

E-LEARNING COURSE

Disaster Risk Reduction and Climate Change Adaptation



Course overview

MODULE 1 Basic definitions and concepts

MODULE 2 Conceptual guidance

MODULE 3 Practical Illustrations

MODULE 4 Integrating DRR and CCA into the project cycle

<http://www.drrplatform.org/learning>



MODULE 4

Integrating DRR and CCA into the project cycle

E-LEARNING COURSE

Disaster Risk Reduction and Climate Change Adaptation

In this module you will:

- Become familiar with the concept of mainstreaming DRR and CCA into project and programme cycles.
- Review the enabling factors and frameworks.
- Obtain a working knowledge of how to integrate DRR and CCA into the project cycle and project logic.
- Learn about tools and methodologies to integrate DRR and CCA into the project cycle.

CHAPTER 1

Mainstreaming DRR and CCA

This part explains what mainstreaming is and how it can be achieved



Introduction to mainstreaming DRR and CCA

MODULE 4
Tools for implementing DRR and CCA

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What is mainstreaming DRR and CCA?

Systematically including disaster risk reduction and climate change adaptation considerations at **all stages of policy and decision-making**, planning and implementation and monitoring processes and **with different partners**.

This means:

... **an assessment** of the potential implications of disasters and climate change for any planned or ongoing activity.

... **an analysis** of how planned or ongoing activities could have an impact on vulnerability to hazards.

Introduction to mainstreaming DRR and CCA

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Successful mainstreaming of DRR and CCA will:

- Alleviate human suffering.
- Promote risk-informed and climate-resilient development.
- Reduce losses and damages and thereby reduce relief and rehabilitation costs.
- Identify climate and disaster risks and address them early on.
- Prevent inappropriate measures (maladaptation).

Challenges for mainstreaming DRR and CCA

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Tools for implementing DRR and CCA

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- **Lack of funding** for cross-cutting issues like DRR.
- **Mainstreaming fatigue**, lack of understanding and time constraints by staff.
- Overcoming **silos thinking** (e.g., between humanitarian aid and development cooperation).
- **Bureaucratic organizational processes** and lacking will for collaboration amongst actors.
- **Lack of capacity** and understanding of relevance of disaster and climate risks.
- High **staff turnover** and ineffective procedures for retaining organizational memory.

CHAPTER 2

The project cycle

This part explains how mainstreaming DRR and CCA in the project cycle can work



Guiding principles for considering DRR and CCA in the project cycle:

1. **Seek full inclusion of at-risk populations**, in particular those who are disproportionately at-risk, like women, children, the elderly, persons with disabilities or ethnic minorities, in all levels of identification, planning, implementation, monitoring and evaluation. Programmes and projects can only be effective if they are based on needs and through the involvement of those at risk.
2. **Understand and address unique needs** of at-risk populations through targeted or integrated DRR/CCA and resilience-building interventions.
3. Ensure that risk management and climate change adaptation activities **do not inadvertently worsen the vulnerability** of at-risk populations.
4. **Redress power imbalances and other structural causes** of differential exposure and vulnerability within the community when planning, implementing and evaluating a project.

What does involvement mean?

Involvement means that our project cycle has to be accessible for the most at-risk. Examples are:

- Don't schedule a meeting on the second floor, which is inaccessible for old persons or wheelchair users.
- Hold the meeting is held in the local language that everyone can understand.
- Make sure to have someone in the room who can translate to sign language for the deaf (could be a family member)

Keep in mind

The basic **principles and elements of good planning** are common to most development and humanitarian aid programmes/projects, and are covered in standard manuals and guidelines.

DRR and CCA programmes/projects **vary widely in terms of size, aim, focus and methods**. But they all want to achieve specific objectives and outcomes within a defined period of time, whether as stand-alone DRR or CCA projects or DRR and CCA integrated into wider development or humanitarian initiatives.

DRR and CCA programming, requires the **adaptation of existing tools to take into account risks** through methods for assessing risks and analyzing hazards, vulnerability and capacity. **Chapter 3** of this Module provides examples of such tools.

CHAPTER 3

Tools for project planning

This part presents tools for the
planning of DRR and CCA projects



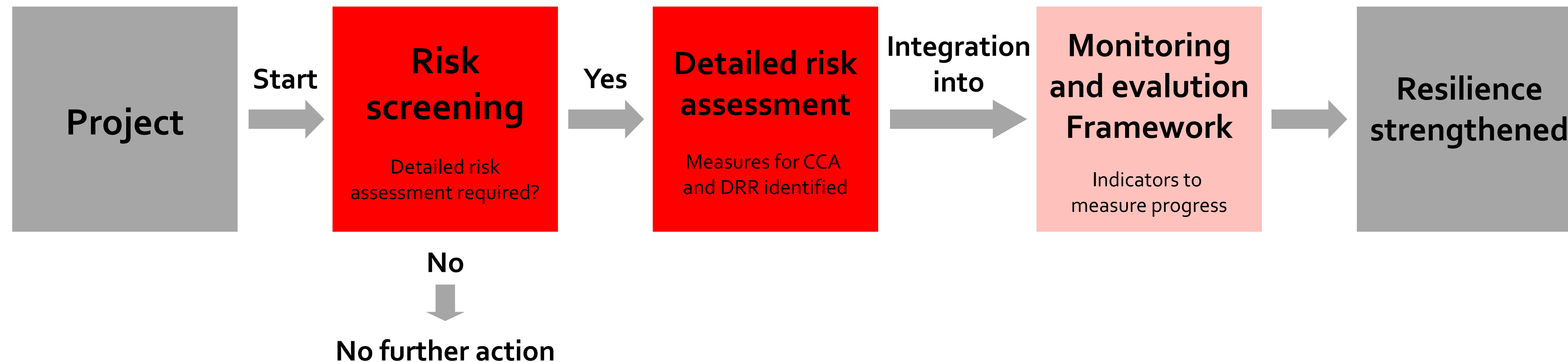
By conducting a Risk Assessment you are able to identify:

- **Technical characteristics of hazards** – location, intensity, frequency and probability.
- **Exposure and vulnerability** including physical, social, human, political, economic and environmental dimensions.
- The **effectiveness** of prevailing and alternative coping strategies.

*Risk Assessments look at all components of risk as defined in **Module 1**: Hazard, Exposure, Vulnerability and Capacity*

A Risk Assessment consists of two phases

MODULE 4
Tools for implementing DRR and CCA



Phase 1: Risk Screening

A simple risk screening is well-suited to the project identification phase, and determines whether a detailed risk assessment is needed in the project planning phase.

Phase 2: Detailed Risk Assessment

A detailed risk assessment, if necessary, is conducted during the project planning phase. All relevant stakeholders involved in the project are consulted about all dimensions of risk: hazard, exposure, vulnerability and capacity.

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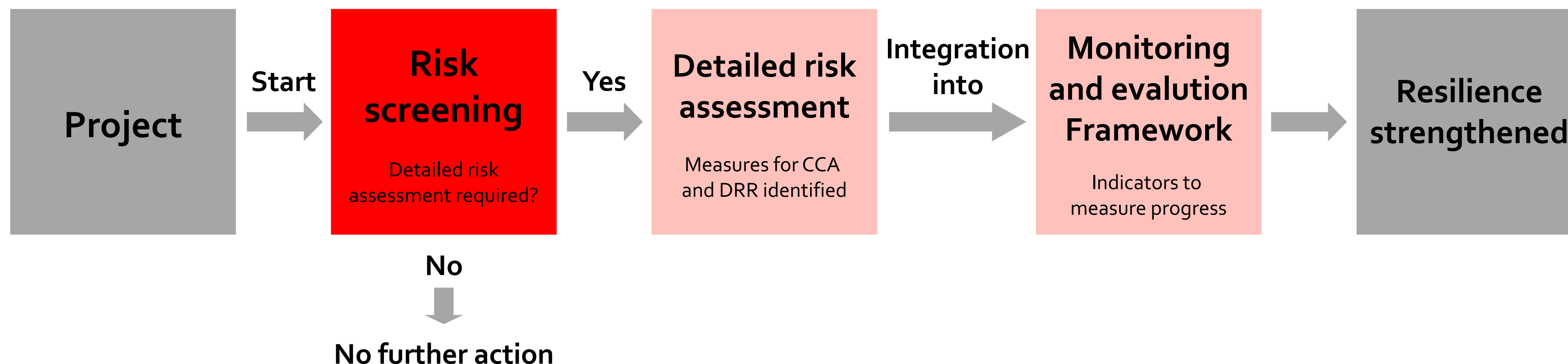
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Phase 1: Consulting secondary risk data

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Tools for implementing DRR and CCA



As a precondition to Risk Screening and later Risk Assessments, consulting secondary risk data can help provide an **overview of risks prevalent in a certain context**.

Secondary data include **meteorological data, historical risk information or climate predictions**, and exist at the national and subnational levels in many countries.

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Sources for secondary risk data

Country risk profiles:

- Center for Research on the Epidemiology of Disasters, EM-DAT database <http://www.emdat.be>
- GFDRR Climate Risk and Adaptation Country Profiles : http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile
- INFORM – Index for Risk Management: <http://www.inform-index.org>
- Think Hazard, GFDRR: <http://thinkhazard.org/>
- *UNEP: Global Risk Data Platform*: <http://preview.grid.unep.ch/>
- UNISDR Risk Data Platform, <http://www.preventionweb.net/english/>

Sources for secondary risk data

Climate-related risks and future changes:

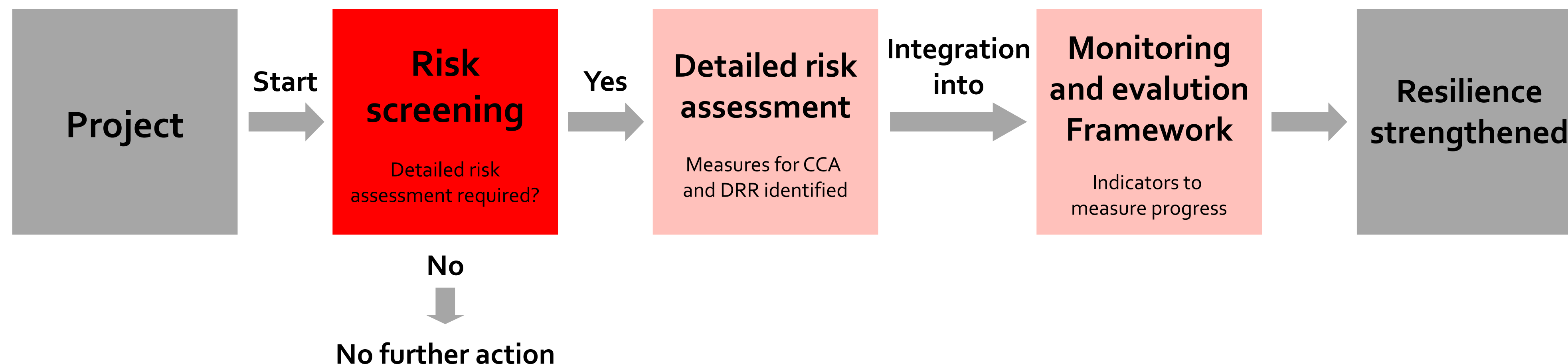
- **Prevention web**, UNISDR provides information on risk profiles, policy documents and maps for countries: <http://www.preventionweb.net/english/countries/>
- **Climate Change Knowledge Portal**, World Bank offers data for countries and subregions for current hazards as well as predictions based on IPCC models: <http://www.worldbank.org/en/topic/climatechange/publication/turn-down-the-heat>
- **National communications to the UNFCCC** include climate profiles and related impacts: http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php

Keep in mind: Also look for **national studies** from governments, academia or NGOs for more information on subnational and local developments on hazards.



Phase 1: Risk Screening

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Tools for implementing DRR and CCA



Aim

To check in a generic and quick way, whether a strategy, programme or project has considered and addressed the existing and future risks associated with disasters and climate change, and whether or not to proceed with a detailed assessment.

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Phase 1: Risk Screening

When to do

The screening should be done at the beginning of the planning process of a new programme/project or during the review of a running programme/project.

How to do

The screening is done by answering some key questions:

- *Are there any risks associated with the planned activity?*
 - *Are these risks high or low?*
 - *Does the planned activity consider these risks?*
 - *Do the planned actions reduce vulnerability to disaster risk and climate change impacts?*
 - *Do beneficiaries have sufficient capacity to deal with the estimated risks, in particular considering those disproportionately at risk, like women, children, the elderly, persons with disabilities or ethnic minorities*
- A detailed assessment is recommended if the screening shows high risks and limited capacities to cope with these risks.

By whom

Overview

Case study: Application of CEDRIG in Myanmar

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Location: Myanmar

Tool application by: Helvetas and local partners

Project context: Community-led coastal management (2015-2018)

Project objective: Improve rural livelihoods through fishing, farming and natural resource management.

Time frame: 3-day workshop and 2 days for preparation/wrap-up with project team.

Objective: Guidance to the project team on how to integrate DRR/CCA measures into the project.

Activities (tool application)

Case study: Application of CEDRIG in Myanmar

- **Workshop preparation** in small team, including project resource persons, (external) DRR/ACC expert (0.5-1 day).
- Capacity-building, **introduction of key concepts** and overlaps related to DRR/ACC/environment (0.5-1 day).
- **Field visit** with focal group discussion – farmers, fishermen, women, vulnerable groups (0.5-1 day).
- **Risk screening:** Introduction and application of “CEDRIG light” with check list (2 hours).
- **In-depth risk analysis and action planning:** Introduction and application of CEDRIG operational through group work including risk assessment, brainstorming and selection of measures, reference to M&E indicators (1-3 days).
- **Stocktaking exercise** in small team for follow-up action plan (0.5-1day).

More information:
<https://www.cedrig.org/>

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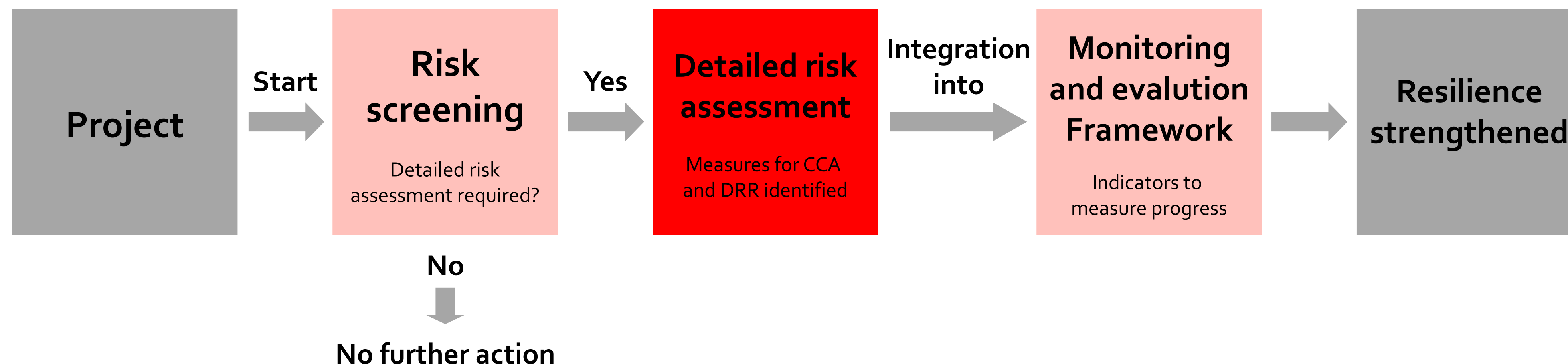
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Phase 2: Detailed Risk Assessment

MODULE 4
Tools for implementing DRR and CCA



Aim

To assess whether a planned programme/project has considered and addressed climate and disaster risks, and to make necessary adjustments to make a programme/project risk-informed and climate-smart.

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Phase 2: Detailed Risk Assessment

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When to do

A detailed assessment should be done when the initial risk screening has identified high risks and low capacities for a planned programme/project or for a programme/project under review.

How to do

- Assess the disaster and climate change risks associated with the planned activity.
- Identify possible risk reduction and adaptation options through participatory approaches.
- Select the most appropriate among the identified risk reduction and adaptation options.
- Adapt the planned activities by incorporating the selected risk reduction and adaptation options by adjusting or amending programme/project objectives as well as activities.

By whom

The detailed assessment should be conducted by a multidisciplinary team with the involvement of those who are most at-risk by the disaster themselves.

Overview

Case study: Application of PACDR in Uganda

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Location: Uganda

Tool application by: Tearfund local partner, with support from Bread for All

Project context: Analysis was done in 2014 for a new project phase in 2015

Project objective: Improved and sustainable water and sanitation services in rural communities.

Time frame: 3-day workshop plus literature search for preparation and project revision with project team.

Objective: Application of Participatory Analysis of Climate & Disaster (PACDR) for better integration of climate related threats and vulnerabilities into the project. Risks

Activities (tool application)

Case study: Application of PACDR in Uganda

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The PACDR analysis consists of three steps:

1. **Research on scientific information** on the national level for Uganda (preparatory work, around 2 days).
2. **Consultations with local project representatives and beneficiaries** to identify the consequences of climate change and disasters on the communities (4 days).
3. **Project review** and action planning with project team (1 day).

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At the local level exercises with groups of women and men :

- Drawing **hazard maps** that identified the main livelihood resources and hazards that affect daily life (men).
- Preparing **seasonal calendars** that identified activities by the month they are implemented (women and men).
- Identification of **coping strategies**: Strategies for landslides – IWRM approach, e.g., construction of water conservation channels, lack of sufficient preventive and reactive strategies, especially for hailstones.
- Identification of **adaptation strategies**: Soil conservation strategies, health and hygiene strategies, resource management, organic farming strategies – organic fertilizers and pesticides, tillage techniques.

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Identification of **coping strategies**:

- Strategies for landslides – IWRM approach, e.g., construction of water conservation channels
- Lack of sufficient preventive and reactive strategies, especially for hailstones

Identification of **adaptation strategies**:

- Soil conservation strategies – check dams, water channels, etc.
- Health and hygiene strategies
- Resource management
- Organic farming strategies – organic fertilizers and pesticides, tillage techniques

Participatory Assessment of Climate and Disaster Risks - PACDR (BfA, HEKS, BfdW);

http://jahresbericht.heks.ch/2015/fileadmin/2015/pdfs/Ausland/HEKS_Jahresbericht_Guideline_Disaster_Risk_Reduction.pdf

CHAPTER 4

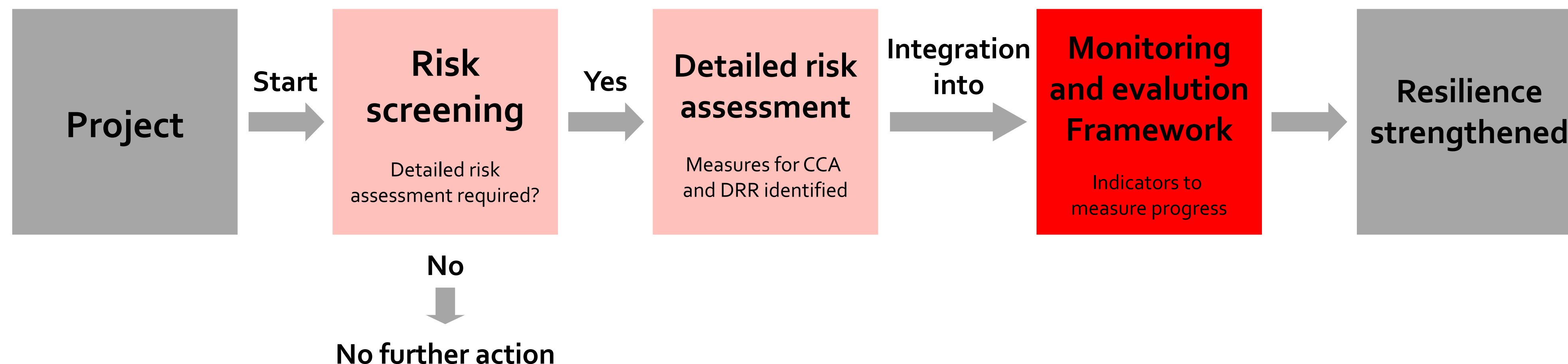
Tools for monitoring

This part presents tools for project monitoring in the field of DRR and resilience



Monitoring and Evaluation Framework

MODULE 4
Tools for implementing DRR and CCA



Aim

To define indicators to measure the DRR and CCA mainstreaming progress and to integrate them into an M&E framework. This will help to evaluate whether an action is justified and is bringing about the intended benefits and ultimately contributing to building resilience.

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Monitoring and Evaluation Framework

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Tools for implementing DRR and CCA

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When to do?

An M&E framework needs to be defined after the risk assessment has been conducted and as soon as **risk reduction and adaptation measures have been selected** and incorporated into a planned activity.

How to do?

- Define **realistic and measureable output and outcome indicators**.
- Develop a **logical framework** by using a logframe table and/or M&E plan table.
- Describe **how to monitor and evaluate** the mainstreaming of risk reduction and adaptation measures.

By whom?

By the **project/programme team** that has done the risk assessment.

Challenges of monitoring and evaluating DRR and CCA

MODULE 4
Tools for implementing DRR and CCA

- The pay-off of DRR and CCA measures can only be truly measured in case of a disaster occurring. It is **difficult to measure an avoided disaster**, an incident that did not occur.
- Climate change and disaster risk is subject to factors such as **probability and uncertainty**, and the formulation of SMART (Specific-Measurable-Achievable-Relevant-Time-bound) indicators is difficult.
- The **attribution gap is high** because of underlying vulnerabilities and the complex environment in which disaster risks and climate change impacts unfold.

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Examples of DRR indicators

Level	Objectives	Examples of indicators
Overall goal	DRR contributes to the strengthening of the resilience of individuals, households, communities and systems/ states.	Decrease of proportion (number) of people/ total population entering poverty due to (a) natural disaster as a result of strengthened absorptive, adaptive and transformative capacities.
Outcome	In the project area losses and damage due to natural disasters at individual, household, community and system/state level are reduced within a defined period of time (e.g. 20, 30, 35 years).	Reduced disaster mortality by (a given percentage in function of number of hazardous events) by 20 (30/35) (taking appropriately into account missing people/ reflect disaggregated data by age, gender and people with disability).
Cross cutting issue Risk Knowledge	Quantitative environmental and risk assessment, in particular also taking into account new investments by public and private sector, including all major hazards/ vulnerabilities and capacities in the community, have been carried out in participatory way (with the involvement of women and men), fed into overarching risk and climate scenarios, are stored in a public database, are updated periodically and are accessible to all members of the community.	Proportion of project area covered by comprehensive risk assessments. Proportion of decision makers at village, community, town, district level having access to hazard, vulnerability and capacity information.

Examples of DRR indicators

Level	Objectives	Examples of indicators
Output level: Avoid the building of (unacceptable) new risks	Proportion of community members/facilities (homes, workplaces, public and social facilities) that are not exposed to hazards in high risk areas within locality.	No. / % of households (women and men) of most-at-risk families (workplaces, public and social facilities) within the project area that have moved to safer sites and/or strengthened their individual dwelling by the end of the protect .
Output level: Reduce existing risks	Level of functioning of the communication / Early Warning System EWS for the transmission of alerts that permits information to reach women and men, elderly and youth in an appropriate and timely manner and linked to higher levels.	No. / % of community members (women and men, elderly and youth) in the project area who receive early warning messages in a timely manner from at least one source.
Output level: Share and bear not transferable risks	In the project area all community members have equally access to services, critical public facilities and infrastructure (health, water, electricity, finances, weather data, hazard information).	increase of No. / % of community members (women and men) in the project area with access to services, critical public facilities and infrastructure at local/ more distant level, especially in area of high risk by the end of project.

Measuring Resilience

MODULE 4
Tools for implementing DRR and CCA

In order to apply a resilience lens in development and humanitarian work, different actors have developed specific tools for measuring how interventions contribute to building resilience. There is a **big variety of non-standardized resilience definitions, tools and examples.**

The right choice depends on the focus and objective of a given case and context.

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Example: The Risk Nexus

In 2013, the Zurich Insurance Group launched a **global flood resilience programme**. As part of this programme, the 5C-4R community-based flood resilience measurement framework measures community resilience to floods.

Objective: To capture interventions that strengthen resilience.

The Risk Nexus approach defines five **sources for assessing resilience**:

1. 5 livelihood capitals (5C)
2. 4 resilience properties (4R)
3. 10 themes, such as health, education, food, governance
4. 5 steps of the disaster risk management cycle
5. Context or environment in which a source is embedded – i.e., internal (community) or external (environment)

Example: The Risk Nexus

4 resilience properties (4C):

1. **Robustness** – Ability to withstand.
2. **Redundancy** – Functional diversity.
3. **Resourcefulness** – Ability to mobilize when threatened.
4. **Rapidity** – Ability to contain losses and recover in a timely manner.

In combining these sources, the tool comes up with categories along a **risk grading scale**:

- A. Best practice for managing the risk.
- B. Good industry standard, no immediate need for improvement.
- C. Deficiencies, room for visible improvement.
- D. Significantly below good standard, potential for imminent loss.

Example: Oxfam resilience checklist

Objective: Guidance for people designing and implementing programmes that aim to increase peoples' resilience

The **Resilience Checklist** for field workers with 18 elements focusing on four categories:

- The change we want to see in the lives of people.
- What NGOs will do with partners.
- What NGOs and allies encourage governments and businesses to do.
- How to organize the work.

Checklist can be downloaded at:

[http://
policy-practice.oxfam.org.uk/publications/a-compar](http://policy-practice.oxfam.org.uk/publications/a-compar)

More information:

http://bwa-presentation.co.uk/odi_reviews/index.ph

Example: Oxfam's resilience checklist

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The change we want to see in the lives of people:

- ✓ Access to contingency resources and support
- ✓ Assets, income, and food security
- ✓ Fostering innovation
- ✓ Access to knowledge and information
- ✓ Exercising rights
- ✓ The natural resource base

What NGOs will do with partners:

- ✓ Assessing and addressing risk
- ✓ Evidence and learning
- ✓ Convening and influencing
- ✓ Achieving change at scale
- ✓ Gender Justice
- ✓ Work long term

What NGOs and allies encourage governments and businesses to do:

- ✓ Action on global climate change
- ✓ Forward thinking and flexible planning
- ✓ Public discourse on resilience
- ✓ Responsiveness to citizen's rights

How to organize the work:

- ✓ Humanitarian, influencing, and development staff collaborating
- ✓ Thematic focus

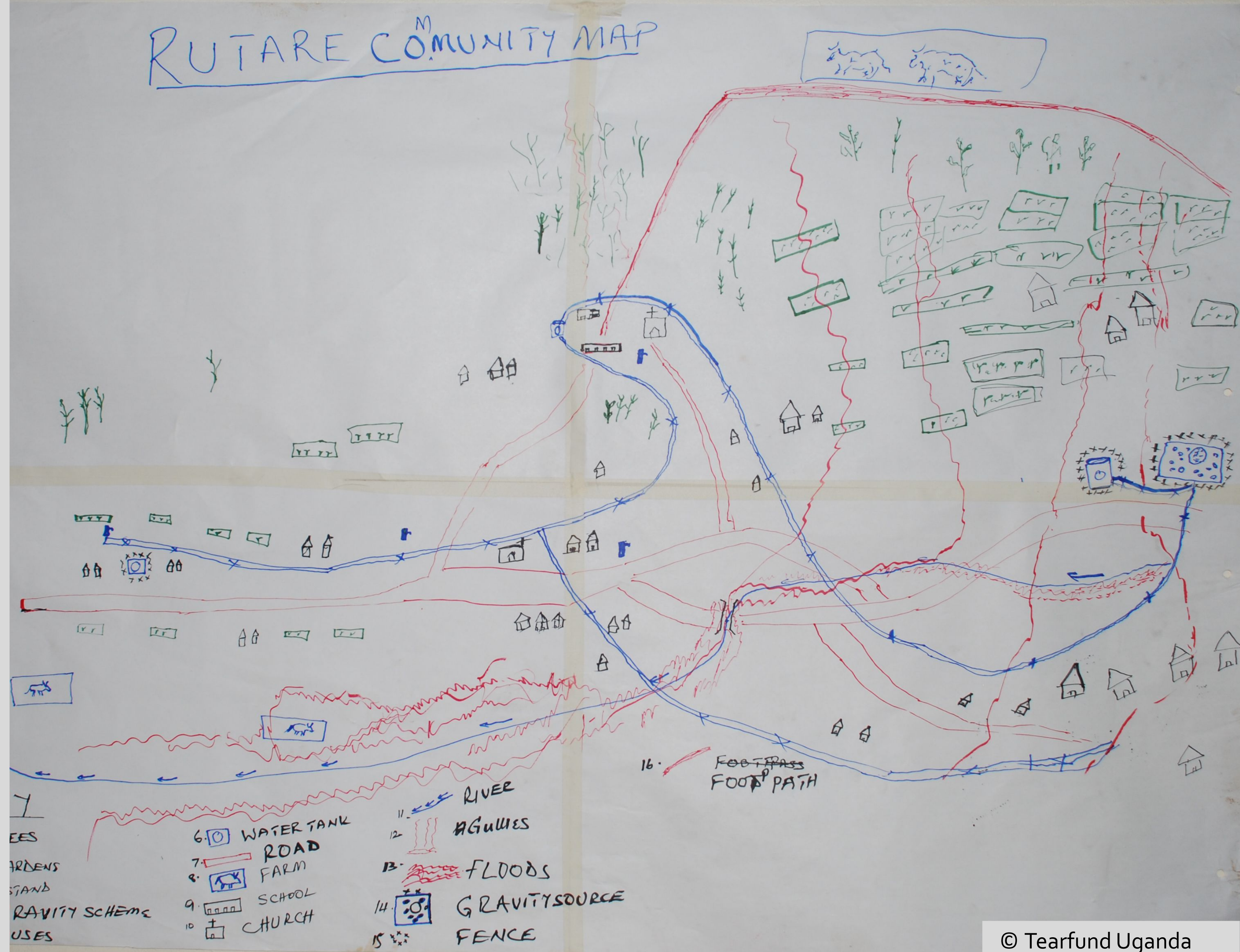
Source: <http://policy-practice.oxfam.org.uk/publications/a->

More information:
http://bwa-presentation.co.uk/odi_reviews/inc

CHAPTER 4

Summary + Quiz

A short recap of Module 4



Key Messages

- Mainstreaming DRR and CCA provides a **sound project/programme infrastructure** that is essential for effective mitigation of disaster-related impacts on livelihoods.
- Mainstreaming can be cumbersome and often **lack the required financial and managerial support** as direct effects are hard to measure. These challenges can be overcome by creating an enabling environment.
- Mainstreaming happens at **each stage of the project/programme cycle**. The required inputs can be identified by conducting a **risk assessment**.
- Mainstreaming also requires setting up a **monitoring and evaluation framework** to measure the impact of DRR and CCA actions.
- There are **many free tools available** that you can use and adapt to your specific context. For Risk Assessments these are CEDRIG and PACDR, among others. For the monitoring and evaluation framework you can use the Swiss NGO DRR Platform indicator toolbox. For measuring resilience you can refer to the Oxfam resilience checklist.

QUIZ

Please tick one or several boxes

What is mainstreaming disaster risk reduction and climate change adaptation?

- ☐ Advocating disaster risk reduction and climate change adaptation across organizational boundaries and shared project regions.
- ☐ Preventing negligence of disaster risk reduction and climate change adaptation considerations in policy and decision-making by adopting specific project review processes dedicated to DRR and CCA.
- ☐ Systematically including disaster risk reduction and climate change adaptation considerations in policy and decision-making, planning and implementation and monitoring processes.

QUIZ

MODULE 4
Tools for implementing DRR and CCA

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What is mainstreaming disaster risk reduction and climate change adaptation?

Systematically including disaster risk reduction and climate change adaptation considerations in policy and decision-making, planning and implementation and monitoring processes.

QUIZ

Select the actions that will help you to create an enabling environment for mainstreaming DRR and CCA

- ☐ Include DRR and CCA in the policy and strategy framework.
- ☐ Identify climate and disaster risks.
- ☐ Conduct local awareness-raising.
- ☐ Get the commitment and support of leadership and management.
- ☐ Make the appropriate institutional arrangements and build the necessary capacity.
- ☐ Promote risk-informed and climate-resilient development.
- ☐ Apply for additional funding.
- ☐ Advocate DRR and CCA internally and externally.

QUIZ

Select the actions that will help you to create an enabling environment for mainstreaming DRR and CCA

- ☒ Include DRR and CCA in the policy and strategy framework.
- ☒ Get the commitment and support of leadership and management.
- ☒ Make the appropriate institutional arrangements and build the necessary capacity.
- ☒ Advocate DRR and CCA internally and externally.

QUIZ

MODULE 3
Practical illustration

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What phases are included in a Risk Assessment?

- ☐ Literature search on relevant climate and disaster risks
- ☐ Risk screening
- ☐ Detailed Risk Assessment
- ☐ Risk-sensitive project planning
- ☐ Monitoring and evaluation of risk

QUIZ

MODULE 3
Practical illustration

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What phases are included in a Risk Assessment?

- ☒ Literature search on relevant climate and disaster risks
- ☒ Risk screening
- ☒ Detailed Risk Assessment

QUIZ

MODULE 3
Practical illustration

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In what phases of the project management cycle are Risk Screening and Assessment conducted?

☐

Project identification

☐

Project planning

☐

Project implementation

☐

Evaluation

QUIZ

MODULE 3
Practical illustration

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In what phases of the project management cycle are Risk Screening and Assessment conducted?

Project identification to identify vulnerable regions and groups in a risk screening.

Project planning if a detailed risk assessment is necessary.

Evaluation as the repetition of the risk assessment can document changes.

QUIZ

MODULE 3
Practical illustration

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What are the key challenges for monitoring DRR/CCA interventions:

- ☐ Difficulty in proving effectiveness
- ☐ Difficulty in obtaining data
- ☐ Uncertainty of risk
- ☐ High attribution gap

QUIZ

MODULE 3
Practical illustration

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What are the key challenges for monitoring DRR/CCA interventions:

Difficulty in proving effectiveness: Effectiveness of DRR and CCA measures can only be truly measured in case of a disaster occurring-

Uncertainty of risk: Climate change and disaster risk are subject to probability and uncertainty-

High attribution gap because of the complex nature of vulnerability-

This course has been developed for the ***Swiss NGO DRR Platform*** by:
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Risk Forum Davos and Zoï Environment Network with contribution from SDC
Visit us online: <http://www.drrplatform.org/learning>



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