

Promoting safety, resilience and social cohesion through and in education: a capacity development process in support of ministries of education

Monitoring and evaluation:
How will we know what
we have done?

Draft

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ABOUT THE PROGRAMME

The basis for this series of booklets has arisen out of collaboration between the Protect Education in Insecurity and Conflict (PEIC) Programme, and UNESCO's International Institute for Educational Planning (IIEP) and International Bureau of Education (IBE). This collaboration and the overall framework build on the efforts and momentum of a wide range of stakeholders.

The overall purpose of the planning process outlined in these booklets is to strengthen education systems to better withstand shocks from disasters, insecurity or conflicts should they occur and to help prevent such problems. The aim of this programme therefore is to support Ministries of Education (MoEs), at central, provincial and district levels, to promote education systems that are safe, resilient and encourage social cohesion within education sector policies, plans and curricula. As recognized by the Education Cannot Wait campaign (which is within the UN Secretary General's Education First Initiative): 'No matter where a country is in its planning cycle there are opportunities to determine its priorities for conflict and disaster risk reduction and to integrate them into annual or sector plans'¹.

More specifically, the programme objectives are:

1. For a core team to catalyse collaboration between partners to consolidate approaches, materials and terminology on the topics of planning and curriculum to promote safety, resilience and social cohesion.
2. To strengthen a cadre of a) planning, research and training specialists in planning for conflict and disaster risk reduction through education (from ministries of education as well as international experts) and b) curriculum developers experienced in integrating cross-cutting issues into school programmes.
3. To strengthen national training capacities through institutional capacity development with selected training institutes and universities.

The programme offers the following materials and booklets for ministries to consult:

- A. An online resource database/website** - this contains a consolidated set of resources on a range of related topics
- B. Booklets and training materials on planning and curriculum to promote safety, resilience and social cohesion**
- C. Policy briefs** for senior decision-makers
- D. Case studies and practitioner examples** - these will be part of the online resource database
- E. Development of monitoring tools and distance learning an innovative monitoring mechanism.** This is a self-monitoring questionnaire for MoEs to determine the level of integration of conflict and disaster risk reduction in their current planning processes.

The various booklets can be read independently, although for clarification of terminology and rationale for undertaking a process of promoting safety, resilience and social cohesion readers should refer to *Booklet 1: An overview of planning for safety, resilience and social cohesion*².

¹ http://www.ineesite.org/uploads/files/resources/201209_GPE-UNGA_call-to-action_EN.pdf

² **Safety** in these materials denotes ensuring the protection and safety of learners, school personnel and facilities; by **resilience** we are primarily referring to the ability of education systems and learners to withstand, adapt to, and recover from shocks and stresses; and **social cohesion** includes promoting a sense of belonging, being accepted by others and having a desire to contribute to the common good. See Policy Booklet 1 for the complete definitions used in these booklets.

Booklet 6 – Monitoring and evaluation: How will we know what we have done?



Take away points

- Ensure that you have a clear logical framework for monitoring and evaluation, which includes elements to ensure: safety and protection for learners, staff and assets; resilience and educational continuity; and social cohesion through equitable access to relevant quality education
- Review Education Management and Information System (EMIS) to determine what indicators for safety, resilience and social cohesion are already included in EMIS, and which need to be included.
- Develop indicators that measure safety, resilience and social cohesion.
- Include indicators of safety, resilience and social cohesion in Annual Operational Plans
- Ensure data collection can be conducted even in insecure or risk-affected areas by using technology or local data collection mechanisms

Introduction

Box 6.1 Understanding monitoring and evaluation

Monitoring is the continuous and systematic collection of data on specified indicators in order to provide the main actors of an on-going development intervention with indications of the extent of progress and achievement of objectives (in relation to allocated resources).

Evaluation is the systematic and objective assessment of an ongoing or completed policy, or plan, including its design, implementation and results. It aims to assess the relevance and fulfilment of objectives and strategies with a purpose of informing decision-making.

EMIS (an Education Management and Information System) is an information system that ensures effective collection, storage, and analysis of information at both central and decentralized levels in order to improve planning, resource allocation, monitoring, policy formation and decision-making.

Why is monitoring important? How do we ensure that the data collected is analyzed and used? How can monitoring and evaluation be best applied to make sure that the issues of safety, resilience and social cohesion (discussed in the previous Booklets 1-5) are actually addressed? These are some of the questions discussed in this booklet.

Monitoring and evaluation (M&E) is essential for knowing whether an education sector plan actually being implemented or not. Collecting, monitoring, analysing and evaluating information helps ministries of education (MoEs) learn lessons for policy and planning in the future. M&E helps identifying obstacles as well as possible changes in the way programmes are being implemented. The indicators that track progress need to be relevant, and adapted to monitoring levels of safety, resilience and social cohesion within the education system.

Such data can be collected, analysed and maintained as part of the national education management information system (EMIS).

This booklet outlines what an M&E framework might look like. It includes examples of indicators that could be used for by ministries of education (MoEs) for monitoring levels of safety, resilience and social cohesion within their programmes. It enables a MoE to prepare an operational plan with objectives and priority programmes, with precise targets, outputs, activities, time lines, indicators, and MoE units responsible.

The following five steps indicate the type of questions and reflections that MoEs should consider – when reviewing their existing M&E plan or creating a new one – to monitor issues of safety, resilience and social cohesion in the education system.

Steps to monitor and evaluate programmes for safety, resilience and social cohesion

- ✓ Develop a logical framework
- ✓ Develop indicators to measure safety, resilience and social cohesion in education
- ✓ Review the EMIS to incorporate indicators related to safety, resilience and social cohesion
- ✓ Incorporate safety, resilience and social cohesion into annual operational plans
- ✓ Address issues of security or instability to ensure comprehensive data collection

Step One: Develop a logical framework

Many MoEs use results-based management (RBM) for planning. With RBM, planning begins with an overall goal. Then interventions are designed to achieve this goal in a logical way.

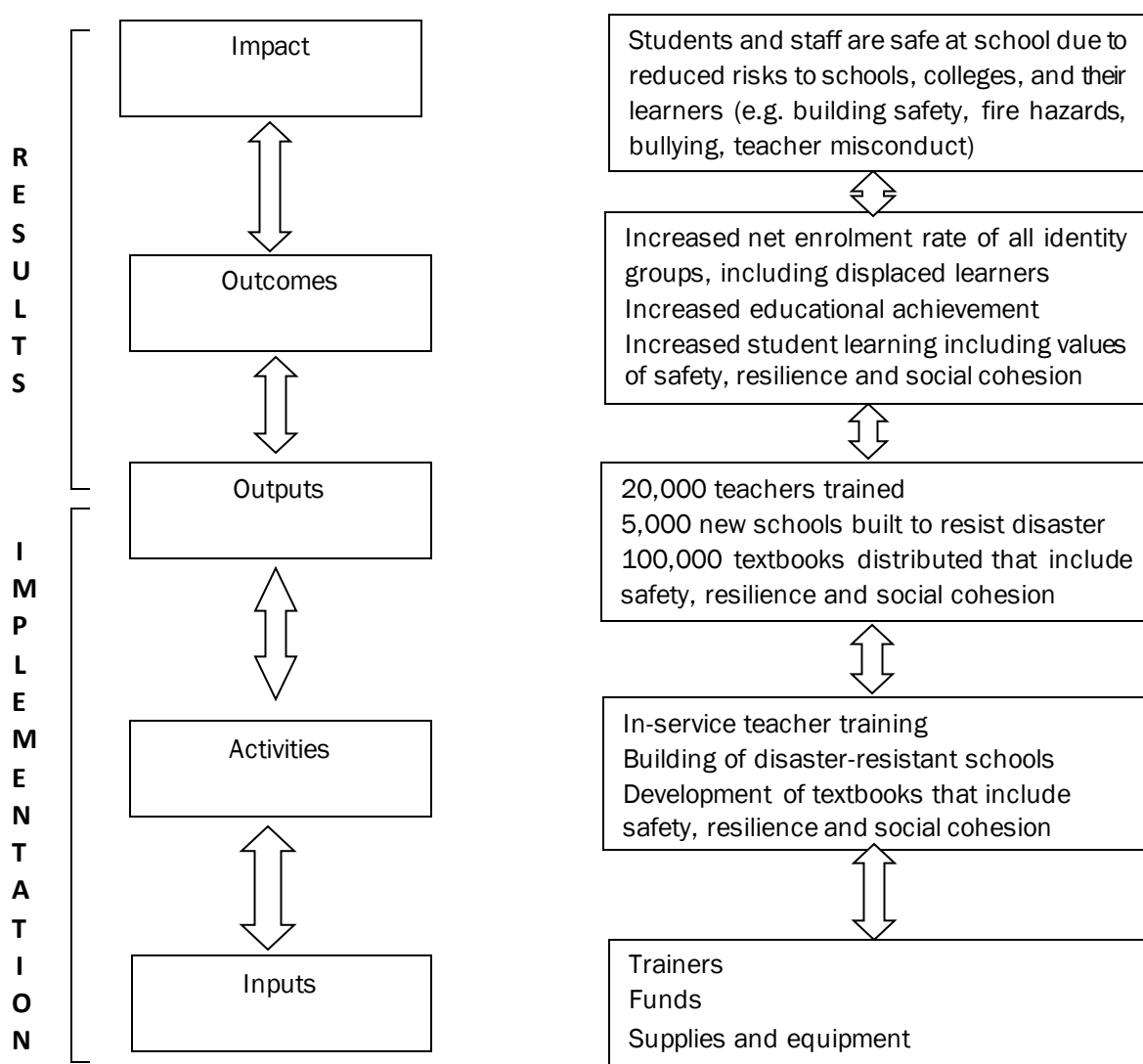
The Logical Framework Approach (LFA) is a tool often used for RBM. (See Booklet 4 on programming for more information on the LFA).

Logframes typically:

- specify *indicators* to measure achievement,
- specify *sources of information* for collecting evidence.
- help MoEs monitor *activities* to ensure that *outputs* are achieved.
- help with evaluating the *outcome(s)* of the programme's *outputs* for its beneficiaries.

Results-based planning establishes a *results chain* of *activities* leading to *outputs* which then lead to *outcomes* and *impacts*. Indicators are defined at each level of the results chain. Figure 6.1 shows a typical results chain for an education sector plan.

Figure 6.1. Example of an M&E results chain that includes issues of safety, resilience and social cohesion³



Outputs, outcomes and impacts together form the *results levels*. Together with the levels of *activities and inputs*, they form the *results chain*. The three levels are described as follows:

- **Outputs** are the products, capital goods and services resulting from a development intervention which are relevant for the achievement of outcomes. Time horizon: immediate or short term.
- **Outcomes** are the short- or medium-term effects of an intervention's outputs, mainly at the level of the direct beneficiaries. Time horizon: medium term.
- **Impact** is the higher goal that a development intervention intends to contribute to. It should demonstrate that change has taken place. Time horizon: medium to long term.

³ Adapted from: Kusek, J.Z.; Rist, R.C. 2004. *Ten steps to a results-based monitoring and evaluation system. A handbook for development practitioners*. Washington DC: The World Bank, <http://www.oecd.org/derec/worldbank/35281194.pdf>, p. 18

When using a results-based M&E system, emphasis is placed on whether inputs and activities contribute to achieving the results (outputs, outcomes and impact), and whether planned effects are achieved.

Development partners increasingly emphasise assessing outcomes and intended impact of a particular project or plan. It is however not easy to measure and attribute impact for some of the results expected for safety, resilience and social cohesion.

Many of these (particularly those relating to social cohesion) are long term goals that can take 10 to 15 years to achieve the level of attitude and behaviour change that will eventually result in lasting impact.

Some of the questions to help guide MoEs to determine whether the plan has both a logical framework and addresses issues of safety, resilience and social cohesion could include:

Does the logical framework for the education sector plan....

- Cover all levels of monitoring i.e. output, outcome and impacts levels?
- Include elements that relate to safety, resilience and social cohesion, as suggested in the following questions?

Desired outcomes: Education systems are safe and protective of learners, education personnel and assets:

- Do programmes successfully reduce risks internal to schools and colleges (e.g. building safety, fire hazards, bullying, teacher misconduct)?
- Do programmes successfully reduce risks from natural and man-made disasters (e.g. floods, hurricanes, earthquakes)?
- Do programmes successfully reduce risks from insecurity and conflict (e.g. attacks on schools or colleges, child recruitment)?

Desired outcomes: Education systems are resilient and provide continuous education regardless of context:

- Do programmes make education systems more resilient at all levels (e.g. records protection, effective school management committees, flexibility when access is disrupted)?
- Do programmes make education infrastructure more resilient (e.g. disaster resistant building standards and their enforcement, siting)?

Box 6.1 Example EMIS indicators that might contribute towards safety and/or resilience

Output: # of schools that have been retrofitted to withstand disasters

Outcome: fewer children killed through poorly designed schools

Impact: increase in net enrolment and retention rates in areas of recurrent disaster

Example EMIS indicators for output, outcomes and impact that might contribute to greater social cohesion

Output: Number (#) of teachers trained in teaching positive values of peaceful co-existence and tolerance of diversity

Outcome: # of teachers using lessons learned during training

Impact: school communities (in schools where teachers have been trained in above values) engaged in school or community based peacebuilding activities

- Do education programmes promote personal resilience (e.g. psychosocial support for students and teachers, positive classroom management, student participation)?

Desired outcomes: Education systems promote social cohesion through equitable access to relevant quality education:

- Do programmes make access to all levels of education more equitable regardless of identity, gender, religion, or geographic location?
- Do programmes promote languages of instruction that respect cultural identity and are pedagogically sound?
- Do programmes enhance curriculum and classroom practice to promote skills for responsible citizenship, the workplace, personal life and health, respect for all, teamwork and conflict resolution.

Step Two: Develop indicators to measure the degree to which safety, resilience and social cohesion are integrated into the education system

The purpose of M&E indicators is to:

- Specify realistic targets for measuring or judging if the stated objectives have been achieved;
- Provide the basis for monitoring, review and evaluation, and thus feed back into the management of the organization or project and into lesson learning and planning for other subsequent work;
- Contribute to transparency, consensus and ownership of the overall objectives and plan⁴.

Indicators should serve as inputs to the decision-making process, where the decision-maker – both government and donor – use the indicators as tools for policy dialogue and adjustment⁵.

Indicators should not be used in isolation. To be meaningful, they must be compared with:

- previous observations,
- observations in other countries
- (or comparing provinces in the same country),
- or by comparing resources used with results obtained.

Indicators are used to measure performance achievement (also called performance indicators), sometimes in relation to inputs used. Indicators usually describe:

- a situation prevailing before or at the beginning of the planning period (baseline),
- an expected situation at the end of the plan (target to be achieved),
- as well as intermediate targets.

⁴ UNESCO. 2006. *National Education Sector Development Plan: a result-based planning handbook*, UNESCO: Paris, p. 51.

⁵ SIDA, 2004a

Box 6.1. Categorization of indicators with reference to the results chain

Indicators of input/activities: measure financial, administrative and regulatory resources provided by government or donors;

Ex. *Share of budget devoted to education.*

Process indicators: measure the processes involved in using inputs;

Ex. *Pedagogical approaches used, management techniques and inspection techniques used.*

Indicators of outputs: measure the immediate and concrete consequence of the measures taken and resources used;

Ex. *Number of schools built, number of educational planners trained.*

Indicators of outcome: measure the intermediate results generated relative to the objectives of an operation at the level of direct beneficiaries;

Ex: *School enrolments, levels of learner achievement, percentage of girls entering the first grade of primary education.*

Indicators of impact: measure the long-term and aggregate results or changes in the segment of society targeted by an operation;

Ex. *Literacy rates, educational attainment of population aged 25 to 60 years, wage increase as a consequence of levels of educational attainment, GDP growth rates.*

(See Annex A for more information on how to construct indicators.)

Table 6.1. Sample Indicators relating to safety, resilience and social cohesion

	Objectives	Indicators
<i>Safety (relates also to issues of access)</i>	To ensure safety and protection for all children and youth to, from, and in school	<ul style="list-style-type: none">• Reduction in # of attacks on education facilities, personnel and students• Reduction in # of children recruited by armed groups at school or on their way to/from school• Increase in # of school buildings that are safe in case of expected natural hazard impacts
	To ensure that teachers adhere to a teacher code of conduct (i.e. includes child friendly and constructive classroom management techniques and prohibition of all forms of abuse of students including corporal punishment and sexual harassment or abuse)	<ul style="list-style-type: none">• Teacher code of conduct in place and used that bans use of corporal punishment and sexual abuse• Incidents of physical and sexual abuse reduced

	Objectives	Indicators
<i>Resilience (relates also to issues of management)</i>	To ensure educational continuity in all contexts	<ul style="list-style-type: none"> • % of schools occupied/partially occupied by armed groups/IDPs/refugees • Reduction in # of school days lost due to recurring or infrequent natural hazards • % of schools that have alternative locations or methods for instruction arranged, in case of disasters or conflict
	To increase capacity of education staff and students to be better prepared, withstand and respond to conflict and/or disaster	<ul style="list-style-type: none"> • % of professionals and government officials with increased knowledge of C/DRR issues and interventions • # education institutions with safety/contingency plans
<i>Social cohesion (relates also to issues of equitable access to quality education)</i>	To increase equitable access to relevant quality education at all levels, regardless of identity, gender, religion or geographic location	<ul style="list-style-type: none"> • Standard education indicators⁶ <ul style="list-style-type: none"> ○ Gross and net enrolment and intake ratios ○ student/teacher, student/classroom, student/textbook ratios ○ school-life expectancy, survival rate ○ private vs. public expenditure levels disaggregated by location, education level, gender, age and identity group where possible
	To increase the level of community awareness of C/DRR issues and interventions in three affected areas by 20--	<ul style="list-style-type: none"> • % of schools and community groups using drills to practice standard operating procedures for emergencies and disasters • # school communities engaged in disaster risk reduction and climate change adaptation activities
	To ensure that by year 20xx, the values of human rights, peaceful co-existence and tolerance of diversity are actively promoted in all education institutions	<ul style="list-style-type: none"> • Curricula and textbooks for all education inputs (including teacher education) reviewed, and negative language or values replaced • Increase in # teachers trained in teaching positive values of peaceful co-existence and tolerance of diversity • # children and youth (in schools where teachers have been trained in above values) engaged in school or community based peacebuilding activities

⁶ For more information on education indicators, see UIS 2009.

Box 6.2. Fragility indicators in Palestine's education sector plan

The Ministry of Education in Palestine has developed specific “fragility indicators” in its 2014-19 education development strategic plan which enable officials to monitor the impact of conflict-related disasters on the system, and to observe progress towards risk reduction within the sector. This includes Area “C”, which is one of three temporary distinct administrative divisions in the West Bank created by the Oslo Accords⁷.

- N° of schools exposed to aggressions against infrastructure
- N° of students/teachers physically violated by the Israeli army or settlers
- Average n° of teaching hours lost due to violations
- % of student drop-out from schools in Area C
- Degree of common psychological and behavioural problems of students of Area C
- % of teaching sessions in math, science and Arabic that are not taught by teachers specialized in teaching these subjects, for Grade 5-12
- % of accomplishment in building, furnishing and equipping new classrooms in accordance with annual requirement plan in area C and marginalized areas
- Level of suitability of school buildings according to international standards
- Degree of effective response of local and international institutions for Israeli violations in schools
- Percentage of students with safe access to school⁸

Box 6.3. Example from Seychelles: creating a baseline for monitoring DRR objectives and programmes

Education institutions and communities in the Seychelles are confronted with a range of risks including floods and tsunamis, fires, road safety, landslides and wind storms. In 2011, the Ministry of Education of the Seychelles decided to conduct an in-depth study⁹ on the exposure of school communities to risks, and the degree of disaster preparedness of the education sector. Through this assessment, data was collected regarding the occurrence and type of disasters that the school communities face, the existence of any emergency and disaster preparedness plan and disaster management committee at the school level, the practice of emergency drills, the existence of school emergency alert systems, the state of schools' surrounding walls or fences, the percentage of educational staff receiving first aid and security trainings, etc. The study was completed and updated by a rapid school survey carried out by the MoE in May 2013.

As such, the study helped establish baseline data that laid the foundation for the integration of a cross-cutting priority programme within the Seychelles' Education Sector Medium Term Strategy (MTS)

⁷ For details about Area “C”, including a map, see UN OCHA oPt. 2011. *Humanitarian factsheet on Area C of the West Bank*, http://www.ochaopt.org/documents/ocha_opt_Area_C_Fact_Sheet_July_2011.pdf

⁸ Ministry of Education and Higher Education (MoEHE), Palestine. 2014. *Palestine Education development strategic plan 2014-2019*, p.165, http://planipolis.iiep.unesco.org/upload/Palestine/Palestine_Education_development_strategic_plan_2014_2019.pdf

⁹ Purvis, M.-T. 2011. *Draft Education Sector – Situation Analysis for Disaster Preparedness*. Victoria Mahé: Ministry of Education, Republic of the Seychelles.

2013-2017. This cross-cutting priority programme aims to “develop and maintain a culture of safety and preparedness sector-wide, and thus build resilience to disasters at all levels”¹⁰. The implementation strategy for this programme is based around five main axes: 1) making organizational arrangements; 2) coordinating efforts and plans; 3) adapting infrastructure to meet safety norms; 4) developing capacities of education actors, including teachers, school communities, and central Ministry staff, and 5) reflecting risk and disaster management in national curricula.

This cross-cutting priority programme includes different components and activities that are all related to baseline data (2013), targets (2017) and indicators. The following table is an **extract** of the MTS 2013-2017 priority programme matrix:

Programme components & activities	Baseline (2013)	Indicators/Targets (2017)
Sub-Programme 4.1 School Disaster Management		
Component 1: Setting up organisational arrangements		
Establish School Safety Committees in all schools	51% of schools either do not have or are developing disaster management committees.	100% of schools have disaster management committees by 2017.
Develop district-level management plans	46% of schools either do not have or are not aware of district-level management plans.	100% of schools have district-level management plans by 2017
Component 3: Development of Emergency and Disaster Preparedness Plans		
Train school boards on Risk and Disaster Management (RDM) and how to conduct a school-level risk assessment	0% of school boards are trained on RDM and how to conduct a school-level risk assessment	100% of school communities are trained on RDM and how to conduct a school-level risk assessment by 2017
Develop school Emergency and Disaster Preparedness (EDP) Plans	28% of school either do not have or have informal EDP Plans	100% of schools have EDP Plans by 2017.
Organise regular simulation drills to test disaster preparedness plans and skills levels	54% of schools have never practiced fire drills, 89% for flooding drills, 80% for tsunami drills and 91% for landslide drills	100% of schools practice regular simulation drills by 2017

Source: Ministry of Education, Republic of the Seychelles. 2013. *Draft Education Sector Medium Term Strategy MTS 2013-2017*.

¹⁰ Ministry of Education, Republic of the Seychelles. 2013. *Draft Education Sector Medium Term Strategy MTS 2013-2017*.
Victoria Mahé: Ministry of Education, Republic of the Seychelles.

Step Three: Review the Education Management and Information System to incorporate indicators related to safety, resilience and social cohesion

The national EMIS is the single most important information source of information for planning, and therefore also for monitoring safety, resilience and social cohesion. Yet, many countries face persistent problems getting and processing the necessary (timely and reliable) data for national statistics.

Many countries face two critical issues. The first relates to the scope of the EMIS: it is often limited to data from the annual school census, while data on cost and financing, on human resources (not only teachers), on learner achievement and on issues related to safety, resilience and social cohesion are often not covered. Few education ministries collect data that are relevant to disasters and conflict. Yet even if such data are collected, they are often not stored in a format compatible with the school census data.

The second issue has to do with the poor quality of the statistical information. This can be partly due to lack of qualified staff or poor working conditions for the EMIS units. It is particularly damaging when a reliable statistical database is absent. In this case, monitoring of progress is blocked, and a trusting relationship between the government and development partners becomes difficult.

This is why education sector plans often include a component on strengthening the national EMIS. A study conducted by IIEP in 2009 on the content of education sector plans revealed that 33 of 46 ESPs contained a component related to the improvement of EMIS for improved ESP monitoring. Such a component should also ensure that both indicators on safety, resilience and social cohesion are included, as well as the means for collecting the data to measure them.

Therefore in order to observe and analyse progress towards specific objectives for safety, resilience and social cohesion, education planners need to ensure that the relevant indicators developed are fully integrated into the EMIS. The framework for monitoring safety, resilience and social cohesion indicators can also draw on traditional education indicators such as enrolment or completion rates and pupil-teacher ratios.

For example, the analysis of disaggregated indicators by sub-national geographic regions (and where possible district level) and by group characteristic (e.g. religious, ethnic, linguistic, displaced, refugee, gender) can be used to reveal discrepancies that may require different education strategies. Such discrepancies could be related for example to (lack of) equitable access to relevant quality education, which can be a grievance and is a key issue for social cohesion. Utilizing existing indicators and building upon them according to the specific issues affecting the education system will make the monitoring process more efficient, and make it easier to monitor progress toward safety, resilience and social cohesion objectives. For non-traditional objectives, however, new indicators are often needed (for example, the number of schools with disaster plans).

It is essential to determine where and how the data will be collected. Information related to safety, resilience and social cohesion can be collected through the annual school survey, or a routine monitoring and inspection checklist for inclusion in national EMIS. For example, specific questions, such as the condition of school infrastructure or the existence of a school safety plan, can be added to the existing annual survey at little additional cost.

Step Four: Incorporate safety, resilience and social cohesion into annual operational plans¹¹

A precondition for successful implementation of an education sector strategic plan is the preparation of annual operational plans. This is essential, but often neglected. An annual operational plan (AOP) is an annual work plan derived from a multi-year sector plan. An AOP indicates the precise targets to be reached during a year and spells out in detail the activities to be undertaken. The AOP therefore also serves as a “must-have” basis for periodic progress reporting. And the AOP makes it possible to later monitor implementation of the sector plan. This makes the AOP the foundation of a sound M&E system, and an essential component of the strategic planning cycle.

Typically, an AOP is prepared on a programme-specific basis. It follows the same structure and logical framework format as the programme matrices, but is more detailed. The AOP links programmes with resources, and provides information on timing, roles and responsibilities, unit costs and other useful information. That is why it is important to ensure that safety, resilience and social cohesion components are reflected in the annual operational plan.

Even if safety, resilience and social cohesion programmes have not been included in the medium or long-term education plan, they can still be incorporated as part of the annual operational planning process. For instance, while Niger’s ten-year education sector plan 2014-2024 (PSEF) was approved without explicitly mentioning risks of conflict and disaster, the Ministry of Education was able to include in its AOP the development of a conflict and disaster risk analysis of the education sector and relevant risk reduction measures.

The process of developing an AOP requires dialogue:

- **Between ministry of education and national disaster management and/or peacebuilding departments:** often national disaster management plans are developed and in place, without necessarily including how different sectors need to reflect these plans
- **Between ministry of education and ministry of finance:** close links should be made between the annual plan preparation and the annual budget preparation to ensure full compatibility between the two and thereby facilitate plan implementation.
- **Between services inside the ministry of education:** MoE’s technical directorates must collaborate closely with the MoE’s finance and planning offices.
- **Between the government and local actors:** many countries see the importance of communities not just for their financial contributions but for accountability reasons, and are granting more autonomy and authority to school committees (including school safety and protection committees). This has policy and budgetary implications which must be considered.
- **Between the government and development partners:** it is necessary to get as much information as possible on all activities financed through external funding (on-budget and off-budget). In the past, most donor funding went to projects and most costs were ‘off-budget’. This has changed somewhat with the SWAp process (Sector Wide Approach). Many donors now fund the Education

¹¹ The text in the following section is adapted from course materials from IIEP’s Education Sector Planning Distance Course, and the GPE *Guidelines for Education Plan preparation and appraisal*, 2012

Plan. Many are joining pooled arrangements or funding via sector budget or general budget support.

There are several ways to present an AOP and annual budget. Some AOPs (e.g. Cambodia) are a simple work plan in matrix format with very little written text. Such as,

- a small introduction explaining the rationale of the budget,
- an explanation of the preparatory process, and
- some general comments on the different budget summary tables and on the possible financing gap.

Others (e.g. Zambia) have substantial narrative sections and can be rather lengthy documents. For example, with:

- a reminder of overall policies and priorities,
- a situation analysis for each program,
- plus a narrative presentation of each program matrix.

The work plan matrix is always the centrepiece of the AOP. It must be aligned with the medium-term plan's programme matrices. In cases where a programme budget approach has been adopted, it must also be made coherent with the programme-budget structure as indicated above.

Work plan matrices can vary, but some minimum components must be included. Figure 6.2 shows an example matrix for an AOP, with measures that could be used to ensure safety, security and social cohesion. (The list of measures mentioned herein is not exhaustive).

Figure 6.2. Example - Annual Operational Plan and Budget Matrix

WORK PLAN 2013								BUDGET – all figures to be confirmed					
	Expected results/Indicators	Baseline	Timing				Respon- sibility	Activity code	Total budget	Govern -ment	Funding source		
			Q 1	Q 2	Q 3	Q 4					Development partners		
													others
Priority Programme 1:	Cross-cutting programmes												
Sub-programme 1:	Education in emergencies												
Planned activities													
Main activity 1: Strengthen multi-sectoral linkages in DRR interventions to maximize the scope of reach of social protection programmes to leverage education outcomes for affected children and families.	Expected results: Conducive policy environment related to SHN created. Adequate social support systems to leverage education. Linkage to other multi-sectorial components of ESDP IV.												
<i>Sub-activity 1.1:</i> Sign MoUs between Ministry of Education, Ministry of Labour and Social Welfare, Water and Sewerage Authority, and Ministry of Finance and Economic Development in order to improve access of affected children and families to existing social protection schemes; establish protocols on school infrastructure and healthy food; and prioritise water provision in time of drought to school gardens/land.	# of agreements signed.	0		x			MoE, MoLSW WaSA MoFED	CDRR13 /01/01	\$5,000	\$5,000			
<i>Sub-activity 1.2:</i> In-service training of teachers on advocacy, partnership building and social mobilisation to	% teachers trained.	0		x	x	x	REBs	CDRR13 /01/02	\$250,000		\$250,000		

leverage education outcomes of children.													
<i>Sub-activity 1.3:</i> Awareness raising and training for teachers and students on hygiene, sanitation and health	% of teachers, staff and students trained on safety and hygiene practices.	0		x	x	x	REBs, in partnership with NGOs	CDRR13 /01/04	\$2,000,000	\$1,000,000			\$1,000,000
<i>Sub-activity 1.5:</i> Strengthening school feeding programs for food insecure areas.	% of schools with established school garden.	0		x	x	x	Ministry of AGR, Rural Dev. MoE, MoH	CDRR13 /01/05	\$5,000,000				
Main activity 2: Increase access to educational resources in an emergency through education infrastructure.	Expected results: Continued education maximised in an emergency.												
<i>Sub-activity 2.1:</i> Establish waterproof, secure stores where materials can be stockpiled and accessed in an emergency.	No. of children benefited from the assistance of learning materials, school feeding program, school uniforms, tents and recreational kits.	0	x				REBs	CDRR13 /02/01	\$5,000,000	\$1,000,000	\$4,000,000		
<i>Sub-activity 2.2:</i> Design schools to provide multi-functional space which could be adapted for emergency classes.	No. of facilities constructed/improved. % of rural schools with minimum facilities package.	0	x	x	x	x	REBs	CDRR13 /02/02	\$10,000,000	\$2,000,000	\$8,000,000		
Main activity 3: Provide quality alternative basic education programmes	Expected results: Quality ABE available for displaced populations.												
<i>Sub-activity 3.1:</i> Establish mobile schools adapted to the needs of pastoralists and subsistence farmers.	No. of mobile schools established.	0	x	x	x	x	MoE REBs	CDRR13 /03/01	\$500,000		\$500,000		
<i>Sub-activity 3.2:</i> Develop minimum standards for ABE.	Minimum standards published. No. of ABE syllabi developed and distributed. % of facilitators attended new syllabi orientation.	0	x				MoE ABE section/ EiE Task Force	CDRR13 /03/02	\$200,000	\$100,000	\$100,000		

<i>Sub-activity 3.3:</i> Integration of agricultural knowledge and practices in new ABE curriculum.	Curricula and textbooks of all ABE programs include sections on agricultural knowledge and practice.	0		x			MoE NGOs	CDRR13 /03/03	\$5,000, 000	\$1,000 ,000	\$4,000 ,000		
<i>Sub-activity 3.4:</i> Train REBs and WEOs in remote support of ABE facilitators.	% of REB and WEO officers trained.	0			x		EiE Task Force w. NGO support	CDRR13 /03/04	\$500,00 0		\$500,0 00		
<i>Sub-activity 3.5:</i> Provide mobile school facilitators with mobile phones, solar chargers and remote support from REBs/WEOs.	% of facilitators equipped.	0				x	REBs/W EOs	CDRR13 /03/05	\$1,000, 000				\$1,000, 000
Main activity 4: Establish phone-based salary payment system.	Expected results: Improved management practices for payment of salaries and for distribution of adequate learning.												
<i>Sub-activity 4.1:</i> Sign MoU between Ministry of Education and Ministry of Communication and Information Technology for the development of national regulatory standards on mobile financial services sector.	Legislation enabling regulations enacted.	0	x				MoE MoCIT	CDRR13 /04/01	\$5,000	\$5,000			
<i>Sub-activity 4.2:</i> Design and implement software and hardware systems for phone-based salary payment system.	Hardware and software functional.	0		x	x		Appoint ed service provide r	CDRR13 /04/02	\$2,000, 000	\$500,0 00	\$1,000 ,000		\$500,00 0
<i>Sub-activity 4.3:</i> Train REBs/WEOs/school leaders in system.	% of REB, WEO and school leaders trained.	0				x	Appoint ed service provide r	CDRR13 /04/03	\$4,000, 000	\$500,0 00	\$3,500 ,000		
<i>Sub-activity 4.4:</i> Provide support system for teachers/facilitators.	% of teachers registered to use new system.	0				x	Appoint ed service provide r	CDRR13 /04/04	\$500,00 0	\$200,0 00	\$250,0 00		\$50,000

Step Five: Address issues of security or instability to ensure comprehensive data collection

As mentioned in Figure 6.1, the first step of the monitoring process is information gathering. In situations of instability or crisis, the difficulties of data collection can be considerable. Yet, even then, the management of the education system must continue in an intelligent and timely manner. The following measures can help to improve data collection in such situations.

1. **Prioritize data to be collected.** Many planning departments tend to want to collect as much data as possible, but in practice, not all data collected are used. In crisis situations, rapid needs assessments can be used (when lengthy data collection exercises are an unaffordable luxury) and its information should then be integrated into the EMIS.
2. **Accessibility:** Accessing schools can be difficult or impossible for data collectors during for example armed conflict or floods. When data are intended to reflect national realities, but in fact cannot be collected in certain regions, its reliability is questionable. The **inaccessibility** of some areas may be offset by the use of **mobile phones for the collection of primary data** (by different data collectors than otherwise).
3. **The organization and coordination of the data collection:** Decentralized management structures are often responsible for collecting and monitoring data. Depending on country contexts, it will be more or less relevant to centralize or decentralize data collection. When human resources are very limited, centralized collection processes may be more effective. In contrast, when the decentralized structures have sufficient resources, centralization can be a handicap because it prolongs the process and increases the risk of error. Participation and inclusion of key stakeholders can provide additional human resources and help verification exercises.

South Sudan

Hand-held devices are being used by data collectors across the country to transmit EMIS data on a monthly basis. Over ninety per cent of the country was covered in 2010.

<http://unesdoc.unesco.org/images/0019/001912/191238e.pdf>

Uganda

DevTrac is a SMS-based system that was piloted at the school level in Uganda. It provides ongoing data on teacher absenteeism; corporal punishment; sanitation and hygiene; emergencies; etc. This digital data collection method allowed to conduct a rapid assessment during floods in Uganda, and to deploy a targeted response. <http://www.devtrac.ug>

4. **Pooling of financial, material and human resources** of different actors and entities involved in the education sector should be **encouraged (ministry, NGOs, bilateral and multilateral, private sector, etc.)** For example it may be possible to designate partners to assist with data collection, such as local non-governmental organizations that have a presence in conflict or disaster-affected areas that may be able to access the information safely and assist in transmitting the data to the appropriate level (e.g. a regional level or the central level). Working with School Management Committees or youth groups to collect and store the data may also be effective.

5. **Technological means:** data collection and processing can take place with a minimum of computer technology (hardware and software). However, these facilities are in short supply in many localities and where they exist, qualified staff to use such technology remains limited, especially in the decentralized departments.

Key actions

- Review existing policies against risks identified in the education sector diagnosis (see Booklet 2)
 - Review existing policies to determine to what extent they promote safety, resilience and social cohesion
 - Enter into a policy dialogue with key stakeholders to determine the degree to which existing policies need to be strengthened or new ones developed
 - Select policy priorities and goals which will be reflected in the selection of priority programmes in the next phase of the planning cycle (see Booklet 4)
-

Key resources

USAID and GPE. 2013. *Integrating conflict and fragility analysis into the education system analysis guidelines: a proposed companion guide*. (Author: Cynthia Koons). Washington DC: USAID and GPE. This companion guide proposed indicators for conflict and fragility.

UNESCO Institute for Statistics. 2009. *Education Indicators. Technical guidelines*. <http://www.uis.unesco.org/Library/Documents/eiguide09-en.pdf>

Kusek, J.Z.; Rist, R.C. 2004. *Ten Step to a Results Based Monitoring and Evaluation System*. Washington, D.C.: World Bank.

[https://www.globalhivmeinfo.org/Gamet/pdf/828 Ten%20steps%20to%20a%20Results-based%20M E%20system%20-%20SUMMARY-1.pdf](https://www.globalhivmeinfo.org/Gamet/pdf/828%20Ten%20steps%20to%20a%20Results-based%20M%20E%20system%20-%20SUMMARY-1.pdf)

This is a 14 page summary, for a UNICEF handbook on M&E, of a 170 page book on setting up an M&E system.

Ministry of Foreign Affairs of Denmark. 2006. *Monitoring and indicators of the education sector*. Technical Note. Copenhagen: MoFA of Denmark.

http://amg.um.dk/en/~media/amg/Documents/Technical%20Guidelines/Monitoring%20and%20Indicators/Indicators%20in%20sectors/Monitoring_Education.pdf

UNESCO. 2006. *National Education Sector Development Plan: A result-based planning handbook*. Paris: UNESCO, specifically sections 4.2.1. on Indicators; 4.2.2 and 4.2.3 on Evaluation (pp. 51-58).

<http://unesdoc.unesco.org/images/0014/001447/144783e.pdf>

Annex A: Choosing and constructing indicators

Relevance and validity of indicators

The most important criteria for choosing indicators are that they are able to measure what they are supposed to measure (validity), and that they are in line with the expressed goal and/or objective of an education sector plan (relevance). As explained in Booklet 3, education sector plans are commonly structured in terms of goals, overall and specific objectives and strategies. Since specific objectives are typically of a quantitative nature and expressed in terms of quantity, quality, and time, indicators will naturally be chosen from the most important targets set.

Figure 4 presents the different elements that indicators need in order to effectively measure progress towards established objectives. Most typically indicators in many education plans focus at the level of 1 and 2 and relatively few indicators include the level of change required within a given time period.

Figure 6.1: How to construct an indicator?

1	BASIC INDICATOR More numerous and better trained students receive a diploma
2	ADD QUANTITY (HOW MANY?) The number of graduates have increased from 5,000 to 14,000
3	ADD QUALITY (WHAT TYPE OF CHANGE?) Number of graduates coming from low income families in regions X, Y, Z who pass standard exams (40% female / 60% male) has increased from 5,000 to 14,000
4	ADD TIME (DURATION) Number of graduates coming from low income families in regions X, Y, Z who pass standard exams (40% female / 60% male) has increased from 5,000 to 14,000 per year as from the starting date of the plan, program or project.

Different types of indicators

Indicators can be grouped under different types of categories:

- Direct or indirect indicators;
- Quantitative and qualitative indicators;
- Indicators by level of monitoring.

Direct indicators are used for objectives that relate to a directly observable change resulting from activities and outputs. For instance, if the expected result is to ‘train over two years 250 inspectors in educational planning and management’, then the direct statistical indicator would be simply a count by semester or by year of the number of those actually trained in this field.

Indirect or proxy indicators may be used, if the achievement of objectives is not directly observable (for instance: increase the quality of life, or strengthen capacity in educational management) or if

measuring an objective would be too costly because it would involve major data collection. Instruments to collect information – such as user satisfaction surveys or public expenditure tracking studies – could be used to construct proxy indicators. From these surveys indicators can be calculated, such as the percentage of users of administrative services who are satisfied or the percentage of funding reaching direct beneficiaries.

Quantitative indicators may relate to ‘the frequency of meetings, the percentage of people trained, growth rates, or the intakes of inputs, e.g. grants, building, and teachers’. Quantitative indicators are statistical measures that measure results in terms of percentages, rates, ratios and indexes.

Qualitative indicators may refer to the level of participation of a stakeholder group, stakeholder opinions and satisfaction, decision-making ability, etc. Qualitative indicators measure results in terms of ‘compliance with..., quality of..., extent of..., level of...’¹² When the expected results are qualitative (change of attitude, capacity building, etc.) a non-statistical approach may be necessary. But, since these aspects are generally difficult to measure, it is often necessary to conduct surveys or research and then to derive quantitative measures for these aspects.

Under the results-based management approach, indicators can be categorized with reference to the results chain (input/activities-outputs-outcomes-impact)¹³, as shown in Box 1.

Data for monitoring and evaluation¹⁴

Since indicators will need to be calculated at least on a yearly basis (for establishing yearly performance reports), they need to be available in a timely fashion. This will also allow comparisons to be made over several years or across regions with a view to establishing time series and trends, or to make regional comparisons. This then means that it is important to choose indicators which can be calculated from data which will be available on a yearly basis via the regular data collection procedures operated by EMIS.

Indicators which can typically be calculated from EMIS data (together with population and financial data) relate to the measurement of:

- Access and participation (apparent and net intake rates, gross and net enrolment rates, transition rates);
- Internal efficiency (flow rate, survival rate, wastage ratio, completion rate, etc.);
- Quality (pupil-teacher ratio, percentage of primary school teachers having the required academic and/or professional qualifications, percentage of children of final grade in a cycle who master a set of nationally defined basic learning competencies);
- Finance (public expenditure on education as a percentage of GDP, public expenditure on education as a percentage of government expenditure, public recurrent expenditure per pupil as a percentage of GDP per capita, public expenditure on primary education as a percentage

¹² UNDP. 2009. *Handbook on Planning, Monitoring and Evaluating for Development Results*. New York: United Nations Development Programme, <http://web.undp.org/evaluation/handbook/documents/english/pme-handbook.pdf>, p. 63.

¹³ European Commission/DG Development. 2002. *Guidelines for the use of indicators in country performance assessment*. Brussels, p. 3.

¹⁴ As in Sections 1 and 2 above, the text in this section is primarily for those participants with less experience in planning. If your strength is in education sector planning, you may use this part to refresh your understanding.

of total public expenditure on education, teachers' remuneration as a percentage of public recurrent expenditure on education).

Sometimes the ministry of education does not have access to general population data (either because such data do not exist or is politically sensitive). This makes it challenging to calculate net intake and enrolment rates for the education system.

An example regarding Education for All (EFA) illustrates the relationship between sector goals, overall objectives, specific objectives and indicators (see the box below), and provides an example of an indicator for access.

Goal	Overall objective	Specific objectives	Indicators
Achievement of EFA by 2015	Increase access to primary education	Increase the net intake rate (NIR) to grade 1 from 85% in 2010 to 100% in 2015 Increase the net enrolment rate (NER) in primary education from 80% in 2010 to 100% by 2015	NIR NER

When preparing an education sector plan, projections of enrolment will have been made generally on the basis of observed trends in the past. In this case, there are yearly targets against which yearly monitoring can be based (see the box below).

Baselines and targets

Objective	Baseline NER 2010	Target NER 2011	Target NER 2012	Target NER 2013	Target NER 2014	Target NER 2015	Indicator
Increase access to primary education	80%	84%	88%	92%	96%	100%	% NER

Since there may be several indicators and targets which are associated with the same objective (for access, there is the Gross Enrolment Rate; the Net Enrolment Rate; the Apparent Intake Rate; the Net Intake Rate by gender, by grade, by region) it will be important to select those indicators which are most meaningful either because of their aggregate nature (for instance, GER for access), or because they refer to a particular problem in the sector which will be tackled by the plan intervention. If there is, for instance, a particular problem in a country with children entering grade 1 over-aged, then an important performance indicator would be the net intake rate to grade 1 or the percentage of over-age children among the grade 1 enrolments.