



# Methods for evaluating the results of monitoring adaptation projects and programs

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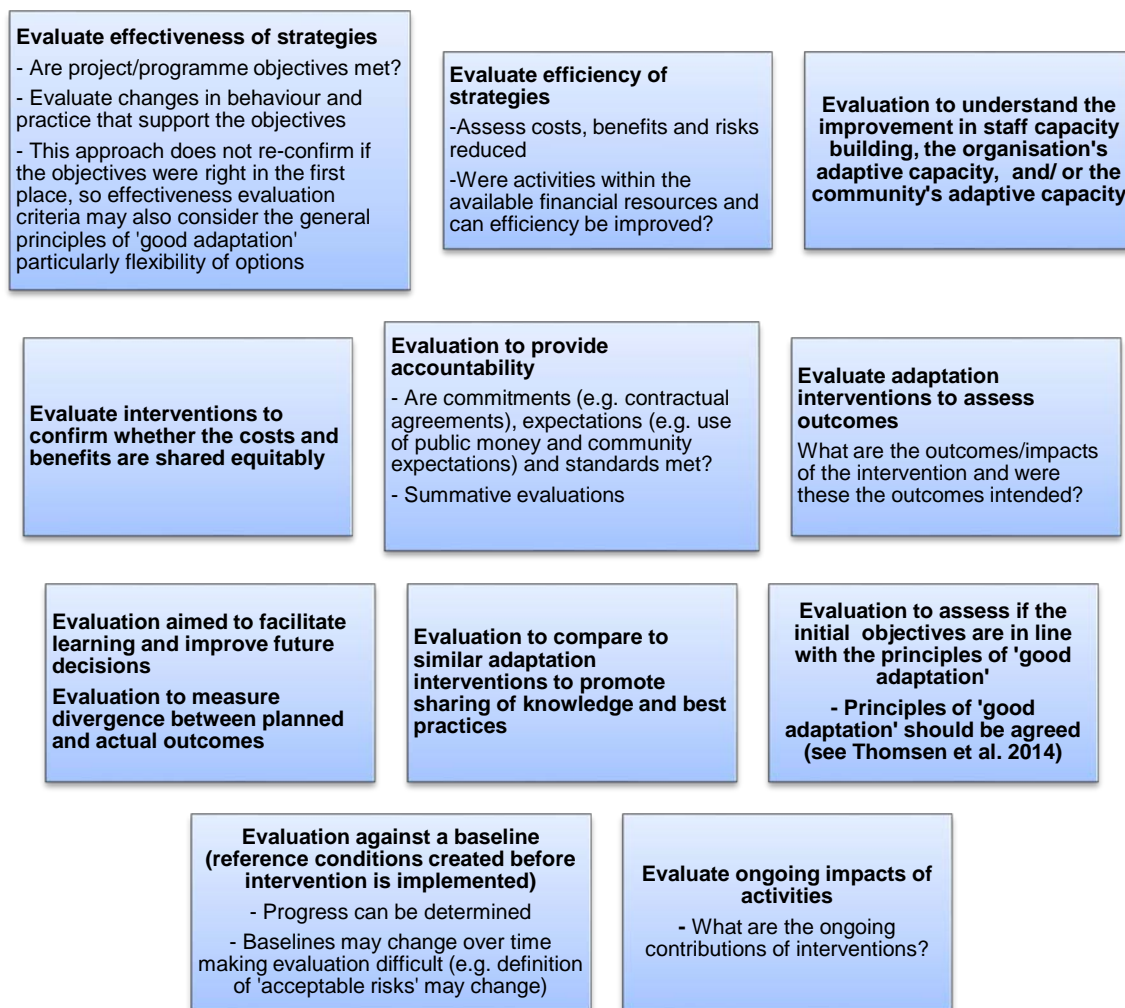
## Introduction

The evaluation of adaptation planning includes the need to track actions that are being undertaken and to provide feedback to relevant stakeholders regarding the success of actions and any necessary adjustments. Evaluation also includes considering and assessing a project or program as a whole, and determining whether the objectives of the program were achieved. The range of activities and outcomes that may be evaluated is summarised in Figure 1.

Monitoring indicators provides the data that underpin evaluations; but it is the analysis and interpretation of data that develops knowledge and that can support decisions about whether objectives in an adaptation plan are being achieved.

There are many ways in which evaluations can be conducted. It is useful to take an approach that ensures evaluations are done with sufficient rigour and logic, and take the data and information that have been collected into consideration. Villanueva (2011) identified four types of evaluation (Table 1):

- i) input-output based evaluations/outcome, impact or results evaluation
- ii) process-based evaluation
- iii) evaluation of behavioural change
- iv) economic evaluation.



**Figure 1:** Different foci of evaluation synthesised from Pringle 2011 (report prepared for UKCIP). Source: Adapted from Pringle 2011

**Table 1:** Approaches and methodologies for evaluating adaptation interventions. Source: Villanueva 2011, p. 20.

M&E methodologies	Focus on	Approach	Assumption
Input-Output-Outcome evaluation	Effectiveness	Elements of adaptive capacity/risk are predetermined and evaluated against a set of indicators	Increased adaptive capacity will ultimately lead to reduced vulnerability Risk probabilistically determined and known
Process-based evaluation			
Evaluation of behavioural change			
Economic evaluation	Efficiency	Benefits of adaptation are measured in terms of economic loss	The ability to determine a baseline and projected benefits and losses

## Input output evaluations

This method helps to determine if an initiative has contributed towards the targeted outcomes (Turner et al. 2014). The Tasmanian Institute of Agriculture M&E materials present an 'if then' hierarchy (see also Bennett 1975) for a project designed to change social, environmental and economic conditions. The hierarchy provides a logical way of linking resources (human, physical and financial), activities, outputs (tangible and intangible) and outcomes (overall impact achieved by program or project) in a layered way (see Wallis 2015). In this approach, outcomes can be considered to be achieved through a series of steps. For example, the success of a project planned to bring changes within a community may depend on how participants react to particular interventions, leading to changes in knowledge or skills or attitudes, which further leads to changes in practices, thereby assisting in achieving the long term goal.

Logical framework (also known as logic model or logframe) is another example of input-output based evaluation (see Table 2). A basic logic model for a project or program consists of the inputs (resources such as funding, expert knowledge), activities (e.g. events, research, capacity building), outputs (e.g. information sessions for organisations, new skills and new knowledge), outcomes (intended and unintended short and medium term effects of initiatives) and impacts (intended and unintended changes from the program over the long term) (Wallis 2015; Pringle 2011). Impacts may be evaluated in different ways; for example, impact evaluation can be conducted by measuring responses to surveys, requests for further information or number of products taken up (e.g. incentive schemes utilised) (Sweeney 2009). Assumptions are clearly indicated in every step of the logic model.

The disadvantage of input-output models is that they follow a linear pattern of cause and effect. Hence they may not be applicable to climate adaptation planning, as this type of planning requires greater flexibility and the potential for iterative adjustment on the basis of changing context and learning.

Bours et al. 2014, in their report for UKCIP, recommend using a theory of change diagram. This can help to account for the long-term sustainable goals of various climate adaptation projects/programs. In this approach, first a long-term goal is visualised and then there is developed a pathway of clear objectives (long, intermediate and short term) that leads to the goals. The theory of change works backwards: it starts by identifying long-term goals and a series of steps required to achieve them. Indicators, thresholds, evidence (if not an assumption) and assumptions are presented in each step as a causal pathway is visualised and a 'change map' is developed (see Turner et al. 2014). All possible causal pathways may be mapped in the change map. The theory of change map can be used to capture the big picture of adaptation planning, as it presents a map with all possible causal pathways with text to justify the change. Individual projects or even short term goals can be studied using the logic input output models or, in other words, it can be used to focus on a specific pathway in the change map.

**Table 2:** Sample logframe table. Source: Table adapted from The United Republic of Tanzania Vice President's Office Report 2012.

<b>Project title</b>				
Region		Financial year budget	Insert start date	Insert end date
Intervention logic	Description	Indicators	Means of verification	Assumptions
Project goals	Provide information on project goals			
Objectives	State objectives			
Outcome 1	State outcome			Provide assumptions at output level
Outcome 2	State outcome if two outcomes are mentioned in the project report			
Output 1.1	Provide information on output 1 in relation to outcome 1			
Output 1.2	Provide information on output 2 in relation to outcome 1			
Output 2.1	Continue filling the information as shown above for subsequent outcomes and outputs			
Activity 1.1.1	Provide summary of each activity for output 1 as elaborated in the Project document			
Activity 1.1.2	With more outputs continue providing summary of each activity corresponding to each output			
Activity 1.1.3				
Activity 2.1.1				
Activity 2.1.2				
Activity 2.1.3				

## Process based evaluations

Process-based evaluation is used mainly to assess progress of a plan before implementation of adaptation interventions and thus supports formative evaluation. In other words, process indicators can describe the processes that lead to a successful outcome. For example, a project's performance can be measured during the planning stage based on the number of community members interviewed to understand the nature of the issue and context of implementation. The main difference between process-based evaluation and the input-output based models is that the former does not specify outcome indicators as it does not define what type of outcomes will emerge (Turner et al. 2014; also see Table 3 from Horrocks et al. 2005). Process-based indicators, which are relevant at an early stage, may no longer be valid at a later stage of a project (see French Environment and Energy Management Agency n.d).

## Evaluation of behavioural change

Behavioural change is evaluated as an outcome in this approach (see Turner et al. 2014; Villanueva 2011). Qualitative (e.g. pre and post project surveys) and quantitative (e.g. number of people changing behaviour) data are both used to evaluate behavioural change as an outcome of a project or program (Sweeney 2009). Self-reported surveys are commonly used to measure behavioural change. Outcome mapping—developed by the International Development Research Centre (IDRC) (see Earl et al. 2001)—is used to evaluate climate adaption projects funded by IDRC and DFID (Department for International Development) (see Turner et al. 2014).

## Economic evaluation

Economic evaluation is mainly used for summative evaluations and thus assesses the overall outcome from a project. It is associated with more objective and quantitative evaluation methods such as cost-benefit analysis. Economic evaluation is often driven by the organisational requirement to ensure efficiency of projects under limited funding resources and to present accountability to funding agencies. Prioritisation of adaptation options can be based on economic and qualitative evaluations. Complete economic assessments are often costly and time consuming and can be beyond the resources available to local governments. The methods used for M&E also depend on the available budget.

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This information sheet was prepared by Supriya Mathew (Charles Darwin University), Stefan Trueck and Chi Truong (Macquarie University). Please cite as:

Mathew, S., Trueck, S., Truong, C., 2016: *Methods for evaluation the results of monitoring adaptation projects and programs*. CoastAdapt, National Climate Change Adaptation Research Facility, Gold Coast.