresponding mandates have to be revised what may require some changes in the legal framework – to be addressed through the NAP process.

In practice, mandates for data collection have to be set up in a formal way through the development of data sharing agreements (DSA)[20]. A DSA is a specific form of agreement that defines the data supplied, from whom, to whom, and when for the transparency system. Ideally, a DSA formalizes an arrangement between the national focal point, or designated coordinator, and the data supplier stakeholder, with technical expertise provided by the team of national experts. A DSA can help secure

[19] UNFCCC, Handbook on Institutional arrangements, 2020
[20] UNFCC, Handbook on Institutional arrangements, 2020

data provision in the longer term and assist data-supplying organizations by formally acknowledging the value of their data, which could promote the allocation of resources within such organizations to deliver reliable data on time. There are many potential DSA formats. DSAs can reference existing national laws for data supply or simply be an informal written specification that is easily revisited for data-collection activities.

4.1.3 Risk management

Main risks related to the implementation of the adaptation MRE system and mitigation measures are summarized below:

Table 3. Measures for risk management

Risks	*Measures to address these risks*
Institutional arrangements: no real operationalization	Reforms of the policy and legal frameworks DSA, MoU to signed with data producers
Lack of consistency between MRE frameworks (including reporting indicators): national level (NAP), sectoral level, local level	Different options to consider when defining a wide-scale M&E system; NAP as a coordination framework
Lack of capacities to inform and report on adaptation	A capacity building plan has to be developed (NAP process).
Lack of resources to inform and report on adaptation	Adaptation MRE staff and budget may be strengthened over time
Lack of good quality data and information	A number of initiatives on adaptation are in place in the different countries - contributing to the production of data. NAP processes are expected to help define guidelines, tools and procedures for the reporting of better-quality data over time and the understanding of potential discrepancies.

4.2 Dataflows

Recommendations to help track adaptation actions and facilitate the monitoring and adaptation processes are as follows.

In general, as commented above, it seems necessary that i) legal arrangements for the definition of mandates / roles and responsibilities on adaptation monitoring are in place, ii) a centralized system for gathering and processing information is developed – in connection with systems in place in the country.

- **Monitoring aspects**
  - Climate M&E focal persons in institutions concerned (project directors) are expected to provide data on the implementation progress and on achievements of actions
  - Data gathering should be coordinated by primary sources/departments, in order to ensure and track the quality of data.
- **“Verification”**

- To check if actions registered are adaptation-relevant, simplified screening process can be defined, mainly to assess[21]:
  - Classification of climate change relevance (primary or secondary objective, marginal)?
  - Definition of Explicit adaptation &resilience result(s) ?
  - Use of climate Projections ?

- **Production of reports / communication**
  - Choose the channel for communicating on adaptation (BTR, Adaptation Communication, Adaptation chapter of the National Communication, NAP).
  - Set up the workflow accordingly
- **Evaluation:** A number of tools and methodologies can be used for the analysis and the evaluation of adaptation action depending on the specific purpose and scale of the evaluation. In general, core evaluative questions for national MRE systems on adaptation are the following[22]:
  - Are adaptation action(s) on track to meet their pre-defined objectives (i.e. the outcomes and impacts they were intended to have when planned), and why/why not?
  - Are the resources being efficiently allocated?
  - Are adaptation action(s) effectively reducing climate risks, and how are they doing this?

We propose to use the OECD DAC framework as the methodological framework when considering evaluation studies on adaptation action.

The OECD DAC framework

The OECD Development Assistance Committee (DAC) developed a methodology for evaluating international development co-operation in 1991 and regularly updates the evaluation framework. The OECD DAC Network on Development Evaluation (EvalNet) now proposes six evaluation criteria – relevance, coherence, effectiveness, efficiency, impact and sustainability – and two principles for their use. These criteria are intended to guide evaluations. The purpose of the evaluation criteria is linked to the purpose of evaluation. Namely, to enable the determination of the merit, worth or significance of an intervention (the policy, project, program, strategy, institution or other activity being evaluated). The criteria are used to identify evaluation questions, with each criterion providing a different perspective on the intervention, its implementation, and its results. Criteria were refined in 2019 to improve the quality and usefulness of evaluation and strengthen the contribution of evaluation to sustainable development:

Figure 13. OECD evaluation criteria

[21] This "questioning" is aligned to MDB common principles on adaptation.
[22] Hammill et al., 2014; Vallejo, 2017

Source: OECD, BETTER CRITERIA FOR BETTER EVALUATION, 2020

The table below proposes some adaptation-oriented questions aligned to the OECD DAC criterion.

Table 3. OECD DAC evaluation criteria

OECD DAC criterion	***Core evaluative question***	***Adaptation specificities***[23]
RELEVANCE	IS THE INTERVENTION DOING THE RIGHT THINGS? (The extent to which the intervention objectives and design respond to beneficiaries, global, country, and partner/institution needs, policies, and priorities, and continue to do so if circumstances change)	Adaptation explicitly addressed in the objectives, activities, what requires to describe the climate issues addressed and to define indicators against adaptation/resilience objectives
COHERENCE	HOW WELL DOES THE INTERVENTION FIT? (The compatibility of the intervention with other interventions in a country, sector or institution)	Consistency with the national development framework
EFFECTIVENESS	IS THE INTERVENTION ACHIEVING ITS OBJECTIVES? (The extent to which the intervention achieved, or is expected to achieve, its objectives, and its results, including any differential results across groups)	Extent to which an adaptation action or adaptation process has achieved its pre-defined objectives; objectives refer to any pre-defined outcomes and impacts they were intended/expected to achieve when they were initially planned. For adaptation processes meanwhile, these objectives are likely to refer to top-line goals and targets that are associated with national priority areas for adaptation
EFFICIENCY	HOW WELL ARE RESOURCES BEING USED? (The extent to which the intervention delivers, or is likely to deliver, results in an economic and timely way)	Efficiency of adaptation refers to the ratio between the benefit gained and the costs of implementation (generally described in terms of economic cost).
IMPACT	WHAT DIFFERENCE DOES THE INTERVENTION MAKE? (The extent to which the intervention has generated or is expected to generate significant positive or negative, intended or unintended, higher-level effects.)	Main challenge to address for adaptation given the complex and long-term features of adaptation interventions; may refer to overarching objectives such as SDGs

[23] Adjusted from ICAT, Guidelines, 2020

OECD DAC criterion	***Core evaluative question***	***Adaptation specificities[23]***
SUSTAINABILITY	WILL THE BENEFITS LAST? (The extent to which the net benefits of the intervention continue, or are likely to continue)	Being sustainable is key for adaptation to be considered as successful, as adaptation that fails to be effective beyond the short-term can hardly qualify as 'adaptation' in any meaningful sense. In practice however, ensuring sustainability in projects and programs is a significant challenge, particularly in the period after their initial lifecycles, where funding and responsibilities typically end.

ANNEX

1. Training material on impact chains

2. Sectoral lists of indicators