# Measuring Success – Handbook

## Part I: Quantitative Indicators - #ms09 Climate Change

# #ms09: Climate Resilience – Households using Mitigation/Adaptation/ Preparedness Measure(s)

| Indicator Statements | | |
|---|---|---|
| **Indicator (in short)** | **Indicator** | Number [actual value] (Share [%]) of households using mitigation/adaptation/preparedness measure(s) promoted by WHH/partners/the project |
| | **Unit of indicator** | Number [actual value] of households |
| **Project-level indicator statements** | **Baseline statement** | *Result:* The number of households using mitigation/ adaptation/preparedness measure(s) that WHH/partners/ the project want to promote was x out of a total of N targeted households. (Sample size= n households) |
| | **Endline statement** | *Result:* During the project period, out of a total of N targeted households, the number of households using mitigation/ adaptation/preparedness measure(s) promoted by WHH/ partners/the project changed from x households (baseline) to y households (endline). (Sample size = n households) |

## Background

**Why do we use this indicator?** A key objective of WHH's strategy for #OnePlanetZeroHunger is **climate resilience**. The promotion of climate change adaptation, mitigation, and preparedness measure(s) is one of the core dimensions of WHH's climate resilience approach.

Climate change has a profound impact on exacerbating hunger, malnutrition, and poverty, necessitating urgent action. Extreme weather events, such as torrential rain, heat waves, and prolonged droughts, pose a grave threat to food security by devastating harvests and causing soil erosion. These adverse conditions for cultivation further escalate food prices, placing a growing burden on rural communities to meet their nutritional needs. Therefore, it becomes crucial to integrate climate change resilience strategies into our programming to enhance food and nutrition security while reducing poverty.

The **Climate Resilience indicator** is useful to assess the **effectiveness of climate change mitigation, adaptation, and/or preparedness measure(s)** promoted by WHH and the extent to which target households correctly use such measure(s).

**What does this indicator assess?** The #ms **Climate Resilience indicator** assesses the **number of targeted households that** [during the project period] **used the mitigation/ adaptation/preparedness measure(s) promoted** by WHH (or by partners or the project).

**For which projects should this indicator be used?** The indicator is suitable for **projects that aim to increase households' climate resilience by promoting mitigation, adaptation, and/or preparedness measure(s).**

The following list provides several illustrative examples of measures across all three areas: increasing climate resilience through **mitigation, adaptation, and preparedness**. It also emphasizes the distinctions between these approaches.

**Climate change mitigation** means **avoiding and reducing emissions** of heat-trapping greenhouse gases into the atmosphere to prevent the planet from warming to more extreme temperatures.

Examples of mitigation measure(s) are:

- **Sustainable agriculture practices**, e.g., agroforestry or conservation agriculture that sequester carbon in soil and biomass and reduce emissions from fertilizer use.
- **Afforestation, reforestation, or reduced-impact logging** help to sequester carbon, avoid emissions from deforestation, and maintain the long-term health and productivity of forest ecosystems.
- **Renewable energy projects**, such as solar or wind energy in communities where energy access is limited to avoid emissions from fossil fuel-based energy sources.
- **Sustainable waste management** practices, such as composting or recycling, that reduce emissions from waste disposal.
- **Green business development**, such as sustainable tourism or eco-friendly product manufacturing that avoid or reduce emissions in their operations.

**Climate change adaptation** measure(s) aim at altering behaviors or systems to **adjust to actual or expected future climate conditions** and to **reduce vulnerability** to the consequences of climate change.

Examples of adaptation measure(s) are:

- **Climate-resilient agriculture**, i.e., the adoption of climate-resilient agricultural practices, such as drought-tolerant crops, improved irrigation systems, and soil conservation measure(s), to help (smallholder) farmers to adapt to changing climatic conditions.
- **Water management**, i.e., the development and implementation of climate-resilient water management systems, such as rainwater harvesting, groundwater recharge, and improved water storage facilities, to help communities cope with more frequent and severe droughts or floods.
- **Livelihood diversification**, i.e., the development of alternative livelihoods, such as eco-tourism or non-timber forest products, to help communities adapt to changing environmental conditions and reduce their dependence on climate-sensitive sectors.
- **Ecosystem restoration**, i.e., the restoration of degraded ecosystems, such as forests, wetlands, or mangroves, which can help to mitigate the impacts of climate change, such as flooding and erosion, and provide a range of other ecosystem services.
- **Climate-resilient infrastructure**, i.e., the development of climate-resilient infrastructure, such as roads, bridges, and buildings, that can withstand more extreme weather conditions and reduce vulnerability to the impacts of climate change.
- **Health interventions** that are tailored to address the specific health impacts of climate change, such as vector-borne diseases or malnutrition resulting from food insecurity.

**Climate change preparedness** measure(s), as an important **part of adaptation**, aim at **lowering the likelihood and impact of climate change induced disasters on people's lives**, such as drought or heatwaves, torrential rainfall leading to flooding or mudslides, extreme weather events such as typhoons, extreme winds.

Examples of preparedness measure(s) are:

- **Vulnerability assessments** to identify areas and communities that are most at risk of climate change impacts and use the results to inform the development of targeted adaptation strategies.
- Development and implementation of **early warning systems** for extreme weather events, such as floods, droughts, and storms, to enable communities to take early action to protect themselves and their assets.
- Developing **disaster risk reduction** plans, including early warning systems, evacuation plans, and infrastructure improvements, to reduce communities' vulnerability to the impacts of extreme weather events.

Some climate resilience measure(s) also have **multiple effects** combining mitigation, adaptation, and/or preparedness effects. An example for this is **agroforestry**, where trees, which are integrated in the farming system, sequester carbon from the atmosphere (mitigation), while also providing shade, reducing soil erosion, improving soil fertility, and diversifying income sources for farmers (adaptation).[1]

## Data Collection #ms09: Climate Resilience

**Who should be interviewed?** The **research unit** of the population (N) and the sample (n) for this indicator is **household**. The population size is composed of the number of households that are supposed to use the promoted mitigation, adaptation, and/or preparedness measure(s).

Questions should be addressed to **one member of each sampled household**, namely the person (adult) who is responsible for the usage of the promoted measure(s) and who received input and/or trainings from WHH/partners/the project.

**When should the data be collected?** The indicator requires a baseline and comparison value(s) to yield meaningful information on project outcomes. **At minimum**, data should be collected as part of both a **baseline and** an **endline** survey. Additionally, a mid-term data collection is optional.[2]

**Please note: Please note: Baseline data must be collected**, even if no mitigation/ adaptation/preparation measures have been promoted at the project's outset. This is crucial to capture existing household practices that may align with the intended interventions of the project/program and obtain meaningful comparative values for assessing WHH's contribution to driving positive change.

The data for the #ms Climate Resilience indicator can be collected at any time of the year. However, results may vary according to season. Data collection should therefore be undertaken at the **same time of the year**.

[1] For more examples on climate change mitigation/adaptation/preparedness measure(s) and their differentiation, see pp. 71-78 of the USAID Indicator Handbook Part II.
[2] Please note that for projects longer than 3 years, mid-term data collection is mandatory and budget must be allocated to it during the design phase.

## Preparing data collection

! For this indicator it is crucial to have a **clear understanding of the promoted mitigation, adaptation, and/or preparedness measure(s)** and a **project-related definition** of what it means to 'use' it/them – *what exactly needs to be done, how, with what materials, for what purpose, for how long.* Based on this definition, assess whether the promoted agriculture/land management measure(s) is/are used 'correctly'.

Points to emphasize:

- Before data collection, conduct a **climate resilience/vulnerability assessment** to get a clear **understanding of the intended effect(s)** of the promoted mitigation, adaptation, and/or preparedness measure(s).
- The **definitions of the promoted mitigation, adaptation, and/or preparedness measure(s)** and what it means to **'correctly use'** them should be well documented and shared with the project/program staff (i.*e., what exactly needs to be done, how it must be done, with what materials, for what purpose, for how long, etc.*)
- In addition to survey skills, **in-depth training** should provide enumerators with a good technical understanding of the promoted measure(s) and the context/project-specific definitions on 'correct usage' of the measure(s).
- Enumerators should assess whether the promoted measure(s) is **relevant** to the households (*e.g., it does not make sense to ask a farmer who did not grow maize whether s/he used intercropping of maize with beans*).
- Enumerators should ask **probing questions** or conduct **observations** to **verify if promoted measure(s) are correctly being used** by respondents. For this, enumerators require a clear understanding of 'correct usage' and climate resilience concepts and approaches in general.
- Enumerators should ask respondents who **denied having used the promoted measure(s) why they don't use them**.

## Indicator calculation

The climate resilience indicator assesses the **number of households using mitigation/ adaptation/preparedness measure(s) promoted by WHH/partners/the project**.

To calculate the indicator, you should first assess whether the promoted measure(s) is relevant to the respondent *(E.g., intercropping of maize with beans is not relevant for a farmer who did not grow any maize beforehand.).* If the measure(s) is irrelevant, do not ask further questions.

If the measure(s) is relevant, then calculating the indicator requires data for the question:

> "In the past *[specify time period corresponding to the project start]* did you use *[specify the mitigation/adaptation/preparedness measure(s) as precise as possible]* for at least *[specify duration]*?"

It is then necessary to **count the number of households that answered the question positively** and that use the measure(s) 'correctly' *[according to your context/project-specific definition of 'correct use']*.

**Please note:** If you are assessing the adoption of **several measure(s)**, you should repeat the above question for each promoted measure and count the positive answers of each household. For the #ms Climate Resilience indicator, it is sufficient that the household used **at least one measure** to be considered as 'using mitigation/adaptation/preparedness measure(s)'. However, it might be of interest for you/your colleagues to identify measure(s) that are commonly adopted by households and what is less so.

**Example**

Project Y is promoting the use of solar energy as well as climate-resilient water management systems. To calculate the indicator, you should ask the household:

- "In the past *[specify time period corresponding to the project start]*, did you/your household use solar energy for at least *[specify duration]*?" ; and
- "In the past *[specify time period corresponding to the project start]*, did you/your household used the climate-resilient water management system for at least *[specify duration]*?"

If the household answers positively to both question (i.e., it adapted both promoted measures), the household is only counted once towards the #ms09 Climate Resilience indicator.
Similarly, if the household answers positively only to one question (i.e., it adapted only one out of the two promoted measures), the household is counted once towards the #ms09 Climate Resilience indicator.
In contrast, if the household answers negatively to both questions (i.e., it didn't use any of the promoted measures), the household is then counted as zero towards the #ms09 Climate Resilience indicator.

Please ask respondents who have **denied** using the promoted measures **why** they made that decision. Inquire about the **factors that discourage or prevent them from adopting these practices**. While this question is not factored into the calculation of this indicator, the gathered information can be very useful for your project. It can help in adjusting current project approaches and activities or in designing similar or follow-up projects.

To **extrapolate**[3] the result from the survey to the (target) population:

1. Calculate the proportion of sampled households **using mitigation/adaptation/ preparedness measure(s) promoted by WHH/partners/the project** out of the total number of sampled households; then
2. multiply the result by the total number of households within the (target) population (see below).

$$\frac{\text{Number of sampled households } \textbf{using mitigation/ adaptation/preparedness measure(s)}}{\text{Total number of sampled households}} \times \text{Total number of households in the (target) population}$$

[3] Extrapolation is a process in which measured characteristics of a sample lead to estimates of unknown characteristics of the target population from which the sample was drawn.

**Please note:** While **reporting on this indicator in ProMIS is done in absolute terms** ([extrapolated] **#** of households using promoted measure(s)), the **global analysis at HO level is done in percentages** (**%** of households using promoted measure(s) out of all targeted households). This is done because using percentage data allows for a more standardized approach to measuring project outcomes, which can be useful for tracking changes over time and comparing results across different regions and contexts as well as between projects/programs with different target group sizes.

Below is a calculation-matrix template for the #ms Climate Resilience calculation, where each row has been filled in for one respondent (Link to the corresponding Excel matrix on WHH Intranet).

***Calculation matrix template (Link to the corresponding Excel matrix on WHH Intranet).***

**Step 1: How many** different mitigation/adaptation/preparedness measures will be/were promoted?

| 3 | | |
|---|---|---|
| 1_Intercropping of maize with beans | 2_Session on organic compost | 3_Vertical farming |

**Step 2:** Assess whether the promoted **measure** is **relevant to the respondent**

| 1_Intercropping of maize with beans | 2_Session on organic compost | 3_Wind energy |
|---|---|---|
| Yes | Yes | Yes |
| No | Yes | Yes |
| Yes | Yes | Yes |

**Step 3:** Assess whether in the past the respondent **used** the measure(s)
***Remark:*** *ask only for measure(s) that are relevant to the respontent and repeat question for each relevant measure*

| 1_Intercropping of maize with beans | 2_Session on organic compost | 3_Wind energy |
|---|---|---|
| No | No | Yes |
| | Yes | Yes |
| Yes | No | Yes |

**Step 4:** Verify whether the measure(s) is used **correctly** and calculate the indicator
***Remark:*** *ask only if the measure(s) is used, i.e., if answer in step 3 is "yes"*

| 1_Intercropping of maize with beans | 2_Session on organic compost | 3_Wind energy |
|---|---|---|
| | | Yes |
| | Yes | Yes |
| Yes | Yes | Yes |

**Step 5:** Convert asnwers into numbers and calculate the indicator
***Remark:*** *count households who used the measure(s) correctly; if several measures are promoted it is sufficient that the houshold correctly uses at least one measure to be considered as 'using mitigation/adaptation/preparedness measure(s)'*

| 1_Intercropping of maize with beans | 2_Session on organic compost | 3_Wind energy | **Agriculture** |
|---|---|---|---|
| 0 | 0 | 1 | 1 |
| 0 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 |
| | | ***Total*** | **3** |

## 3. Questionnaire for #ms Indicators - #ms09 Climate Resilience

This section contains the #ms questionnaire for all eleven indicators and is consistent with the Akvo Flow #ms template.

This section includes not only the questions and answers but also comments for enumerators (which can be used in training) and specifications for the person designing/adapting the project-level template.

| Question ID | Question and Answer | | Remarks for Different Users of #Measuring Success | |
|---|---|---|---|---|
| | **Questions** | **Answers** | **Enumerators** | **Designer of Project-Specific Questionnaires** |
| **0.1** | **0.1: Before starting the interview** | | | |
| 0.1.1 | WHH project ID | Project ID | | This question is currently formatted as free text. You may change it to a multiple-choice format if necessary (e.g., when one survey covers two or more project IDs). |
| 0.1.2 | Date of interview | Date | | |

| | | | | |
|---|---|---|---|---|
| 0.1.3 | Consent to interview:<br>I would like to ask you to provide your objective responses regarding your situation. Your participation is voluntary, and your information will be kept confidential. I have informed you about what type of data will be collected, for which purposes it will be used, with whom the data may be shared, and that you have the right to access your data and to ask for correction or deletion. Do you agree to the collection and processing of your data? | - If "yes", proceed with questions<br>- If "no", do not proceed with any further questions | | |
| **0.2** | **0.2: Interviewee information** | | | |
| 0.2.1 | Household location | Remark: Answer categories must be project-specific: | | Free text question can be replaced by a cascading question if you wish |
| 0.2.2 | Geographical coordinates | Geo-coordinates | | |
| 0.2.3 | Who is head of the household? | - Father<br>- Mother<br>- Grandmother<br>- Grandfather<br>- Child/Youth<br>- Other | | |

| | | | | |
|---|---|---|---|---|
| 0.2.4 | Name & surname of interviewee | Name / surname<br><br>Or<br><br>Interviewee is Head of Household | Before starting the interview, make sure that relevant persons are present, mainly:<br><br>- For #ms01 MAHFP and #ms02 FCS: the person (adult) who is responsible for food preparation in the household.<br>- For #ms03 MDD-W: a woman aged 15-49<br>- For #ms04 Drinking water: the person (adult) who is responsible for handling the household's drinking water<br>- For #ms05 Sanitation: the person (adult) who is responsible for maintaining the sanitation facility used by household members<br>- For #ms06 Income: the head of the household or a person responsible for or aware of the care and organization of the household<br>- For #ms07 Skills: a training graduate<br>- For #ms08 Agriculture and #ms09 Climate Resilience: the person (adult) who is responsible for the usage of the promoted measure and who received input and/or trainings from WHH/partners/the project.<br>- For #ms10 Women in decision-making: an adult woman<br>- For #ms11 Participants' satisfaction: a project participant | |

| | | | | |
|---|---|---|---|---|
| 0.2.5 | What is the sex of the interviewee? | - Female<br>- Male<br>- Other<br>- Don't know / No answer | | |
| 0.2.6 | Age of the interviewee? | Figure | | Allow only numeric values up to 99 |
| | **0.3: Choice of Indicators** | | | |
| 0.3.1 | On **which indicators** will you collect data in this household? | - #ms01: Food Access (MAHFP)<br>- #ms02: Food Consumption Score<br>- #ms03: Nutrition Diversity (MDD-W)<br>- #m04: Drinking Water<br>- #ms05: Sanitation<br>- #ms06: Income<br>- #ms07: Skills<br>- #ms08: Agriculture<br>- #ms09: Climate Resilience<br>- #ms10: Women in Decision-making<br>- #ms11: Participants' Satisfaction | | |

| 09 | Climate Resilience | | | |
|---|---|---|---|---|
| 09.1 | **How many** different mitigation/ adaptation/ preparedness measure(s) **will be/were promoted**? | Numeric value | | - Insert the number of promoted measures<br>- Repeat the questions Q09.2 – Q09.5 for each measure promoted within the project/program (number in Q09.1)! |
| 09.2.1 – 09.2.x | *[Enumerator assessment:]* Is the promoted measure [1, 2, 3, ...] **relevant** to the respondent? | - Yes<br>- No<br>- Don't know | Assess whether the promoted measure is relevant to the respondent. *(E.g., intercropping of maize with beans is not relevant for a farmer who did not grow any maize beforehand.)* | |
| 09.3.1 - 09.3.x | In the past *[if endline: specify time period corresponding to the project start]* did you **use** ***[specify measure [1, 2, 3, ...]*** for at least *[specify duration]*? | - Yes<br>- No<br>- Don't know/ No answer | | - Ask only if answer to Q09.2 is "Yes".<br>- Adapt the question regarding the period under consideration (i.e. project duration), the specific mitigation/adaptation/prepared-ness measure(s) and the minimum duration of use. |
| 09.4.1 - 09.4.x | *VERIFY THE RESPONSE:* Is the promoted measure [1, 2, 3, ...] **used *correctly*** *by the respondent*? | - Yes<br>- No<br>- Don't know/ No answer | - Based on your project team's definition of 'correct use' ask one or more probing questions to verify the response. Alternatively, ask the respondent if you can have a look at the promoted measure.<br>- Specify what it means to 'correctly use' the promoted measure [what exactly needs to be done, how, with what materials, for how long, for what purpose, etc.] | - Ask only if answer to Q09.3 is "Yes".<br>- Repeat the question for each mitigation/adaptation/preparedness measure(s) promoted within the project/program (number in Q09.2). |

| | | | | |
|---|---|---|---|---|
| 09.5.1 - 09.5.x | What are the 1-3 key reasons for not using the promoted measure [1, 2, 3, ...]? | | Note each point clearly, describing it in a full sentence. | - Ask only if answer to Q09.3 is “No” or “Don’t know”.<br>- This is an optional question to support you for your project planning: You may take it out if the question is found not to be useful. |