
Swiss NGO DRR Platform

DRR and CCA Indicator Toolbox

Data Collection and Analysis Package

List of Standard Indicators

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% of households and/or persons able to correctly name local hazard risks and measures to reduce them	12
% of households that are able to describe sustainable environmental management practices	13

Outcome 1: Decision making is hazard and climate risk-sensitive	
Indicator 0101	% of public budget invested in DRR/CCA
Description	<p>This indicator measures the volume of the public budget actually spent in DRR and CCA activities. It is connected with indicator No 0102 (<i>% of the annual public budget set aside for DRR/CCA</i>) and to a project context, where the aim is to newly include and increase money for DRR and CCA activities. These can range from prevention to mitigation and on to preparedness for response and risk sharing.</p> <p>Three types of DRR/ CCA-investments are explored:</p> <ul style="list-style-type: none"> • DRR as part of a DRM budget: DRR is often financed as part of a larger DRM budget that includes preparedness, response and sometimes recovery (e.g. early warning systems, evacuation facilities, contingency planning); • DRR as a budget line or special fund: financing the targeting of DRR needs as a first priority (e.g. climate and risk monitoring, targeted risk reduction measures); • DRR integrated into development planning and management: where risk is integrated into sector plans and management (e.g. transportation, health, education, agriculture). <p>Here, the actual expenditures on DRR/ CCA within a year (or another pre-defined accounting period) are of interest. The state level will be most likely municipal.</p>
Means of Verification	<p>Official statistics, accountability reports Interviews with key actors of the municipality</p>
Data to be collected	<ol style="list-style-type: none"> 1) Define the financial mechanisms to consider (part of DRM – stand-alone – integrated). If also “mainstreamed” expenditures are considered, identify the corresponding sector/ unit of the municipality. 2) As reference framework, create a list of relevant DRR/CCA activities 3) Collect data on these activities <ol style="list-style-type: none"> 3.1 Extract the numbers from official information (statistics, accountability reports) or/ and 3.2 Interview key actors by going through the list: Did you spend money on XY during the last year? How much? 4) Identify the total public expenditures during the last year.
Computation	<p>Numerator: Amount of public budget invested in DRR/CCA Denominator: Total amount of public budget</p> <p>Divide the amount of DRR/CCA expenditures by the total amount of public expenditures and multiply the result by 100.</p> <p>If you have examined several budget lines for DRR/CCA activities, then add them to the total DRR/CCA amount.</p>
Disaggregation	Optional: size of community, type of community (rural-urban)
Comments	It is important to note, that it is not the aim to have a comprehensive tracking, measuring and reporting of all public expenditures on DRR/CCA. For such cases, OECD DAC DRR policy marker might be helpful.
Reference	Jan Kellett, Alice Caravani, Florence Pichon, 2014: Financing Disaster Risk Reduction: Towards a coherent and comprehensive approach. ODI; UNDP

Outcome 3: Human beings / settlements, (critical) infrastructures are safe

Indicator 0301 % of structural protective measures maintained properly	
Description	<p>The indicator measures if and to what extent the structural protective measure established with the support of the project is maintained. Properly maintained means periodically (at least once per season) controlled and showing no signs of avoidable deterioration.</p> <p>Usually, in community-based projects, the community is in charge to maintain the measures. If the entry point is the authority and not the community, then the maintenance lies with the authority.</p>
Means of Verification	Survey, observation, expert assessment
Data to be collected	<ol style="list-style-type: none"> 1) Specify against which hazard the measure is protective 2) Specify the type of structural measure: grey – green – hybrid infrastructure 3) Indicate the year of establishment of the measure 4) Estimate the assets at risk by ticking the category: <ul style="list-style-type: none"> • Human lives • Houses, permanent settlements • Livestock, agricultural produce, productive land etc. • Community buildings (schools, markets, community halls etc.) • Water systems (water for drinking, household, irrigation, waste water) • Roads, train lines etc. • Energy supply (gas, petrol, electricity) 5) Asses the level of maintenance by asking following questions: <p>Q1: How many times has the measure been checked in the last 12 months? A1: 0 – 1 – 2</p> <p>Q2: Did the measure show any sign of avoidable deterioration? A2: Yes – no. If A2 is yes, try to specify/ describe</p> <p>Q3: Did a hazardous event(s) happen in the past 12 months? A3: Yes – no.</p> <p>If A3 is yes: continue</p> <p>Q4: Did the measure prove to be effective in protecting people and their assets? A4: yes – no. If A4 is no, try to describe/ document the damage (to the assets/ to the structural measure)</p> <p>Q5: How effective is the measure for a certain scenario [specify small/frequent – extreme/rare event]? Depends on the design event of the measure, material, construction A5: very good – good – regular – bad – very bad</p> <p>Q6: How would you rate the quality of care and maintenance given by the responsible stakeholders? A6: very good – good – regular – bad - very bad</p>
Computation	<p>Numerator: Number of structural measures established with support of the project managed and maintained properly</p> <p>Denominator: Total number of structural measures established with support of the project.</p> <p>Either assess all structural measures (with support of the project) or a statistically representative sample and extrapolate.</p>
Disaggregation	Optional: size of community, type of community (rural-urban)
Comments	Requires expert assessment.
Reference	SRC questionnaire and analysis

Outcome 3: Human beings / settlements, (critical) infrastructures are safe	
Indicator 0307	% of critical infrastructure remaining functional during and after an event
Description	This indicator measures the number of critical infrastructures that has been protected against a specific type of hazard. The infrastructure can include, for example, water systems, sanitation facilities, health facilities, schools, etc. Targeted infrastructure includes all community infrastructures that received project support.
Means of Verification	Survey, technical assessment, post-event damage assessment
Data to be collected	<p>1) Pre-define the main quality standards that each of the surveyed infrastructure needs to meet (review their original design) including the hazard(s) against it is protective.</p> <p>2) Assess the damaged occurred to the infrastructure: Level I – No significant damage - usable/operational Level II – Minor damage – needs repair to be usable/operational Level III – Major Damage – structure is not usable and cannot be occupied Level IV – Destroyed – not usable and cannot be repaired</p> <p>3) Conduct technical monitoring (involving a qualified engineer) assessing whether the construction still meets the pre-defined quality standards.</p> <p>Complementarily, you can survey (sampling among users) whether the infrastructure could provide its services despite the hazardous event: Q1: In your experience, did you have (sufficient) access to the [specify the infrastructure]? A1: yes / no / does not know Q2: In your experience, did the [specify the infrastructure] provide sufficient services? A2: yes / no / does not know</p>
Computation	<p>Numerator: Number of critical infrastructure with support of the project that serves its purpose despite the impact of a hazardous event.</p> <p>Denominator: Total number of critical infrastructure with support of the project.</p> <p>Either assess all critical infrastructure with support from project or a statistically representative sample and extrapolate.</p>
Disaggregation	Optional: size of community, type of community (rural-urban)
Comments	Needs a hazardous event during project duration. Also suitable as mainstreaming indicator. Requires expert assessment.
Reference	<p>https://www.indikit.net/indicator/29-drr-and-resilience/142-protection-of-public-infrastructure</p> <p>https://www.indikit.net/indicator/22-wash/190-wash-services-in-facilities</p>

Outcome 4: Livelihoods are protected

Indicator 0401	% of households using measures to protect productive assets
Description	<p>Productive assets: refers to "all the things that help to earn money or get food" and includes farmed land, livestock and physical assets that secure or increase the household's labour productivity and production. Includes on-farm and off-farm assets at the household level.</p> <p><i>Examples for on-farm assets, see UNISDR Technical Guidance for Monitoring and Reporting on Progress in Achieving the Global Targets of the Sendai Framework for Disaster Risk Reduction pages 40-45.</i></p> <p>Protection: encompasses a wide range of activities, e.g. crops, agricultural inputs etc. saved from flooding, drought, erosion etc.; safe places for livestock, machinery etc.; retaining the value of an asset by selling it prior to devaluation (destocking ahead of a drought period).</p>
Means of Verification	Household survey
Data to be collected	<p>Recommended survey questions (Q) and possible answers (A):</p> <p>Q1: In the past [specify the time period], did you apply any measures for protecting your productive assets against [specify the main hazard(s)]? A1: yes / no</p> <p>If yes: continue:</p> <p>Q2: What kind of measures did you use and for which assets? A3: specify the asset: and the measure:</p> <p>Optional, for proportion of protected productive assets per household:</p> <p>Q3: Can you give an estimation of the value of your productive asset, [specify]? A3: <i>If possible in monetary value and separated as per protected and non-protected assets. If open answer, try to calculate according to asset [ha, animals/ha, ...]</i></p>
Computation	<p>Numerator: Number of households using measures to protect productive assets. Denominator: Total number of households surveyed</p> <p>Optional (sub)numerator: Proportion [sum/value] of protected assets of household Optional (sub)denominator: Total sum of all assets of household</p> <p>Divide the sum/ value of the protected asset of household by total value of asset of household. Add all percentage values and divide by number of surveyed households.</p>
Disaggregation	<p>Mandatory: gender, age, disability Optional: socio-economic status, minority/ethnicity</p>
Comments	<p>If risk assessments available, check if housings are exposed to hazards. If possible, verify through observation whether the measure was really used.</p>
Reference	<p>Indikit: https://www.indikit.net/indicator/29-drr-and-resilience/145-protection-of-productive-assets Care: Framework of Milestones and Indicators for Community-Based Adaptation</p>

Outcome 5: Agricultural production is climate-resilient

Indicator	% of households growing crops that are resilient to climate hazards [stresses]
Description	Crops and varieties that are suited to the changing climate must be introduced and adopted in order to reduce risk of crop loss. Applies to increasing frequency and intensity of climate hazards (e.g. floods, storms, ...) and changing climate (e.g. longer heat periods, cold waves, etc.).
Means of Verification	Household survey
Data to be collected	Recommended survey questions (Q) and possible answers (A): Needs to be completed
Computation	Numerator: Number of households with adopted crop varieties that are resilient to climate hazards Denominator: Total number of households surveyed
Disaggregation	Mandatory: gender, age, disability Optional: socio-economic status, minority/ethnicity
Comments	Make sure that your survey size is representative.
Reference	GIZ, Repository of Adaptation Indicators Real case examples from national Monitoring and Evaluation Systems, Indicator "Increase in the percentage of climate resilient crops being used"

Outcome 6: People/households are economically flexible and not fully dependent from hazard and climate susceptible activities	
Indicator 0601	% of households engaged in multiple occupations / with diversified income portfolio
Description	Diversified income supports climate adaptation: if one activity is negatively impacted by climate change, people can still rely on other less climate sensitive activities for a living. Occupations include non-agricultural options. Less climate-dependent sources of income reduce the vulnerability.
Means of Verification	Household (budget) surveys, local employment surveys
Data to be collected	Recommended survey questions (Q) and possible answers (A): Q1a: Can you tell me from which activities you earned money in the past [specify the number] months? Q1b: Rephrase the same question by asking about other household members' sources of income (e.g. husband or son's source of income). A1: <i>You can create general categories (e.g. from 1) formal employment; 2) sale of products/ services; ...)</i> Q2: Since when do you have this occupation/these occupations? A2: <i>Complement above list</i> Q3: Do you have started a new / changed / expanded your earning occupation as a result of the [project/ provided assistance]? A3: Yes – No. If A3 is Yes, then ask what is the occupation
Computation	Numerator: Number of households with members with multiple occupations/income sources Denominator: Total number of households surveyed
Disaggregation	Mandatory: gender, age, disability Optional: socio-economic status, minority/ethnicity
Comments	Be aware that if you interview only one household member, s/he might not have a complete overview of the other members' income. If your survey's piloting shows such a situation, you might need to invest time in interviewing every earner in a household. Make sure that your survey size is representative.
Reference	GIZ, Repository of Adaptation Indicators Real case examples from national Monitoring and Evaluation Systems, Indicator "Number of people with diversified income" https://www.indikit.net/indicator/10-markets-income-employment/321-increased-income https://www.indikit.net/indicator/10-markets-income-employment/97-household-average-income

Outcome 7: Natural resources are sustainably managed

Indicator 0701	% of households adopting sustainable environmental management practices
Description	<p>This indicator documents the effect of the project’s interventions promoting for / supporting the implementation of environmental management practices by counting the households.</p> <p>What constitutes an environmental management practices depends much on the focus of the project and its region and how it impacts the risk and environmental situation. Practices include soil and water conservation, sustainable forestry, biodiversity protection, wetland management, maintenance of water supply and drainage systems, waste management.</p> <p>The indicator also checks the duration of the application, as this is a crucial sign for the effectiveness of the project. Furthermore, the long-term use of the practices is also the best indication of their sustainability.</p>
Means of Verification	Household surveys, observations (transects)
Data to be collected	<ol style="list-style-type: none"> 1) Identify a list of environmental practices that the project covers. Specify what exactly does it mean to adopt a practice – what exactly needs to be done, how, with what materials, for what purpose, etc. Define the minimum time the practice needs to be followed to be considered as “adopted” (for example, at least for the previous two seasons). 2) Ask the households for each of these practices: <ul style="list-style-type: none"> Q1: Do you apply that specific measure? Q2: When did you begin applying that specific measure? Follow with 1 -2 additional measure-specific questions that verify a “yes” to the first question. 3) Complement the interviews with transect walks to / of the specific practices that were mentioned.
Computation	<p>Calculate the percentage of households a) who have followed the practice for the minimum required time period and b) who have followed it correctly (decide in advance which result you will use for your indicator).</p> <p>If you have several environmental management measures promoted by your project, then a household counts for this indicator if it fulfils the criteria for at least one of these measures.</p> <p>Numerator: Number of households with adopted environmental management practices</p> <p>Denominator: Total number of households surveyed</p>
Disaggregation	<p>Mandatory: gender, age, disability</p> <p>Optional: socio-economic status, minority/ethnicity</p>
Comments	Make sure that your survey size is representative.
Reference	<p>https://www.indikit.net/indicator/4-agriculture-and-nrm/215-adoption-of-promoted-practices</p> <p>Caritas, Standard indicators for Climate change and disaster risk, C200</p>

Outcome 8: Mechanisms/ strategies in place to cope adequately with hazardous events

Indicator 0801	% of communities in hazard-prone areas with a functional emergency committee
Description	<p>The indicator measures if communities have an emergency committee and to what extent it is functional. Functional means: 1) trained, 2) equipped, 3) recognized by the national DRM system, 4) linked to the superior level and 5) active, either during and after a hazardous event or in simulation exercises</p> <p>Hazard-prone areas are identified by risk assessment: with a history of being exposed to hazardous events (loss of lives or essential livelihoods) or predicted to be so because of climate change.</p>
Means of Verification	Survey, observation, simulation exercise
Data to be collected	<p>Recommended survey questions (Q) and possible answers (A):</p> <p>Q1a: Which training topics are standard / compulsory for the full training of the local emergency committee members? <i>[open question or predefined list]</i></p> <p>Q1b: How many committee members have been trained in [specify in at least one, half, all] standard / compulsory training topics up to now?</p> <p>Q2a: What equipment is essential for the emergency committee in the project intervention area? <i>[open question or predefined list]</i></p> <p>Q2b: What equipment does the emergency committee have?</p> <p>Q2c: Is a maintenance and replacement system for the equipment in place? A2c: Yes – No</p> <p>Ask to see the warehouse and verify if all mentioned items are in stock and ready for use.</p> <p>Q3: Is the emergency committee a formal body of the national or subnational (regional, departmental or other) DM system or is it informally recognised by a superior level DM institution? A3: Yes – no</p> <p>Q4: Does the emergency committee have a DM plan with standard operating procedures? A4: Yes – no</p> <p>Q5a: In the last 12 months, how many hazardous events happened in the community that led to people being harmed or assets being destroyed?</p> <p>Q5b: In how many of these events did the emergency committee respond?</p> <p>Q5c: In the last 12 months, in how many simulation exercises was the emergency committee involved?</p> <p>Q5d: In the last 12 months, has the DM plan been tested and, if necessary, updated?</p>
Computation	<p>The indicator is fulfilled, if the committee has:</p> <ul style="list-style-type: none"> • all active members trained in minimum 50% standard / compulsory topics • all essential equipment available and ready for use • recognition status by being a formal body of the system or recognized informally • linkage status is given by having DM plan • activities are proven by interventions in events (if any) or simulation exercises and updating of DM plan <p>Numerator: Number of all target communities in hazard-prone areas with a functional emergency committee</p> <p>Denominator: Number of all target communities in hazard-prone areas</p>
Disaggregation	Optional: size of community, type of community (rural-urban)
Comments	
Reference	SRC questionnaire and analysis

Outcome 9: Emergency response is appropriate to events

Indicator 0901	% of households living in a hazard-prone area that correctly react to an alert
Description	Correct reaction depends on the contingency plan for the area and the required activities. It has to be verified either by hazardous event or simulation exercises.
Means of Verification	Survey, observation, simulation exercise Post-disaster assessments
Data to be collected	<p>Recommended questions and answers:</p> <p>Q1: How do you usually learn about an upcoming hazardous event [specify 2-3 examples of the most common and severe hazardous events]? A1: pre-define answers according to the local context</p> <p>Q2: Have you ever received information about an upcoming hazardous event from [specify the EWS's way of informing local inhabitants]? A2: Yes – no</p> <p>If A2 is yes: continue</p> <p>Q 3: Did you receive the information about an upcoming hazardous event on time, giving you enough time to protect your family? A3: Yes – no</p> <p>Q4: Do you remember how useful the provided advice was? A4: Yes – no</p> <p>If A4 is yes: continue</p> <p>Q5: How useful was the advice? A5: very useful / fairly useful / fairly non-useful / very non-useful</p> <p>Q6: What did you do after receiving an alert during [specify 2-3 examples of the most common and severe hazardous event]? A6: pre-define answers according to the local context/ contingency plan in place</p>
Computation	<p>Numerator: Number of households living in a hazard-prone area correctly react to an alert</p> <p>Denominator: Total number of households living in a hazard-prone area surveyed.</p>
Disaggregation	<p>Mandatory: gender, age, disability</p> <p>Optional: socio-economic status, minority/ethnicity</p>
Comments	Make sure that your survey size is representative.
Reference	https://www.indikit.net/indicator/29-drr-and-resilience/139-early-warning-system-s-effectiveness

Outcome 10: Risk transfer or sharing mechanisms are functional and accessible.

Indicator 1001	% of the communities where social protection schemes are established and accessible
Description	<p>Formal social protection schemes include social assistance and other welfare schemes provided by the state; informal social protection schemes include savings group or other forms.</p> <p>Established means a minimum coverage of persons in a community (e.g. at least 20%).</p> <p>The protection schemes have to be non-discriminatory: equitable eligibility of all community members, including the most at-risk groups (such as persons with disabilities, older persons, women headed households) to access.</p>
Means of Verification	Survey, data by social schemes provider/ authority
Data to be collected	<p>There are two ways to collect the required data:</p> <p>1) Review the service providers' records to see the number of persons receiving targeted social protection services.</p> <p>2) If the first option is not feasible, collect the following data by conducting individual interviews with a representative sample of your target group members:</p> <p>Q1: In the last [specify number] months, have you received any [specify the service you are interested in] from any state institution, non-governmental organisation or company? A1: yes / no. If yes, request for further specification.</p>
Computation	<p>Numerator: Communities with established social protection schemes</p> <p>Denominator: Total communities in the project area</p>
Disaggregation	Optional: size of community, type of community (rural-urban)
Comments	
Reference	https://www.indikit.net/indicator/9-social-protection-and-inclusion/193-number-of-people-receiving-social-protection-services

Outcome 12: Capacities of decision makers, authorities, communities, households, XXX are strengthened allowing them to adequately take action to reduce risks/adapt to climate change
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Indicator 1201	% of households and/or persons able to correctly name local hazard risks and measures to reduce them
Description	<p>The indicator measures the proportion of the target households who correctly understand what the promoted messages are asking them to do. This is an essential pre-condition for ensuring that the behaviour change messages lead to the intended results.</p> <p>Hazard risks need to be named from a set of most common local hazards including impact either on household or on community as a whole, effective measures named may address household or community as a whole.</p>
Means of Verification	Survey, observation
Data to be collected	<ol style="list-style-type: none"> 1) Compile a list of most common local hazard risks 2) Together with the local stakeholders responsible for the implementation of DRR measures, select a limited number (3-6) of the most important preparedness and mitigation measures that every at-risk household should be aware of and follow. 3) Set the minimum number of hazards and corresponding DRR measures the respondent must be aware of to be considered as having "appropriate awareness": at least 2 4) Conduct a household survey with following recommended questions: Q1: What is the most common hazard in your community? A1: Q2: What could happen if a [specify hazard] passes/ occurs in your community? A2: Q3: What is an effective measure to counter the hazard? A3: After the respondent replies, keep probing: "Is there anything else the households/ the community should do to reduce the [specify hazard]?" 5) Keep probing: "What is another common hazard in your community?" and repeat the questions.
Computation	<p>Calculate the indicator's value by dividing the number of respondents aware of the minimum number (or types) of risks and corresponding measures by the total number of interviewed respondents and multiplying the result by 100.</p> <p>Numerator: Number of households/persons who are able to correctly name the 2 most relevant local hazard risks and measures to reduce them</p> <p>Denominator: Total number of households/persons surveyed</p>
Disaggregation	<p>Mandatory: gender, age, disability</p> <p>Optional: socio-economic status, minority/ethnicity</p>
Comments	Make sure that your survey size is representative.
Reference	https://www.indikit.net/indicator/29-drr-and-resilience/137-disaster-preparedness-plan-awareness

Outcome 12: Capacities of decision makers, authorities, communities, households, XXX are strengthened allowing them to adequately take action to reduce risks/adapt to climate change

Indicator 1207	% of households that are able to describe sustainable environmental management practices
Description	Sustainable environmental management practices according to project context.
Means of Verification	Survey, observation
Data to be collected	<ol style="list-style-type: none"> 1) Compile a list of sustainable environmental management practices that are promoted in the context and/or fostered by the project 2) Set the minimum number of sustainable environmental management practices to be identified, at least 2 3) Ask the households if they can enumerate environmental management practices which they believe to be sustainable. 4) Ask the households for each of these practices: <ul style="list-style-type: none"> Q1: Can you describe the practice? A1: Q2: What is the effect of the practice? A2: Q3: Do you know how to apply the practice? A3: Yes – no
Computation	Numerator: Number of households who are able to correctly name at least 2 environmental practices Denominator: Total number of households surveyed
Disaggregation	Mandatory: gender, age, disability Optional: socio-economic status, minority/ethnicity
Comments	Make sure that your survey size is representative.
Reference	