Managers are being asked to actively apply the information gained through monitoring and evaluation to improve strategies, programmes and other activities.

The main objectives of today's results-oriented monitoring and evaluation are to:

- Enhance organizational and development learning;
- Ensure informed decision-making;
- Support substantive accountability and UNDP repositioning;
- Build country capacity in each of these areas, and in monitoring and evaluating functions in general.

FIGURE 1. OBJECTIVES OF MONITORING AND EVALUATION

Monitoring and evaluation help staff to...

Be accountable & reposition ourselves

Build Capacities

Learn from experience

Make more informed decisions

These objectives are linked together in a continuous process, as shown in Figure 1. Learning from the past contributes to more informed decision-making. Better decisions lead to greater accountability to stakeholders. Better decisions also improve performance, allowing for UNDP activities to be repositioned continually.

Partnering closely with key stakeholders throughout this process also promotes shared knowledge creation and learning, helps transfer skills, and develops the capacity of UNDP country offices and projects for planning, monitoring and evaluation. These stakeholders also provide valuable feedback that can be used to improve performance and learning. In this way, good practices at the heart of monitoring and evaluation are continually reinforced, making a positive contribution to the overall effectiveness of development.

B. Definitions of Monitoring and Evaluation

Monitoring can be defined as a continuing function that aims primarily to provide the management and main stakeholders of an ongoing intervention with early indications of progress, or lack thereof, in the achievement of results. An ongoing intervention might be a project, programme or other kind of support to an outcome. (See Chapter 4 and the Annexes for more on monitoring.)

Evaluation is a selective exercise that attempts to systematically and objectively assess progress towards and the achievement of an outcome. Evaluation is not a one-time event, but an exercise involving assessments of differing scope and depth carried out at several points in time in response to evolving needs for evaluative knowledge and learning during the effort to achieve an outcome. All evaluations—even project evaluations that assess relevance, performance and other criteria—need to be linked to outcomes as opposed to only implementation or immediate outputs. (See Chapter 5 on evaluation.)

Reporting is an integral part of monitoring and evaluation. Reporting is the systematic and timely provision of essential information at periodic intervals.
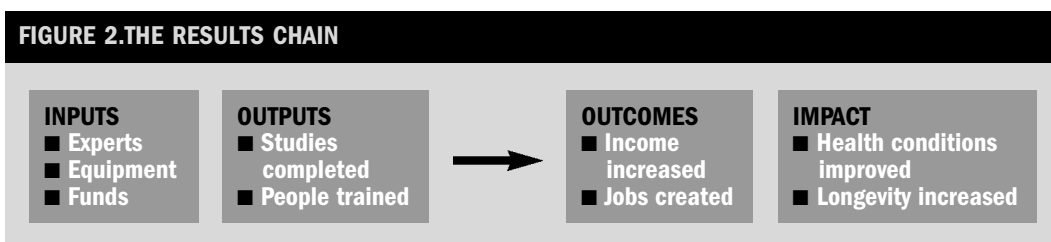
Monitoring and evaluation take place at two distinct but closely connected levels:

One level focuses on the **outputs,** which are the **specific products and services** that emerge from processing inputs through programme, project and other activities such as through ad hoc soft assistance delivered outside of projects and programmes.

The other level focuses on the **outcomes** of UNDP development efforts, which are the **changes in development conditions** that UNDP aims to achieve through its projects and programmes. Outcomes incorporate the production of outputs and the contributions of partners.

Traditionally, UNDP staff has been more familiar with the first level: monitoring and evaluation that is programme and project based and that views performance in terms of outputs. Today, the challenge is to go beyond this level and to link performance with outcomes, with rigorous and credible assessments of progress towards and achievement of outcomes.

Approaches, techniques and tools for monitoring and evaluation, which should be applied at both levels, are presented throughout the *Handbook*. Figure 2 illustrates how outputs and outcomes inter-relate during the process of achieving results.

FIGURE 2. THE RESULTS CHAIN

INPUTS	OUTPUTS		OUTCOMES	IMPACT
■ Experts ■ Equipment ■ Funds	■ Studies completed ■ People trained	→	■ Income increased ■ Jobs created	■ Health conditions improved ■ Longevity increased

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Two other terms frequently used in monitoring and evaluation are defined below:

Feedback is a process within the framework of monitoring and evaluation by which information and knowledge are disseminated and used to assess overall progress towards results or confirm the achievement of results. Feedback may consist of findings, conclusions, recommendations and lessons from experience. It can be used to improve performance and as a basis for decision-making and the promotion of learning in an organization. (See Chapter 7 on knowledge and learning.)

A **lesson learned** is an instructive example based on experience that is applicable to a general situation rather than to a specific circumstance. It is learning from experience.

The lessons learned from an activity through evaluation are considered evaluative knowledge, which stakeholders are more likely to internalize if they have been involved in the evaluation process. Lessons learned can reveal "good practices" that suggest how and why different strategies work in different situations—valuable information that needs to be documented.

In an impact evaluation, a theory of change is useful for identifying the data that need to be collected and how they should be analysed. It can also provide a framework for reporting.

Developing a theory of change is not simply a matter of filling in boxes; it is important to ensure that the theory of change adequately represents what the intervention intends to achieve and how – to the satisfaction of those who will use it. Ideally, a theory of change explains how change is understood to come about, rather than simply linking activities to expected results with an arrow.

Main points

1. A theory of change explains how activities are understood to contribute to a series of results that produce the final intended impacts.

2. There are different ways of developing and representing a theory of change.

3. In an impact evaluation, the existing theory of change should be reviewed and revised as needed to guide data collection, analysis and reporting

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2. WHEN IS IT APPROPRIATE TO USE A THEORY OF CHANGE?

A theory of change is a building block for impact evaluations and should be used in some form in every impact evaluation. It is particularly useful when the intention is to learn from an impact evaluation conducted at one site and then apply these lessons to another site.

When planning an impact evaluation and developing the terms of reference, any existing theory of change for the programme or policy should be reviewed for appropriateness, comprehensiveness and accuracy, and revised as necessary. It should continue to be revised over the course of the evaluation should either the intervention itself or the understanding of how it works – or is intended to work – change.

3. HOW TO DEVELOP A THEORY OF CHANGE

A theory of change should begin with a good situation analysis. This involves identifying: the problem that the intervention seeks to address; the causes and consequences of this problem; and the opportunities, for example, synergies with other initiatives, or existing resources that can be leveraged or strengthened. Even in situations where the theory of change is being developed or significantly revised well after implementation has commenced, it is important to review the situation that gave rise to the intervention to ensure that the intervention is attempting to solve the right problem.

The next stage is to clarify which aspects of the problem the intervention will address, and to make explicit the outcomes and impacts that it seeks to produce.

When there is agreement about the current situation and the desired situation that the intervention is intended to contribute to producing, the next step is to develop a theory about how to get from the current situation to the desired situation. This should be in two parts – a theory about how this change will come about (e.g., deterrence) and a theory about how the intervention will trigger this change (e.g., drawing attention to gaps in service delivery by conducting surveys of availability and publishing the findings). This is illustrated in figure 3, which shows some theories about how change might come about and what the intervention might do to trigger each of these changes.

Figure 3.   Theories about how change comes about and how the intervention can trigger the change

Individual change: transformative change of a critical mass of individuals	Investment in individual change through training, personal transformation/consciousness-raising workshops or processes; dialogues and encounter groups; trauma healing
Health relationships and connections: break down isolation, polarization, division, prejudice and stereotypes between/among groups	Process of inter-group dialogue; networking; relationship building processes; joint efforts and practical programmes on substantive problems
Root causes/justice: address underlying issues of injustice, oppression/exploitation, threats to identity and security, and people's sense of injury/victimization	Long-term campaigns for social and structural change; truth and reconciliation; changes in social institutions, laws, regulations and economic systems
Institutional development: establish stable/reliable social institutions that guarantee democracy, equity, justice and fair allocation of resources	New institutional and governance arrangements/entities; development of human rights, rule of law, anti-corruption; establishment of democratic/equitable economic structures; decentralization
Grass roots mobilization: mobilizing the community so that politicians have to pay attention	Mobilize grass roots groups, non-violent direct action campaigns, use of the media, education/mobilization efforts, advocacy groups

Source: Based on Church, Cheyanne and Mark M. Rogers, *Designing for Results: Integrating Monitoring and Evaluation in Conflict Transformation Programs*, Search for Common Ground, Washington, D.C., 2006, pp. 14–15. See http://www.sfcg.org/programmes/ilt/ilt_manualpage.html.

A theory of change should ideally draw upon a combination of information and processes, including:

- needs assessment or determinant analysis that identifies what must be in place for success

- documented objectives

- previous evaluations and research on similar programmes or policies, particularly those that include analysis of how the programmes/policies work

- expert opinion on these types of programmes/policies

- perspectives of staff, managers, partners and community members about how (not whether or not) the intervention works, or fails to work

- feedback from relevant stakeholders on draft versions of the theory of change

- research-based theories about how change occurs.

In many cases, it is helpful to draw on theories from research to inform the development of the theory of change. For example, an evaluation conducted in Africa – which examined the impacts of capacity development on institutionalization, emergency preparedness and response, and disaster risk reduction in

the education sector[1] – identified four different research-based theories to inform the evaluation. Lewin's three-stage model of change[2] focuses on the driving forces that facilitate or hinder change, and how those involved in the change agree that the change is necessary, collaborate towards the desired result and ensure the support of the relevant leadership. Lippitt's phases of change theory[3] sets out seven phases of change that are brought about by a change agent. Prochaska and DiClemente's change theory[4] identifies the different stages of change, including the maintenance of the change, and acknowledging that change often involves failures and restarts, and that different activities are needed at each stage. Social cognitive theory[5] identifies different elements required to learn to behave differently: observational learning/modelling, outcome expectations, self-efficacy, goal setting and self-regulation.

In evaluations that have a long time frame, and where there has previously been an insubstantial theory of change, it could be appropriate to commit more time and budget to this process, including by convening stakeholders to review and revise draft versions.

In evaluations that have a short time frame and a small budget, the process of developing and using the theory of change should be incorporated into all stages of the evaluation. The evaluation team should review and revise the theory of change as part of an inception report for the evaluation – including using it as a source for reviewing the evaluation questions, and developing or reviewing the planned research design and methods of data collection and analysis – and then use it as a conceptual framework for analysing and reporting the data.

In some evaluations, where there is considerable existing knowledge about how the particular interventions work, and where the intervention does not need to change and adapt during implementation, it will be possible to set out a 'road map' in advance, and then use this as a reference point for the evaluation.

Some interventions cannot be fully planned in advance, however – for example, programmes in settings where implementation has to respond to emerging barriers and opportunities such as to support the development of legislation in a volatile political environment. In such cases, different strategies will be needed to develop and use a theory of change for impact evaluation.[6] For some interventions, it may be possible to document the emerging theory of change as different strategies are trialled and adapted or replaced. In other cases, there may be a high-level theory of how change will come about (e.g., through the provision of incentives) and also an emerging theory about what has to be done in a particular setting to bring this about. Elsewhere, its fundamental basis may revolve around adaptive learning, in which case the theory of change should focus on articulating how the various actors gather and use information together to make ongoing improvements and adaptations.

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[1] The Post-war Reconstruction & Development Unit and the Institute of Effective Education, Building a Culture of Resilience: The final report of the evaluation of capacity development in, and its impact on institutionalization of, emergency preparedness and response (EPR) and disaster risk reduction (DRR) in the education sector in Eastern and Southern Africa Region, University of York, York, June 2012. See http://www.york.ac.uk/iee/assets/Building_a_culture_%20of_resilience_UNICEF_%20EvaluationReport.pdf.

[2] Lewin, Kurt, *Field Theory in Social Science: Selected theoretical papers*, Harper & Row, New York, 1951.

[3] Lippitt, Ronald, et al., The Dynamics of Planned Change, Harcourt, Brace & Company, New York, 1958.

[4] Prochaska, James O., and Carlo C. DiClemente, 'Transtheoretical therapy: Toward a more integrative model of change', Psychotherapy: Theory, Research & Practice, 19 (3), 1982, pp. 276–288.

[5] Bandura, Albert, 'Social Cognitive Theory: An Agentic Perspective', *Annual Review of Psychology,* 52 (1), February 2001, pp. 1–26. See http://www.annualreviews.org/doi/abs/10.1146/annurev.psych.52.1.1.

[6] Funnell, Sue C. and Patricia J. Rogers, *Purposeful Program Theory: Effective Use of Logic Models and Theories of Change*, Jossey-Bass/Wiley, San Francisco, 2012, pp. 264–277.

It is this linking of implementation progress with progress in achieving the desired objectives or results of government policies and programs that makes results-based M&E useful as a public management tool. Implementing this type of M&E system allows the organization to modify and make adjustments to both the theory of change and the implementation processes in order to more directly support the achievement of desired objectives and outcomes.

The Theory of Change

One way to view the differences between traditional and results-based M&E is to consider the theory of change. According to Kusek and Rist (2004), **theory of change** is a representation of how an intervention is expected to lead to desired results. (More information about the theory of change and definitions are provided in chapter 4.) Theory of change models typically have five main components: inputs, activities, outputs, outcomes, and impacts (table 3.1). Some theory of change models also include other features, including target groups, and internal and external factors.

> ■ **Traditional monitoring and evaluation:** Monitoring and evaluation that focuses on project or program implementation
>
> ■ **Results-based monitoring and evaluation:** Monitoring and evaluation that combines the traditional approach with assessment of results
>
> ■ **Theory of change:** Theory of how an initiative leads to desired results

Table 3.1 Main Components of a Theory of Change

Component	Description
Inputs	Resources that go into a project, program, or policy (funding, staffing, equipment, curriculum materials, and so forth).
Activities	What we do. Activities can be stated with a verb ("market," "provide, " "facilitate," "deliver").
Outputs	What we produce. Outputs are the tangible products or services produced as a result of the activities. They are usually expressed as nouns. They typically do not have modifiers. They are tangible and can be counted.
Outcomes	Why we do it. Outcomes are the behavioral changes that result from the project outputs (quit smoking, boiling water, using bed nets). Outcomes can be increased, decreased, enhanced, improved, or maintained.
Impacts	Long-term changes that result from an accumulation of outcomes. Can be similar to strategic objectives.

Source: Kusek and Rist 2004.

The Results Chain

A theory of change can be modeled in various ways, for example using theoretical models, logic models, logical frameworks and outcome models, and results chains.[1] All of these include the basic elements of a theory of change, that is, a causal chain, outside conditions and influences, and key assumptions. In this book, we will use the results chain model because we find that it is the simplest and clearest model to outline the theory of change in the operational context of development programs.

A results chain sets out a logical, plausible outline of how a sequence of inputs, activities, and outputs for which a project is directly responsible interacts with behavior to establish pathways through which impacts are achieved (figure 2.1). It establishes the causal logic from the initiation of the project, beginning with resources available, to the end, looking at long-term goals. A basic results chain will map the following elements:

Inputs: Resources at the disposal of the project, including staff and budget

Activities: Actions taken or work performed to convert inputs into outputs

Outputs: The tangible goods and services that the project activities produce (They are directly under the control of the implementing agency.)

Outcomes: Results likely to be achieved once the beneficiary population uses the project outputs (They are usually achieved in the short-to-medium term.)
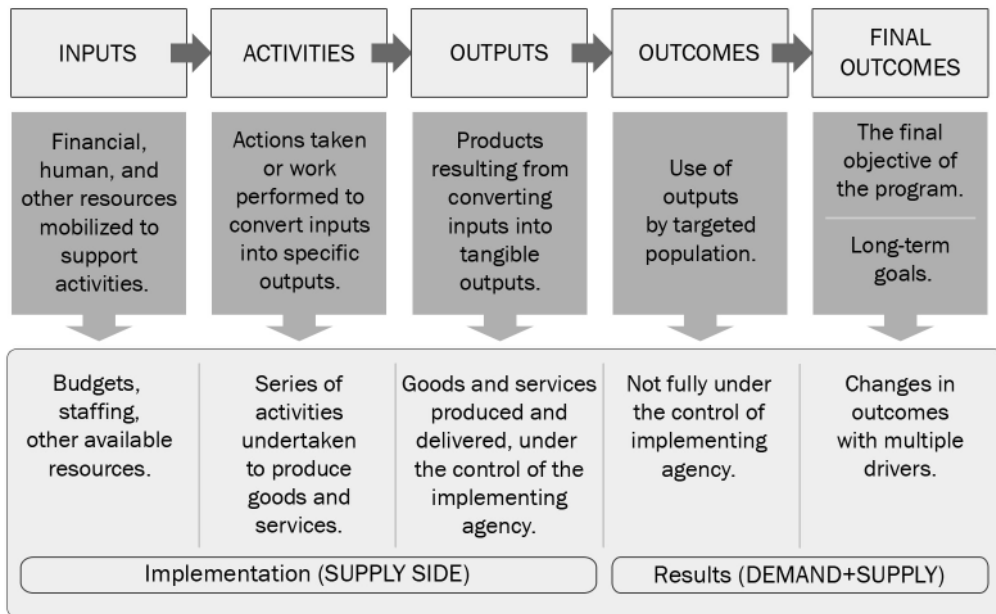
Final outcomes: The final project goals (They can be influenced by multiple factors and are typically achieved over a longer period of time.)

The results chain has three main parts:

Implementation: Planned work delivered by the project, including inputs, activities, and outputs. These are the areas that the implementation agency can directly monitor to measure the project's performance.

Results: Intended results consist of the outcomes and final outcomes, which are not under the direct control of the project and are contingent on behavioral changes by program beneficiaries. In other words, they depend on the interactions between the supply side (implementation) and the demand side (beneficiaries). These are the areas subject to impact evaluation to measure effectiveness.

Figure 2.1   What Is a Results Chain?

INPUTS	ACTIVITIES	OUTPUTS	OUTCOMES	FINAL OUTCOMES
Financial, human, and other resources mobilized to support activities.	Actions taken or work performed to convert inputs into specific outputs.	Products resulting from converting inputs into tangible outputs.	Use of outputs by targeted population.	The final objective of the program. Long-term goals.
Budgets, staffing, other available resources.	Series of activities undertaken to produce goods and services.	Goods and services produced and delivered, under the control of the implementing agency.	Not fully under the control of implementing agency.	Changes in outcomes with multiple drivers.

Implementation (SUPPLY SIDE)	Results (DEMAND+SUPPLY)

Source: Authors, drawing from multiple sources.

Assumptions and risks: These are not depicted in figure 2.1. They include any evidence from the literature on the proposed causal logic and the assumptions on which it relies, references to similar programs' performance, and a mention of risks that may affect the realization of intended results and any mitigation strategy put in place to manage those risks.

For example, imagine that the ministry of education of country *A* is thinking of introducing a new approach to teaching mathematics in high school. As shown in figure 2.2, the inputs to the program would include staff from the ministry, high school teachers, a budget for the new math program, and the municipal facilities where the math teachers will be trained. The program's activities consist of designing the new mathematics curriculum; developing a teacher training program; training the teachers; and commissioning, printing, and distributing new textbooks. The outputs are the number of teachers trained, the number of textbooks delivered to classrooms, and the adaptation of standardized tests to the new curriculum. The short-term outcomes consist of teachers' use of the