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Guidelines and Toolkit for a Diagnosis of the Education in Emergencies Data Ecosystem

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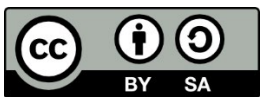

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Introduction, objectives, and rationale

Addressing education needs in crisis settings in a comprehensive and adapted manner is a necessary step towards achieving Sustainable Development Goal (SDG) 4, as well as all the other SDGs with which education has reciprocal linkages. As the lead UN Agency for the SDG 4, UNESCO is strongly committed to building the resilience of education systems worldwide, to limit the effects of disasters on the physical, emotional, and social well-being of the most vulnerable learners and educators.

The Education 2030 Framework for Action specifically stresses the need to 'develop education systems that are more resilient and responsive in the face of conflict, social unrest and natural hazards – and to ensure that education is maintained during emergency, conflict and post-conflict situations'. However, in most countries impacted by emergencies and protracted crises, governments and their partners face major, recurring challenges when planning for and responding to education in emergency and protracted crises. One of the most critical challenges faced is the lack of disaggregated, reliable, and up-to-date data that can serve as a baseline for preparedness, response, and recovery strategic plans and programmes, while monitoring the impact of progress made.

When available, Education in Emergencies (EiE) data are typically fragmented because their collection and use tend to mirror and sometimes reinforce misalignment between humanitarian and development programming (Buckner, 2019; INEE et al., 2019). The data fragmentation and lack of proper coordination among the organizations working on EiE may have multiple negative consequences, such as inaccurate identification of vulnerable groups and their needs, insufficient and misallocated funding, inefficient policy and programme interventions, weak education sector plans, and lower leadership capacity of ministries of education (MoEs) in times of crisis.

Several initiatives are under way to address the multiple challenges related to educational data in emergency settings. As part of these global efforts, UNESCO – with the support of Education Cannot Wait (ECW), Norwegian Capacity (NORCAP, belonging to the Norwegian Refugee Council), and the Swedish International Development Cooperation Agency (SIDA) – has committed to supporting MoEs in countries affected by emergencies and protracted

crises, to strengthen and adapt their institutional information systems to better inform EiE strategies and programmes. Strengthened data systems can enhance government accountability in EiE, while facilitating monitoring of the resilience of the education system faced with recurring emergencies.

It is against this background that the guidelines and toolkit aim to strengthen EiE institutional system data. More specifically, they aim to generate a diagnosis of the EiE data ecosystem at a given point in time, mainly by evaluating the opportunities for integrating humanitarian EiE data systems with development and national institutional education information systems. They include approaches and tools for the identification of the EiE data needs, the mapping of the existing relevant data sources and producers, assessment of the quality of those data sources, and an examination of how data needs are covered by existing data and opportunities to address the identified data gaps.

How were these guidelines developed?

The guidelines are one of the knowledge products developed within the ECW-funded project, 'Strengthening institutional information systems for increased resilience to crises', implemented by UNESCO. This project also included the elaboration of a conceptual framework to promote a common understanding of concepts, processes, and outcomes for EiE data, which has provided the conceptual basis for the development of these guidelines.

Key inputs were obtained from six country case studies (Chad, Ethiopia, Palestine, South Sudan, Syria, and Uganda) implemented in 2020 and 2021 by UNESCO, in partnership with NORCAP and supported by ECW and SIDA. The six case studies analysed the current education management information systems (EMIS) and more broadly the general EiE data landscape in these countries, identifying the main challenges related to the production and use of those data for each national context.

These studies were the basis for implementing bilateral projects of technical support to strengthen EiE data in Ethiopia and South Sudan, which started in 2021 and whose implementation has generated important insights that now contribute to the current guidelines.

Additionally, to ensure complementarity with ongoing work around EiE data, the development of these guidelines was informed by inputs from country, regional, and global level stakeholders. The development process was informed by consultations with key stakeholders during the inception period, including the conceptualization of these guidelines. Also, global online user research was conducted between July and August 2022, gathering responses from 225 respondents from 40 countries, which provided important feedback on user expectations for such tools and the most often demanded technical guidance. The consultation process also included a series of consultations with field experts and potential future users. Finally, two full-scale piloting exercises were conducted in two different countries, Ecuador in January 2023 and Jordan in March 2023.

General approach to strengthening the EiE data ecosystem

A data ecosystem can be defined as a system in which several actors interact with each other to exchange, produce, and utilize data (UNSD, 2019). In light of this definition, EiE data and data ecosystems exhibit some particular characteristics.

- EiE data are educational data, covering learners, teachers, and other educational personnel, schools, learning, and education systems more broadly. A distinctive characteristic of the purpose of these data is to help prevent, prepare for, respond to, and recover from an emergency and or protracted crisis (IIEP-UNESCO, 2023).
- While respecting the distinctive character of EiE data, these guidelines do not approach the EiE data ecosystem as fundamentally different from the traditional education data ecosystem, but rather as an integral part of it.
- Another difference between EiE data and traditional educational data is that EiE data are often produced, generated, and managed by multiple government and non-government actors, including humanitarian organizations who typically are at the forefront of response

and recovery efforts in emergency settings. This characteristic adds a significant level of complexity to the functioning of the EiE data ecosystem.

- When available, educational data in emergency settings are typically fragmented because their collection and use tend to mirror and reinforce misalignment between humanitarian and development programming (Buckner, 2019; INEE et al., 2019). Multiple actors, with different mandates and different priorities, are active in data production and use, often in ways that are poorly coordinated or overlapping, and lack shared understanding of concepts, processes, stakeholders, and outcomes for data. This lack of common ground contributes to disparate ways of working and results in missed opportunities for efficiency, coherence, and optimization of limited resources, in relation both to the production of data and to their use for more effective intervention to address education needs in crisis settings and strengthen system resilience (IIEP-UNESCO, 2023).
- The constraints facing EiE data make it different from a real data ecosystem, where the connections and coordination between actors are key. Therefore, these guidelines propose an approach to improving the availability and quality of EiE data that promotes reinforcement of the functioning of an EiE data ecosystem by placing the MoEs and their institutional education information systems at the centre.

The term 'institutional information system' refers to a wide ecosystem of people, technologies, models, methods, processes, procedures, rules, and regulations that function together to provide education leaders, decision-makers, and managers at all levels with a comprehensive, integrated set of relevant, reliable, unambiguous, and timely data and information to support them in completion of their responsibilities. There is some overlap with the kind of data and information collected by an 'integrated EMIS'; however, institutional information systems include a wider range of qualitative and quantitative data and information.

Finally, even though the proposed approach calls for the adoption of a strategy to integrate EiE data into national education information systems as much as possible, it should be recognized that those systems will be able to address only some of the data demands for EiE. This is due to several factors, including limitations on the types of data they are able to collect, given their technical design and purpose, and also the necessary limits on the burden imposed on data respondents. An efficient response to EiE data needs requires the active and coordinated participation of other development and humanitarian actors, avoiding 'siloed' organization.

Glossary

DQA	data quality assessment
DRM	disaster risk management
ECW	Education Cannot Wait
Ed-DQAF	Data Quality Assessment Framework for Education
EiE	Education in Emergencies
EMIS	education management information systems
ESP	Education Sector Plan
GER	gross enrolment ratio
HRP	Humanitarian Response Plan
IDPs	internally displaced persons
M&E	monitoring and evaluation
MoE	ministry of education
NGO	non-governmental organization
NORCAP	Norwegian Capacity
SDG	Sustainable Development Goal
SIDA	Swedish International Development Cooperation Agency
UNDRR	United Nations Office for Disaster Risk Reduction
WASH	water, sanitation, and hygiene

When, by whom, and how should these guidelines be used?

The diagnostic guidelines and tools propose an approach that is most relevant to the mid- and long-term goals of data system strengthening. Rather than responding to immediate data needs when a crisis hits, they intend to provide an essential basis for educational stakeholders – national authorities and their development and humanitarian partners – to strengthen institutional capacity for enhanced planning and managing education before, during, and after crises.

The processes designed to improve the EiE data ecosystem may require, for example, changes in individual data collection tools or the deployment of new ones, the design of an effective coordination mechanism among data producers to reduce the burden on respondents and improve data sharing practices, and the establishment of cooperation agreements among partners to collect specific data in a standardized manner. These are system-level and structural changes that can be implemented better when organized in line with a mid- to long-term vision.

These guidelines, which are intended to diagnose the EiE data ecosystem, follow a comprehensive methodology consisting of four steps, as described in the following sections, progressing from understanding the problem and the data needs to assessing how the different demands are addressed. The guidelines provide tools to implement each of those steps. For example, in relation to the first step, the understanding of data needs, *Tool 1 (Risk analysis of hazards)*, proposes a specific way to classify those needs, providing concrete examples to facilitate the work.

While the methodology is organized in four steps, these are not necessarily successive stages always implemented together. In fact, this will depend on the existing information base of EiE data. For example, it might be that EiE data needs have already been established in an existing Education Sector Analysis or data diagnosis; in such a case, the focus would shift to steps 2 and 3, identifying the data sources and evaluating their quality.

The users of the guidelines and toolkit fall into two main categories which are not necessarily mutually exclusive. First and foremost, the guidelines and tools are designed for technical experts tasked with conducting the actual diagnostic exercise. While the diagnostic guidelines and tools are presented as global public goods, that is to say publicly available resources which can freely be used and replicated to support global efforts to address EiE data challenges, their actual implementation should be reserved for informed and knowledgeable technical experts with backgrounds in education statistics. Second, the guidelines are intended for national authorities and humanitarian partners interested in findings and recommendations from the diagnostic exercise which can inform programmes and projects aimed at strengthening institutional data systems with a focus on EiE data.

Diagnosing the EiE data ecosystem

A diagnosis of the EiE data ecosystem is a process that requires different activities and the involvement of, ideally, all the EiE data stakeholders. As such, the development of a mechanism in which the different EiE data producers and users can be involved in all the different steps, as needed, is crucial to ensure the quality of the diagnosis.

As recommended by different methodologies for improving data production and access, it is key at initial stages to carry out a desk review, not only to understand the situation in relation to the theme of interest, but also to identify main stakeholders, different user needs, and engagement in the initiative (ODI, 2021).

Depending on how the diagnosis is organized, there will be a need to conduct a series of technical consultations in order to

- Verify, update, and complement the information gathered by the desk review.
- Ensure effective communication around the project of strengthening the EiE data ecosystem, while ensuring the required buy-in by the various stakeholders.

- Agree on the most appropriate theoretical classifications embedded in the tools to produce the mappings (for example, the typology of hazards proposed by these guidelines could be adapted based on the inputs received from the MoE officials, including experts in disaster risk management and representatives from relevant stakeholders at both national and local levels).
- Determine the most appropriate way to establish a strategic and technical consultation body and define its members and functioning.

This last step will be crucial for building interest and ensuring the relevance and ownership of the entire process. It is important that the members are chosen strategically based on their actual involvement or contributions to the process.

Having made clear how the process should be organized, the first step of the diagnosis will be to produce a brief analysis of the country context to be used as background information for the more specific analysis to follow. This should include

- A general description of the country in terms of population, location, socio-political context, and government institutions.
- The elaboration of a general country risk profile to provide a synthetic view of the national risk context.
- An outline of the educational situation of the population, in terms of access, participation, completion, and learning.
- Any other aspects considered relevant for the context.

After the elaboration of the context analysis, the guidelines suggest carrying out the diagnosis in four phases, as shown in *Figure 1*.

Figure 1. Four-phase approach to conducting a diagnosis of the EiE data ecosystem

Phase 1. Identification of EiE normative data needs
1. Production of mapping of hazards, risk factors, and education system's vulnerabilities with known and potentially disruptive effects on education 2. Reviewing national monitoring and evaluation (M&E) frameworks and programme documents relevant for EiE 3. Identification of EiE normative data needs resulting from the potential consequences of identified hazards and data required for relevant EiE indicators
Phase 2. Mapping of the EiE data ecosystem
1. Identification of data producers and data sources 2. Coordination of data collection activities within the EiE data ecosystem
Phase 3. Quality assessment of the most relevant EiE data sources
1. Data quality assessment of EMIS/annual school census 2. Education in Emergencies Data Quality Assessment (EiE_DQA) of relevant EiE data sources
Phase 4. Coverage of information needs and data gaps
1. Data needs covered by existing data sources 2. Data gaps and potential data collection to address those gaps

Source: Authors

Phases 1 to 4 detail the background information and directions to guide the implementation of the approach, as well as presenting the tools to support the implementation.

Note that the implementation of these four phases does not need to be carried out in the order presented in *Figure 1*. In practical terms, it may often be convenient to start with Phase 2, by meeting with the data-producing organizations and mapping their most relevant databases for analysis.

The sequential organization of the proposed work phases is flexible and must take account of different elements in the implementation of the study, such as the availability of the relevant actors to collaborate with the process.

These guidelines include a set of six tools that support the implementation of the four phases. *Table 1* presents the tools available for each phase.

Table 1. Tools accompanying these guidelines to support the implementation of the diagnosis of the EiE data ecosystem

Diagnosis phase	Tool
1. Identification of EiE normative data needs	Tool 1. Risk analysis of hazards Tool 2. Identification of data needs and data coverage
2. Mapping of the EiE data ecosystem	Tool 3. Mapping of data producers and data sources relevant for EiE Tool 4. Questionnaire to review the coordination of data production activities within the EiE data ecosystem
3. Quality assessment of the most relevant EiE data sources	Tool 5. EMIS Data Quality Assessment (EMIS_DQA) matrix Tool 6. Education in Emergencies Data Quality Assessment (EiE_DQA) matrix
4. Coverage of information needs and data gaps	Tool 2. Identification of data needs and data coverage

Click here to download the tools which are also available via the tool icon.

Source: Authors.

Phase 1 Identification of EiE normative data needs

The first stage of the inception phase starts with a contextualized mapping of hazards and other risk factors specific to education, followed by a review of existing M&E frameworks and the establishment of a normative framework of data needs. These three tasks are described in *Section 1.1* and *Section 1.3*.

At the end of this stage, the following questions should be answered:

- What is the country risk profile and what are the most prevalent hazards to education and their impacts?
- Are there specific data required to produce indicators included in national monitoring frameworks and programme documents relevant for EiE?
- What are the implications in terms of data and information needs for planning and managing education?

1.1. Mapping of hazards and other risk factors

This step consists of the identification of normative EiE data needs, and starts with a full mapping of hazards and other risk factors with known and potentially disruptive effects on education.

A hazard is defined as 'a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation' (UNDRR, 2020) .

In reality, hazard mapping and risk analysis ought to be a dynamic and regular exercise, as new threats emerge while others disappear or diminish. It is thus proposed to identify hazards and risk factors occurring in recent years while also considering other foreseen threats deemed to have an impact on education.

To help navigate the hazard mapping and for the purpose of identifying the normative EiE data needs, these guidelines propose the use of four categories, inspired by the United Nations Office for Disaster Risk Reduction (UNDRR) classification of hazards, with a focus on risks that most commonly have an impact on the education sector: environmental hazards, technological hazards, biological and health hazards, and social hazards.

Environmental hazards are risks related to the weather, hazards with a geological origin, and hazards arising through the degradation of natural ecosystems. They include storms, flash floods, tsunamis, cyclones, droughts, snow and ice storms, heat waves, rock- and landslides, earthquakes, sinkholes and volcanic eruptions, air pollution, soil degradation and deforestation, wildfires, desertification, and sea level rise.

Technological hazards arise from the possibility of failure of an existing technology, and include structural failure including building, bridge, or dam collapse, nuclear plant failure, data security related hazards, hazardous waste, road traffic accidents, explosive agents, and other industrial risks (e.g. leaks of dangerous gases or chemicals).

Biological and health hazards cover hazards of organic origin including invasive species such as locusts and rodents, pandemics (e.g. HIV, ebola, flu, COVID-19) and vector-borne diseases (e.g. malaria, dengue, zika), unsafe or insufficient water, and unsafe or insufficient food.

Social hazards are brought about by human activities and choices. They include armed conflict, explosive remnants of war, violence, abuse, neglect and exploitation, peer violence, bullying, sexual and gender-based violence, gang violence, military use of facilities and child recruitment, and child labour.

Different classifications of hazards and risk exist, including for example the typology proposed by the Comprehensive School Safety Framework 2022–2030 (GADRRRES, 2022), which is highly relevant for the education sector.

However, the four-part classification presented here is intended to simplify as much as possible the identification and categorization of EiE data needs. This is an important task for the diagnosis of the EiE data ecosystem, although other classifications could also be used, especially the ones that might have already been developed at the national level. *Figure 2* provides a more comprehensive list of hazards classifiable under each of the categories.

Once the hazards have been identified and classified, it will be necessary to identify their associated risks and describe their potential disruptive effects on education. This will help later on to decide which types of data are needed more urgently.

Depending on the context, it might prove appropriate to conduct a very granular hazard mapping in terms of geographical distribution and dynamics, for example when dealing with vast territories with diverse risk profiles.

1.1.1. Establishing the levels of risk by type of hazard

Information about risks can be thought of in terms of the nature and severity of potential hazards and their interactions with the education system. This includes identifying exposure to hazards, existing vulnerabilities, and available capacities for resilience. The following equation illustrates the relationship among these factors:

$$\textbf{Risk} = \frac{\text{Exposure} \times \text{Hazards} \times \text{Vulnerabilities}}{\text{Capacities}}$$

Exposure can be defined as the situation of the people, infrastructure, and materials located in hazard-prone areas.[1] *Vulnerabilities* are understood as 'the conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards' (UNDRR, 2022). *Capacities* refer to 'the combination of all the strengths, attributes and resources available within an organization, community or society to manage and reduce disaster risks and strengthen resilience' (UNDRR, 2022) – in this case, within the education system and its component parts. While this might seem most relevant before a crisis, information on risks remains relevant during and after crises, particularly in the context of protracted crisis or where hazards might be multiple or recurrent.

A specific hazard does not affect all individuals, households, communities, and infrastructure to the same degree and in the same way. While some could be seriously affected, others might not be affected at all. Even though the magnitude of the hazard might be the same, the impact can be different depending on exposure, vulnerability, and coping and adaptation capacities. In other words, as shown by the formula above, the risk of a disaster is directly proportional to the magnitude of the hazard, level of vulnerability, and exposure, and is inversely proportional to the capacity to withstand the shocks and stresses of the hazard. Hazard, exposure, vulnerability, and capacity are often called risk determinants or risk factors (IFRC, 2019).

1.1.2. Establishing the severity of risks

Where this has not been embedded in earlier analysis, it is important to determine the severity of risks through an analysis of their potential impact on the education system, in particular if the country risk profile or the description of hazards have highlighted complex situations in which several different types occur. When resources are limited, this will ultimately help planners prioritize and focus their disaster and emergency management efforts and, in line with the purpose of these guidelines, help to determine the data needs.

A visual representation can be very helpful in this context. A simple but very effective figure is the risk heat map. Risks are plotted on a two-axis diagram, according to their likelihood of occurrence (Y-axis) and their impact (X-axis). In this instance, the impact dimension should encompass the three dimensions described earlier – exposure, vulnerability, and capacity.

Figure 2 illustrates a risk heat map. In such a context, it is recommended to allocate resources to respond to hazards produced by terrorist attacks, droughts, floods, and epidemics, which all have a very high impact and occur frequently. In contrast, insect infestation has a very high potential impact, but its likelihood is very low, and investing in improved response capacities of an education system should be considered with caution when resources are tight. Where the impact of a hazard can vary considerably (for example, rainfall), such a hazard should be broken into two entries in the risk map (for example, light rain and storm).

1 This is adapted from the UNDRR definition of exposure: 'The situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas'.

Figure 2. Risk heat map, prioritizing risks by probability of occurrence and impact

Likelihood (frequency of hazards) →							
	Almost certain	5				Flood Drought Epidemics	Terrorist attacks
	Likely	4					
	Possible	3				Industrial accidents	
	Unlikely	2					
	Rare	1				Insect infestation	
			1	2	3	4	5
			Negligible	Minor	Moderate	Major	Catastrophic
			Impact (severity of consequences) →				

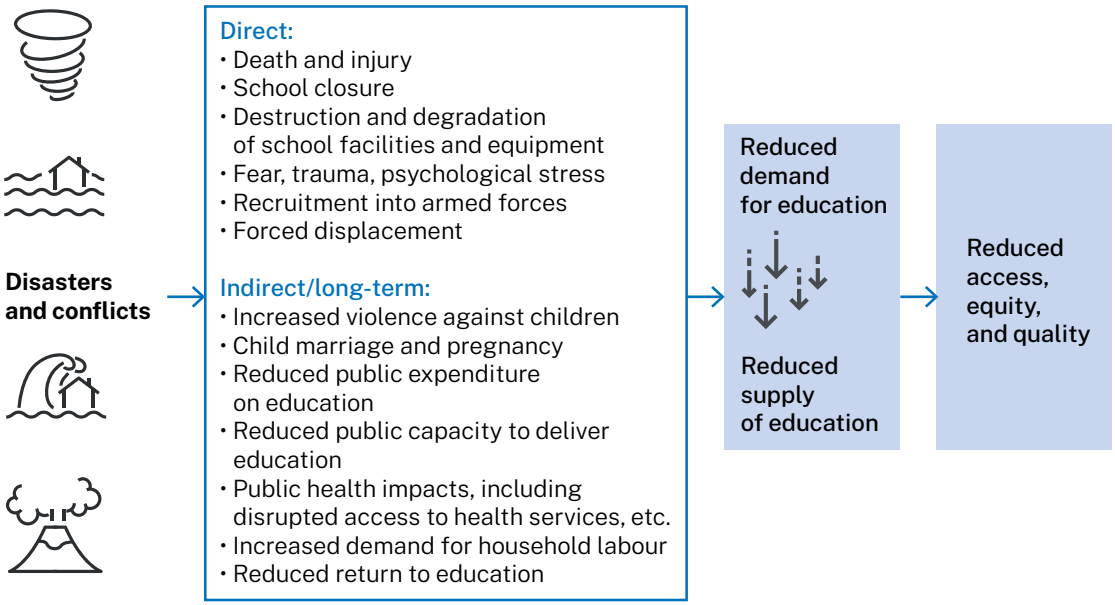
Source: IIEP-UNESCO, 2021c.

1.1.3. Risks and the impact on education

A final element in the elaboration of risk mapping is understanding how risks impact education and why they are impacting it in a particular way. Ideally, we need to identify the education system's vulnerabilities to the hazards that prevent the provision of quality education.

Figure 3 summarizes the various effects conflicts and disasters may have on education systems. These effects may broadly be grouped into direct and indirect, both of them leading to the disruption of education supply and demand and ultimately reducing access, equity, and quality of education in affected settings.

Figure 3. Channels through which disasters and conflicts impact education



Source: IIEP-UNESCO, 2021c.

These guidelines provide a tool to support the analysis of hazards and their severity. The specific objective of *Tool 1 (Risk analysis of hazards)* is to provide a template matrix to implement the risk analysis related to the hazards affecting the education system in any one country. *Tool 1* also includes a template risk heat map that can be used to simplify the presentation and analysis of the results.

1.1.4. Key information resources to produce the mapping of hazards

This work ideally should start with a desk review of recent risk analysis and hazards and vulnerabilities assessments, which normally provides useful background information and analyses the country's risk profile. Coordination and collaboration by the organizations and stakeholders who work on disaster risk prevention, preparation, response, and recovery based in the country where the study will take place is key to assure the quality of this work. Selected sources of information to be consulted at this stage are given in *Box 1*.

Box 1. Key information resources to produce the mapping of hazards

Methodological guidelines to conduct risk analysis

- Chapter 12 on Risk Analysis for Resilient Education Systems, in Education Sector Analysis Methodological Guidelines, Vol. 3

General country risk profiles:

- INFORM risk index: Generalized risk of a crisis based on structural conditions
- INFORM severity index: Severity of an existing crisis
- The Humanitarian Data Exchange: Open platform for sharing data across crises and organizations
- National disaster management agencies

Information on natural hazards:

- Climate Change Knowledge Portal
- Emergency Events Database (EM-DAT)

Information on conflicts:

- Armed Conflict Location and Event Data Project (ACLED)
- Global Coalition to Protect Education from Attack (GCPEA)
- Uppsala Conflict Data Program (UCDP)

Information on humanitarian education responses:

- UNOCHA/National and Subnational Education Clusters / Partners
- UNHCR (Operational Data Portal)
- UNOCHA Financial Tracking Service (FTS)

1.2. Review of national M&E frameworks and programme documents relevant for EiE

The process of identifying EiE data needs should incorporate the analysis of existing national M&E frameworks on education. Assuming that the M&E frameworks are clearly linked to Education Sector Plans (ESPs) or other relevant policy documents, it can be assumed that they reflect the policy priorities and can help identify EiE data needs.

Special attention should be given to indicator frameworks for the follow-up of ESPs, EiE programmes, or policies. Those indicator frameworks should also reflect some agreement on what EiE indicators should be monitored and what data would be needed to calculate them. *Box 2* presents an example of a regional monitoring framework that could be relevant for determining the national data needs on an issue that is crucial for the planning and managing of EiE.

Box 2. Regional Monitoring Framework for Students on the Move

An increase in intra-regional mobility and massive displacement flows in Latin America and the Caribbean have created important challenges to guaranteeing the right to education in States across the region. Among these challenges are the need for more and better data on the education of people on the move and the urgency of promoting their use in educational planning processes.

In response, the Regional Bureau for Education in Latin America and the Caribbean (OREALC/UNESCO Santiago), within the framework of the UNESCO Regional Strategy on Human Mobility for Latin America and the Caribbean (2022–2025) and in line with the Joint Declaration of the VIII International Technical Meeting on Human Mobility of Venezuelan Citizens, has implemented the Regional Monitoring Framework for Students on the Move.

This framework has two components. The first component is articulated according to a matrix of regionally comparable educational indicators that aim for an orderly and systematic vision of the regional progress in guaranteeing the right to education of people on the move. The second component focuses on the formulation, implementation, and results of national policies and initiatives for the educational inclusion of students on the move.

The first component of the monitoring framework includes a set of 13 indicators, which require specific data if countries are to adopt it.

For example, one of the indicators is the gross enrolment ratio (GER) for students on the move, defined as the proportion of students on the move, regardless of age, who are enrolled at the beginning of the school year at a given education level, compared to the total number of people on the move who are theoretically of age to be enrolled at this level. The indicator thus requires two specific types of data: the number of students on the move enrolled at a given education level, and the number of people on the move in the theoretical age range for that same education level.

This is one example of how planning and monitoring documents may help to determine the priority data required for EiE.

Source: UNESCO, 2023.

Tool 2 (Identification of data needs and assessment of data coverage) includes a template matrix to record the data required to produce the relevant EiE indicators identified at this step. The findings from this process, combined with the identification of data needs resulting from the risk analysis of hazards (see *Section 1.3*), should define a comprehensive framework of normative data needs.

1.3. Identification of normative EiE data needs

Based on the previous mapping of hazards and other risk factors, the following step conducts an identification of normative EiE data needs: the goal is here to establish an ideal yet contextualized data reference framework against which the actual data ecosystem can be compared to identify unmet data needs.

The identification of the information needs is not an easy task, because there are different types of data use and user in each country. For example, the department of inclusive education at a MoE may want specific information on the numbers of refugees enrolled in schools and how they perform in the national exams, in order to inform the design of education support programmes for that specific population. In another case, a local non-government organization (NGO) without the resources to scale up interventions might like to have general information on the needs of students living in emergency situations so as to advocate for support for those groups and raise funds. *Table 2* presents a list of typical uses and audiences for those data.

Table 2. Primary data uses and audiences in EiE

Data usage	Typical data audiences
Sector coordination	UN agencies; humanitarian organizations; national Education Clusters; MoEs
Guiding programme design	Education specialists; technical officers
Programme monitoring and evaluation	M&E officers; programme officers; researchers
Guiding policy and decision-making	Funding agencies and donors; national governments
Advocacy	Advocacy organizations (UN agencies; Human Rights Watch); national governments advocating for funding; clusters and other coordination platforms

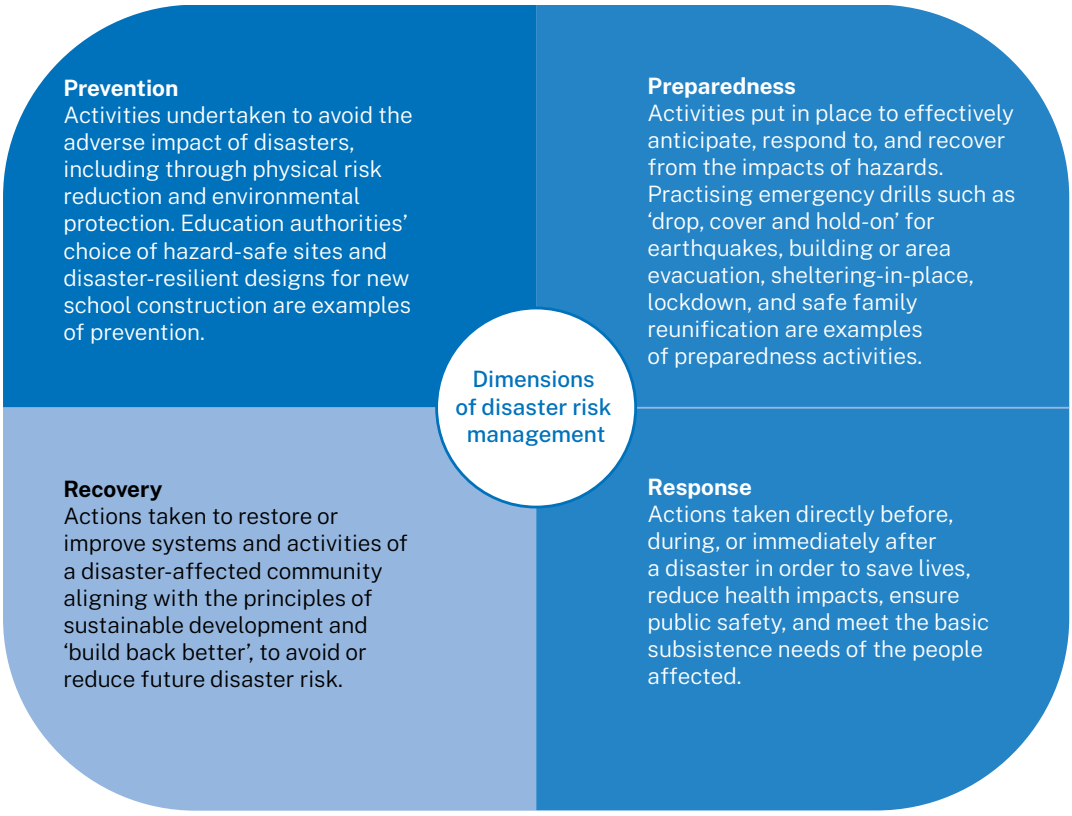
Source: Adapted from Buckner et al., 2019.

In a context of multiple potential data usages and users, how should the identification of the information needs be organized, once a specific mapping of hazards has been produced at the country level?

The identification and classification of data needs for EiE proposed by these guidelines rely on a conceptual framework that includes three requirements (IIEP-UNESCO, 2023):

1. Data should cover all the dimensions included in the disaster risk management (DRM) cycle, namely prevention, preparedness, response, and recovery, as seen in *Figure 4*. This goes beyond a typically more limited approach of EiE, where the main focus is on the stage of response and recovery. In other words, the scope of the data should cover the periods before, during, and after crises.

Figure 4. Typical phases in the DRM cycle

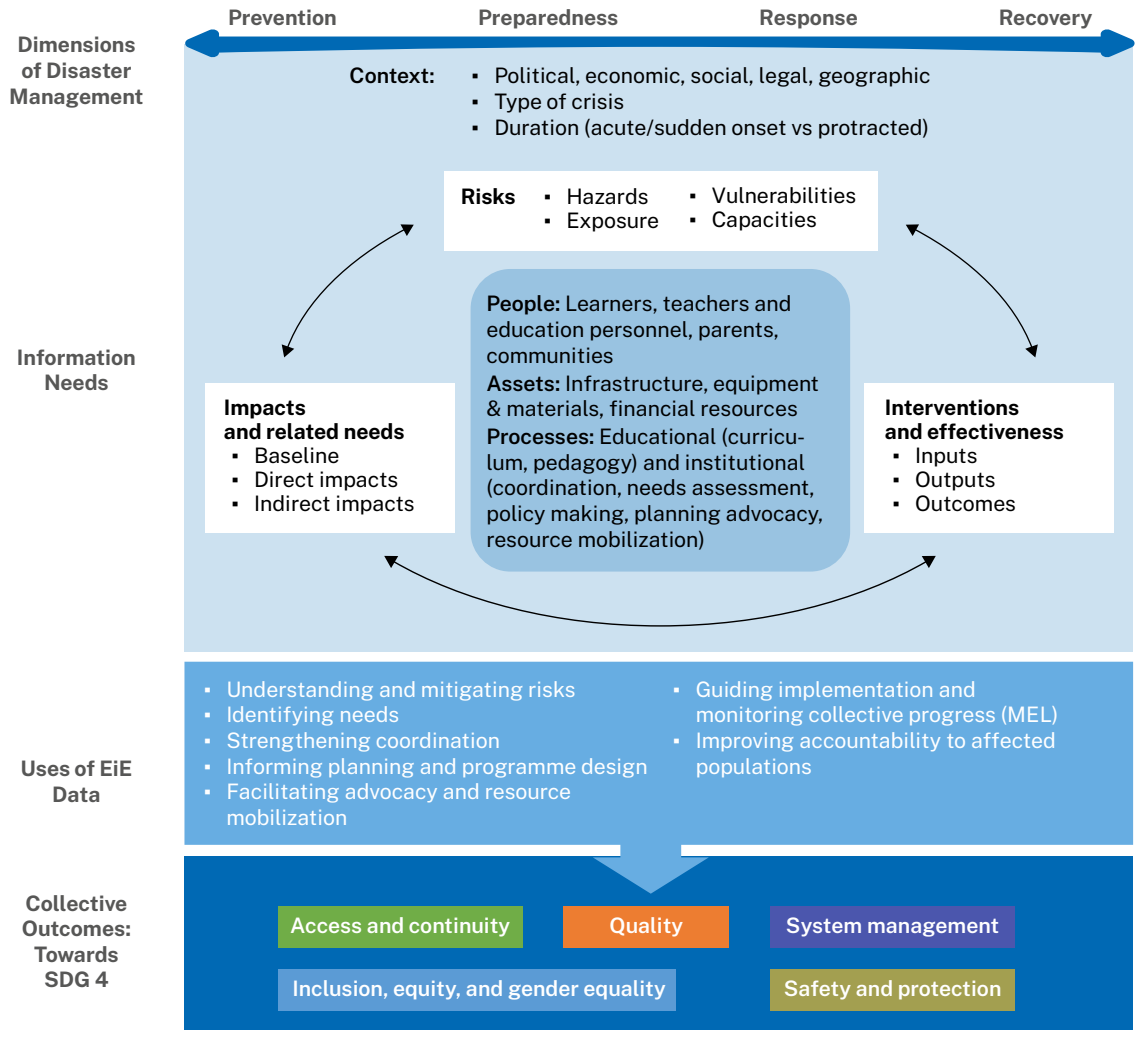


Source: IIEP-UNESCO, 2021b.

2. Data required cover the different risks facing a specific country, their impacts, and existing interventions in relation to the components of the education systems, namely:
   - People: students, teachers, other educational personnel, parents, teaching facilities, communities.
   - Physical assets: infrastructure, educational equipment, and materials.
   - Processes: institutional arrangements essential for the functioning of the education system.
3. Finally, data are needed to monitor the evolution of the expected collective outcomes of the education system, which could be organized around the following categories:
   - access and continuity,
   - quality,
   - equity and inclusion,
   - safety and protection,
   - system management.

Figure 5 pulls together the different elements of this conceptual framework.

Figure 5. Conceptual framework for EiE data



Source: IIEP-UNESCO, 2023.

Table 3 presents a matrix that identifies data needs based on a risk analysis of hazards using the conceptual framework. *Tool 2 (Identification of data needs and assessment of data coverage)* is provided to support the implementation of this analysis at country level.

Table 3. Classification of data needs according to types of risk and dimensions of the DRM cycle

Type of risk	Timing of data needs	Data needs
Environmental hazards Technological hazards Biological and health hazards Social hazards	Before a crisis	Identify data to measure the exposure of people, assets, and education processes to the different types of risk, as well as data on interventions to prevent, prepare for, and mitigate the effects of the different risks
	During or after a crisis	Identify data to measure the impact on people, assets, and education processes of the different types of risk, as well as data on interventions to respond to and recover from the effects of the different risks

Source: Based on *Tool 2. (Identification of data needs and assessment of data coverage).*

Tool 2 has two purposes: first, identifying the EiE data needs resulting from the risk analysis of hazards and from relevant EiE sets of indicators defined nationally, and second, assessing how those needs are addressed by the existing data produced nationally. This second task cannot be done until the processes of defining the data needs and mapping the EiE data ecosystem (presented in the next section) are completed.

Phase 2 Mapping of the EiE data ecosystem

After establishing a normative framework of data needs, the following step consists in finding out what data are available to address those needs. For that purpose, it is recommended to produce a mapping of the current EiE data ecosystem by responding to three questions:

- What are the organizations (data producers) currently active in EiE data production?
- For each data producer, what data are being produced?
- Are there any coordination mechanisms among data producers?

The following *Section 2.1* provides an introduction to the most typical relevant EiE data sources; *Sections 2.2 and 2.3* explain the methodology recommended for mapping the EiE data ecosystem.

2.1. Typical data sources relevant for EiE

A data source is 'a specific data set, metadata set, database or metadata repository from where data or metadata are available' (OECD, 2008).

When trying to identify the data sources available nationally that are relevant for EiE, it is important to know that most of the EiE data come from two sources:

- Educational development sources produced by national or international data producers, usually as the result of the implementation of a statistical operation.
- Humanitarian operations sources, including those related directly to the education response to crisis and emergency situations, and also others whose main focus is not education but who can provide important contextual data.

Table 14 in *Appendix 2* presents the most common data sources for EiE, with summary information on their contents and on the organizations responsible for their production.

Depending on the specific intended use of the data, the sources will differ in aspects key for their usability, such as frequency, definition of target population, and coverage.

In general, humanitarian actors produce and require data to plan programme design, organize the coordination of activities with other partners, and monitor and evaluate the effectiveness of their programmes. In contrast, development actors tend to prioritize the use of data for policy-making and advocacy.

A consequence of the different needs of these two types of actor is that while organizations providing humanitarian responses to emergency situations require the best possible administrative data to be used for operations purposes, development actors tend to prioritize the use of statistical data to guide their actions and policy-making process. *Table 4* summarizes some key differences between development and humanitarian data.

Table 4. Differences and similarities between development and humanitarian data

Development data	Humanitarian data
Mostly focused on trends for sector planning purposes	Mostly focused on responding to immediate operational needs
Low level of frequency (e.g. annual)	Very frequent (e.g. weekly, monthly)
Stable reference population	No stable reference population
Focus on overall education system	Focus on education services provided, usually outside the education system
Clear understanding of what data coverage, reliability, and quality mean	Lack of clear understanding of what data coverage, reliability, and quality mean

Source: Adapted from Smiley and Cremin, 2019.

2.2. Identification of data producers and data sources

Identifying relevant EiE data sources and producers will require engagement with multiple stakeholders who may be involved in challenges related to collecting, sharing, or using data.

These guidelines propose a specific tool (*Tool 3. Mapping of data producers and data sources relevant for EiE*) to identify the EiE data sources available and the corresponding data producers. Information also needs to be compiled about certain characteristics of the different data sources identified. The review of those characteristics is necessary for understanding their strengths and limitations for reporting on the data needs as well as the possibility of creating bridges between surveys, existing complementarities, and so on.

Table 5 lists the variables selected to describe the design and contents of the data sources.

Table 5. Information to be gathered on the identified EiE data sources

Category	Information collected on the data source
Name and type of data producer	Government agency, NGO, international NGO, international organization
Type of data source	Humanitarian education response data, educational development data, contextual data
Data collection sample	Census, probabilistic sample, non-probabilistic sample
Main objective of survey	As defined by survey manuals or other technical or dissemination reports related to the data source
Format of data collection	Paper-based, SMS, web-based application, tablet-based, hybrid, other
Unit(s) of analysis	For instance: students, teachers, schools; households, individuals; internally displaced persons (IDPs), refugees
Who answers the questionnaire(s)?	For instance: school principals, key community informants
Geographic coverage of the data source	For instance: all regions, selected regions, areas excluded
Type and levels of education (applicable to schools and other teaching facilities surveys only)	Formal, non-formal education; pre-primary, primary, lower secondary, upper secondary, post-secondary
Type of data relevant for EiE	Identification of data included in the data source categorized by the type of indicators that could be produced with those variables; types of indicator classified by thematic areas: access and continuity, quality, equity and inclusion, safety and protection
Frequency of data collection	Theoretical and de facto frequency of data collection
Data availability	Years for which the data source is available and next data collection period
Data availability by administrative subdivisions	If statistics can be produced, disaggregating by different levels of administrative subdivision
Data sharing	Data and metadata are publicly available

Source: Based on *Tool 3. (Mapping of data producers and data sources relevant for EiE).*

2.3. Coordination of data collection activities within the EiE data ecosystem

Ensuring the provision and continuity of education in contexts of emergency faces many challenges. Among them are a lack of coordination and leadership capacity; duplication of assessments, planning, and appeals processes; weakness in data collection and management; and unpredictable funding (UNHCR, Global Education Cluster, and INEE, 2020).

The lack of coordination of EiE data production often results in overlapping and divergent data collection systems across actors and coordination structures, including governments, resulting in gaps in data collection and information management systems, which constrain efforts to analyse evolving needs against which to plan and coordinate a response (Nicolai et al., 2020).

From this perspective, it is not enough to identify data sources and producers; ideally the different data producers and other stakeholders should review coordination mechanisms to reduce the duplication of services and data gathering, avoid geographical overlaps, and so on.

Tool 4. (Questionnaire to review the coordination of data production activities within the EiE data ecosystem), included in these guidelines, provides a set of indicative questions about the coordination of statistical activities on EiE. The questions are designed based on some fundamental quality principles, recommended by the UN National Quality Assurance Frameworks Manual for Official Statistics (UNSD, 2019), for better coordinating the functioning of a statistical system and managing relationships with stakeholders as a precondition for quality, efficient production of statistics.

Phase 3 Quality assessment of the most relevant EiE data sources

Examining the availability of relevant data sources, existing coverage, and coordination within the EiE data ecosystem is a first step towards assessing the possibility of addressing specific information needs.

A second important task is reviewing in more depth how those data are produced and whether they meet certain quality standards. For example, if the data are inaccurate or lack other quality requirements, such as timeliness, reliability, or accessibility, their use might be limited.

Section 3.1 introduces the concept of quality statistical information; *Section 3.2* presents a methodology for evaluating the quality of specific data sources.

3.1. Quality statistical information

By 'quality' we mean the degree to which a set of inherent characteristics of some object fulfils requirements, how far it is 'fit for use' or 'fit for purpose'. It is the users' needs that define the quality. Different users may have different needs, which must be balanced against each other to give the concept its concrete content.

With respect to the quality of statistical information, over the past 20 years statistical agencies have arrived at the consensus that the concept of quality applicable to statistics is multidimensional, so that there is no one single measure of quality (UNSD, 2019). This is consistent with the principle that quality cannot be an absolute but should be closely linked with the stakeholders' and users' needs.

Despite the absence of a single definition of quality, specific tools have been developed for data quality management (or assurance) frameworks, which form the basis for assessing quality in different areas by providing a coherent, holistic system to perform the assessment.

The quality assessments of specific statistical systems, surveys, or other statistical operations or outputs rely on the applicability of well-defined statistical quality frameworks, which provide a holistic, coherent system for examining the different elements necessary to assure the quality of the statistics.

At the international level, some of the most widely known statistical quality frameworks are the European Statistics Code of Practice, the International Monetary Fund (IMF) Data Quality Assessment Framework, the Recommendation of the Organization for Economic Cooperation and Development (OECD) Council on Good Statistical Practice, and the UN–National Quality Assurance Frameworks Manual (UNSD, 2019).

3.2. Assessing the quality of the most relevant EiE data sources

A data quality assessment (DQA) should be organized and carried out following a specific assessment framework. The design of those frameworks usually takes account of the type of data source to be assessed (e.g. whether the information system is based on administrative

data collection or a sample-based statistical survey) and, in some cases, the main domain covered by the data (e.g. education or health).

The present guidelines propose implementing the DQA based largely on the Data Quality Assessment Framework for Education (Ed-DQAF) methodology (UIS-UNESCO, 2017).[2] The Ed-DQAF framework has been selected as the base quality assessment methodology for three principal reasons:

- It has been developed with a sectoral view of education data sources.
- Its development is relatively up to date, having been finalized in 2018.
- The assessment tools were designed to be self-administered or with minimum external support (as 'assisted self-assessments'), which is very convenient in contexts of limited national capacity to carry out that type of evaluation.

The Ed-DQAF, like most other similar methodologies, assesses the production process, the management of data outputs, and the characteristics of the enabling statistical environment or infrastructure, covering all stages and aspects of data collection, processing, and dissemination (UIS-UNESCO, 2017).

However, the specificities of the EiE data ecosystem and data have required adaptations of that methodology. Those adaptations take into account the challenges in the production of EiE data and address recommendations presented in the last version of the UN National Quality Assessment Frameworks Manual for Official Statistics (UNSD, 2019).

The necessary adaptations of the Ed-DQAF methodology to make it suitable for a diagnosis of the EiE data ecosystem resulted in the creation of two different DQA tools accompanying these guidelines: *Tool 5 (EMIS_DQA matrix)* and *Tool 6 (EiE_DQA matrix)*.

3.2.1. What data sources should be evaluated with the two DQA tools proposed?

Tool 5, The EMIS_DQA matrix, was designed to support the implementation of a DQA on the Annual School Census, EMIS, or similar data collection system, to be run by the MoE. Given that a central objective of these guidelines is strengthening those information systems, running the EMIS_DQA is a key step in the diagnostic process.

However, for the evaluation of the EiE data ecosystem, identifying other relevant data sources different from EMIS is also important. For these other data sources, it is proposed to run the EiE_DQA (*Tool 6*), which is a much lighter instrument than the EMIS_DQA but still has the capacity to examine the most relevant quality indicators of a data source in relation to its data production processes and statistical outputs.

In many cases, there are several data sources relevant for EiE. For example, the six country case studies developed in 2020 and 2021 identified many of these at the national level, in addition to EMIS.[3] When making use of several data sources, it has to be decided which ones will be assessed with this methodology, since implementing a DQA is a process that demands specialized resources, time, and coordination with different stakeholders.

Consequently, resources and efforts should focus on assessing only the most relevant and regular data sources. In principle, the EMIS of the MoE should be the first one on the list. However, determining what other data sources should go through this process is a decision that depends on each context. In addition to EMIS, the data sources selected for the quality assessment using EiE_DQA (Tool 6) should respect four criteria: (1) regular data collection process, (2) nationally representative coverage, (3) overall relevance for the EiE context, and (4) accessible documentation for analysis.

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2 The Ed-DQAF is not the only data quality assurance framework developed specifically for education data sources. Others include the World Bank's SABER-EMIS and the more recent Inter-American Development Bank's SIGED diagnostic instrument. All these methodologies share similar rationales and implementation; for more information on how these statistical frameworks are organized, the UN-NQAF Manual can be consulted (UNSD, 2019).

3 *Appendix 1* presents a description by country of the different data sources identified as being relevant in Chad, Ethiopia, Iran, Palestine, South Sudan, and Uganda.

3.2.2. Implementation of the DQA on the relevant data sources

The methodology of the DQA relies on the implementation of two assessment tools which examine different elements of the functioning of the data production process. In the case of *Tool 5*, three levels of analysis are examined: (1) the institutional environment, (2) the statistical processes for data production, and (3) the statistical outputs. In the case of *Tool 6*, the process focuses only on levels of analysis 2 and 3 (statistical processes and outputs).

The assessment of each of the levels determines the compliance of the data source assessed with individual quality elements or indicators, grouped first under specific requirements and then under principles, by scoring each indicator on a scale from 1 (non-compliance) to 4 (full compliance). This scoring system may thus indicate full, partial, or non-compliance with individual indicators, and allows for both aggregation to a total score and scores for quality requirements, principles, and levels of analysis.

The scale proposed by DQA matrixes is:

1. Non-compliance with the quality indicator
2. Minimal compliance with the quality indicator
3. Partial compliance with the quality indicator
4. Full compliance with the quality indicator

Table 6 presents a summary of the scope of each assessment tool and how they are structured in terms of levels of analysis and quality principles.

Table 6. Numbers of quality indicators included in the EMIS_DQA (*Tool 5*) and the EiE_DQA (*Tool 6*) by levels of analysis and quality principles

	Tool 5: EMIS_DQA	Tool 6: EiE_DQA
Level of analysis: enabling environment		Not applicable
Principle 1: Policy and legal framework	4	
Principle 2: Adequacy of resources	7	
Level of analysis: statistical processes		
Principle 3: Sound methodology	6	5
Principle 4: Managing the respondent burden	3	1
Principle 5: Accuracy and reliability	8	5
Level of analysis: statistical outputs		
Principle 6: Assuring relevance	2	2
Principle 7: Periodicity and timeliness	3	3
Principle 8: Consistency	3	2
Principle 9: Accessibility and clarity	8	6
Total number of quality indicators	44	24

Source: Authors.

The assessment matrixes were developed to be self-administered. However, the self-assessment process can also be carried out by staff teams and supported by internal or external experts to explain the framework and facilitate the filling out of the forms used; this is referred to as an 'assisted self-assessment', especially in situations where the staff involved are not familiar with these types of DQA.

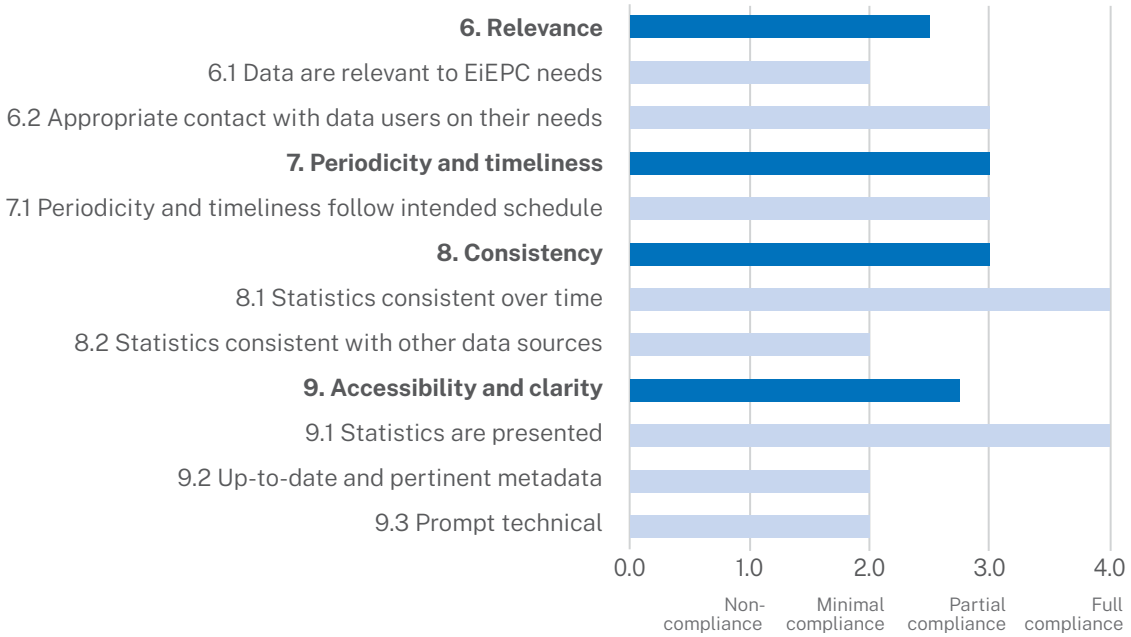
Finally, the process of scoring required by the assessment tool should be guided by the collection of evidence and explanations supporting the specific scores assigned. However, of equal or greater importance than the scoring are comments explaining why requirements were met, were only partially met, or were not met. Those comments, especially when there is no compliance with the quality requirements, will form the basis of a strategy for improvement.

3.2.3. Reporting the results of the DQA

The results obtained from the DQA will help to design a plan of improvement that ideally includes actions on the different dimensions covered by the assessments.

To analyse the DQA results, it is recommended to consolidate the scores recorded in the assessment matrixes in a visualization tool designed to show areas of strength and weakness of the information system. *Tool 5* includes some template figures for the production of a chart for each level of analysis. *Figure 6* is an example of a chart produced for the quality dimension of statistical outputs.

Figure 6. Presentation of DQA results



Source: Extracted from the EMIS_DQA matrix (*Tool 5*), based on a hypothetical example.

Phase 4 Coverage of information needs and data gaps

This step consists of a comparison between the list of EiE normative data needs and the data currently available, with two objectives, namely how well the existing data sources cover the identified data needs and what are the best options for addressing identified data gaps.

4.1. Coverage of data needs by existing data sources

Given that a set of theoretical data needs were determined and that the main relevant data sources, their characteristics, and relevant EiE data are also identified, it is possible to pull all that information together to determine if the theoretical data needs are:

- Fully covered by the existing data sources, so that no further enhancement in the data collection instruments is necessary.
- Inadequately or partially covered, which will require revision or adaptation in the data collection instruments, for instance by changes in the data collection frequency, coverage, and so on.
- Not at all covered by existing tools, which would entail the modification of the data collection instruments that are part of either the EMIS or other relevant data collections, or alternatively the introduction of a new data collection tool or mechanism to address this gap.

The guidelines propose using *Tool 2 (Identification of data needs and data coverage)*, the one already used to record the data needs, to support the implementation of this analysis. That tool is also proposed for identifying data needs not addressed by the current data sources, as explained in *Section 4.2*.

4.2. Addressing the data gaps

When all the data gaps are identified, it will be useful to assess three elements in each case:

- Level of disaggregation desired (gender, location, etc.).
- Desired frequency of data collection (annual, quarterly, monthly, weekly, on-demand, etc.).
- Date at which the information must be available (at the beginning of the school year, before the end-of-year exams, when the school reopens, just after a disaster, etc.).

After acquiring this information, three more questions should be addressed to complete the feasibility analysis of addressing data gaps:

- The technical possibility of integrating each piece of information into the EMIS.
- If it is decided that the EMIS is not an appropriate data collection for filling the gap, is there an alternative among the existing data sources (regular sample survey already in place, special or on-demand data collection, etc.)?
- The possibility of creating interconnectedness between the different tools.

This analysis should be carried out, ideally, with the focus on strengthening the EMIS as much as possible, as it constitutes the main data source on education in most countries. At the same time, it is important to know the limitations of those information systems and recognize that, in many circumstances, they are not the most appropriate data collection tools. For those cases, a strategy must be developed to strengthen the whole EiE data ecosystem by reducing the overlapping between data collections and increasing the harmonization and coordination between them.

The way forward

This diagnosis should not be seen as an end in itself, but rather as the basis for a plan to improve EiE statistics. This plan may address some or all of the challenges highlighted in the diagnosis.

Although there are several ways to organize this improvement plan, it must be guided by a number of principles:

- *A highly consultative process*: Like the diagnostic process, the prioritization of the areas for action in the improvement plan must be consultative, given the diversity of stakeholders in EiE data. The priorities, along with the implementation modality, should be identified with the leading members of the platform who were part of the diagnosis, to ensure that they reflect a shared understanding of needs, and a realistic and context-driven approach, while building on ongoing practices and existing capacities.
- *Led by the government*: This plan should ideally be developed under the leadership of the MoE and involve key stakeholders.
- *Prioritization*: Depending on available resources and timeline, the improvement plan may have to prioritize and focus on specific key areas such as added value, long-term sustainability, or capacity to address data challenges at institutional level.

Given that the ultimate objective of the plan is to improve data availability and quality, the proposed activities may be organized around the three levels of analysis of the EMIS_DQA framework: the enabling environment, statistical processes for data production, and statistical outputs. *Table 7* provides selected examples of activities that could be included in each level.

Table 7. Proposed core content of an EiE data improvement plan

Quality dimension	Activities
Improving the institutional environment	• Development or strengthening of EiE strategy, education continuity plan • EiE data development strategy • EMIS improvement plan with a focus on EiE data
Improving the statistical processes for data production	• New modules on EiE data included in institutional education information systems • New standalone EiE data collection tools • Harmonization of definitions and methods • Integration of humanitarian and development data systems • Strengthening technical documentation on EMIS-based relevant EiE indicators • Capacity development to strengthen data production processes
Improving the statistical outputs	• Data sharing protocols • Data sharing platforms • Publications, data dissemination products, data analysis • Capacity development to strengthen data use, dissemination, uptake

Source: Authors.

The accompanying *Guidance Note*, a global public good published as part of this project, provides a compendium of tools and good practices for supporting an EiE data improvement plan from an institutional perspective.

Appendix 1. EiE relevant data sources identified for six countries

This Appendix summarizes the findings of the six country case studies implemented in 2020 and 2021 regarding the main relevant data sources identified at the national level. Most of the information included in *Tables 8* to *13* comes from those reports.

Table 8. Main data sources identified for Chad in the country study

Data source	Who collects the data?	What data are collected?
Humanitarian Education Response Data		
Refugee EMIS	UNHCR	UNHCR has a data collection system that is used for programme monitoring and covers all schools in the camps and settlements. Although this system has the same name as the Ministry's system (i.e. EMIS), it focuses only on refugees and has different tools and specific questionnaires for three different phases: 1) beginning of school year questionnaire (covering infrastructure, teachers, enrolment, and protection issues); 2) end of school year questionnaire; 3) monthly questionnaires, which focus especially on monitoring attendance. ACRA (Azione Cooperative Rurale Africa) as well as Jesuit Refugee Service (JRS) support the implementation of UNHCR activities, including data collection.
EduTrac	UNICEF/ Ministère de l'Education Nationale et Promotion Civique (MENPC)	EduTrac is a mobile-phone-based data collection system that allows rapid communication and real-time information sharing through SMS and calls from schools and local authorities up to national level. The questionnaire includes information on EiE such as teacher attendance, infrastructure and equipment, refugee and IDP enrolments, and school feeding. At the time of the country study, EduTrac was being piloted in two provinces, but it was expected that the initiative would be expanded in the coming years.
Educational Development Data		
EMIS	MENPC	EMIS in Chad covers pre-primary through secondary education, NFE, literacy centres, and technical schools. Each level of education has a questionnaire covering areas such as distance to school, water, sanitation, and hygiene (WASH) and classroom infrastructure, teachers, and learning materials. Enrolment of refugees, IDPs, returnees, and orphans and vulnerable children (OVCs) were captured for the first time in the 2018–2019 EMIS questionnaires.
School reports (beginning and end of school year)	MENPC	At the beginning of the year, schools prepare a 'Rapport de la rentrée scolaire' (Back to school report). This report includes information on enrolments by gender, status and class, infrastructure, teachers, dropouts, etc. Additional information is collected regarding needs and emergency cases, such as a collapsed roof or other issues, or information on refugees. At the end of the year the schools also make a report called Rapport de la fin d'année.
Contextual Data (security, population movement, etc.)		
International Office for Migration (IOM) data	IOM	IOM regularly collects data covering three geographical areas: Lake region, Logon Oriental, and Moyen Chari. To collect data, IOM uses two different questionnaires. The first is conducted every two months. The survey is addressed to community leaders, IDP representatives, and local government. The second survey is conducted every six months and includes questions related to EiE specifically in relation to out-of-school children due to 'no school or too far away', 'school closed', 'security problems in reaching the school such as armed groups, risk of kidnapping, risk of attacks on the school', 'lack of teachers', 'discrimination', or 'lack of financial resources'.

Source: All information comes from the study conducted by UNESCO and NORCAP (2021): *Strengthening Education Management Information Systems (EMIS) and Data for Increased Resilience to Crisis. Country Case Study: Chad.*

Table 9. Main data sources identified for Ethiopia in the country study

Data source	Who collects the data?	What data are collected?
Humanitarian Education Response Data		
Humanitarian Response Plan (HRP)	OCHA	The HRP is prepared for a protracted or sudden-onset emergency that requires international humanitarian assistance (OCHA,2022). OCHA's 2019 HRP in Ethiopia focuses on the needs of IDPs and IDP-returnees, while simultaneously responding to the needs of communities affected by food and livelihood insecurity from previous years of protracted drought, as well as other associated multi-sectoral needs.
Refugee EMIS	MoE, UNHCR	Refugee EMIS uses the same questionnaire as the regular education system, with slight adjustments in content for contextual relevance (e.g. teacher qualifications lower than certificate/diploma, temporary learning spaces, peace education instead of civics and ethics in the national curriculum, orphans).
Woreda reports	Woredas	Woreda reports serve as a first alert and constitute the backbone of more extensive emergency needs assessment and triangulation of its follow-up. These reports include in particular information on the number of students, teachers, and schools affected.
5W matrix reports	UN, Clusters, partners	Mapping tools that show partner and operational presence in emergency situations (Who), the type of intervention they provide (What), in which locations (Where), during which period (When), and for which beneficiaries (for Whom).
Educational Development Data		
EMIS	MoE	EMIS data in Ethiopia cover all subsectors, from early childhood education to higher education, including alternative basic education (ABE), ANFE, technical and vocational education and training (TVET), and colleges of teachers' education, with information on access, efficiency, and inputs, national exam results, and selected teacher attributes, by gender, region, age, grade level, and year. Emergency is not included in EMIS.
Vital data	MoE	Data collection implemented in each village with main goal of determining the number of children expected to enter Grade 1.
REBs surveys	REBs	The REBs conduct monthly school surveys (focusing on the number of students and teachers), submitted in quarterly reports to the regional councils.
Education Statistics Annual Abstracts (ESAA)	MoE	This Education Statistics Annual Abstract provides information on General Education so that evidence-based decisions can be made in any proposed interventions. More specifically, it includes information on enrolment (GER and NER), repetition, dropouts, learning materials, WASH, teachers, etc. Although the report includes data on refugee education, the information is limited.
Contextual Data (security, population movement, etc.)		
Displacement Tracking Matrix (DTM)	IOM	The DTM collects and analyses data on the mobility, vulnerabilities, and needs of displaced and mobile populations. It includes information on education (e.g. access based on distance and attendance in ABE/temporary learning spaces, teachers, school feeding, or latrines).

Data source	Who collects the data?	What data are collected?
Living Standards Measurement Study (LSMS)	The World Bank	The Living Standards Measurement Study (LSMS) is a household survey programme housed within the Survey Unit of the World Bank's Development Data Group that provides technical assistance to national statistical offices (NSOs) in the design and implementation of multi-topic household surveys (FAO,2022). It enables the analysis of, among other things, household welfare and behaviour and assessment of the impact of various government policies on people's living conditions. Recently, LSMS is supporting the implementation of high-frequency telephone surveys in Ethiopia to track the impact of Covid-19 (The World Bank, 2021).

Source: Most of the information comes from the study conducted by UNESCO and NORCAP (2021): *Strengthening Education Management Information Systems (EMIS) and Data for Increased Resilience to Crisis. Country Case Study: Ethiopia*. When other sources are consulted, they are listed in the table with the corresponding hyperlinks.

Table 10. Main data sources identified for Palestine in the country study

Data source	Who collects the data?	What data are collected?
Humanitarian Education Response Data		
Composite school suffering index	Technical Direction (DG) of School Building	The DG of School Building maintains an Excel-based data system to calculate school needs and priorities based on a composite school suffering index. This tool prioritizes a school's needs against other schools within a specific catchment area.
M&E Report	DG of Educational Planning (Division of Monitoring and Evaluation)	The Division of Monitoring and Evaluation aims to monitor the achievement of the education system by systematically measuring key performance indicators linked to the Education Sector Strategic Plan. In particular, the M&E Division monitors the variation of exposure to conflict risks for schools located in fragile areas. The variables analysed include the number of schools exposed to attacks on infrastructure, the number of students and teachers exposed to physical violations, the rate of class hours lost as a result of violations, etc.
Educational Development Data		
GE Database	DG of Educational Planning (Division of Statistics)	This database houses the school census data on a Microsoft Access platform. The data collected inform the Education Statistical Yearbook and aim to provide a holistic picture of the educational system in order to inform decision-makers about achievements and priority needs on the basis of Ministry targets. It includes some traditional indicators that can provide a perspective on the vulnerability of specific components of the education system to emergencies, such as school enrolment, quantity and quality of school infrastructure, student/counsellor ratio, and dropout rates.
School Management Information System (SMIS)	Initially DG of Educational Planning, but currently under DG of ICT	The SMIS was developed to serve as one unified, centralized, and integrated web-based system to be used at all levels (school, district, and ministry) for all school-based GE data. It includes 17 modules that range from the assessment of school infrastructure to the school's financial status. It also includes information on EiE components.

Data source	Who collects the data?	What data are collected?
E-School Portal	DG of Educational Planning and DG of ICT	The E-School Portal is a web-based information sharing portal that aims to connect parents, school leaders, and teachers to share information on academic programmes and engage parents and communities in school events and activities. It includes information on school access, violations and attacks, and first aid capacities, among others.
MoE Gaza EMIS UNRWA EMIS	MoE Gaza UNRWA	The MoE in Gaza has its own EMIS. It covers the government schools in the Gaza Strip and is completely separate from all systems used by the MoE in Ramallah, except the GE data system. The UNRWA EMIS captures information on all UNRWA schools across the five fields of operation (West Bank and Gaza, Syria, Lebanon, and Jordan).
School Health survey	DG of School Health	The survey developed by the DG of School Health and compiled by the Field Health Workers examines the state of the school building and premises, sanitation, and hygiene, as well as safety measures. It also examines the capacity within schools and acquisition of positive behavioural practices that contribute to the safety of the overall school environment.
Healthy and Safe School Environment survey	DG of School Building, DG of School Health, and DG of Field Follow-Up	The questionnaire includes a large number of indicators related to the general infrastructure safety standards (environment of the school building, school canteen, safety of water and health facilities, etc.)
Specific surveys to assess special and inclusive education needs and programme outcomes	DG of Counselling and Special Education	This tool complements the statistical data on learners with disabilities that are integrated into the yearly GE Statistics, and provides a more detailed overview of the capacities in place at school level to implement adapted special and inclusive education activities.

Source: All the information comes from the study conducted by UNESCO and NORCAP (2021): *Strengthening Education Management Information Systems (EMIS) and Data for Increased Resilience to Crisis. Country Case Study: Palestine.*

Table 11. Main data sources identified for South Sudan in the country study

Data source	Who collects the data?	What data are collected?
Humanitarian Education Response Data		
UNHCR - REFUGEE EMIS	UNHCR	Refugee EMIS includes information on school enrolment and attendance, as well as on teachers and their nationality, subjects they teach, GPS coordinates of schools, furniture, facilities, school supplies, etc.
• Education functionality data • 5W matrix reports	The South Sudan Education Cluster (SSEC)	The SSEC collects at least two types of data: the nationwide education functionality data, which serves as the basis for the annual Humanitarian Needs Overview cycle, and the 5W matrix reports. These reports show partner and operational presence in emergency situations (Who), the type of intervention they provide (What), in which locations (Where), during which period (When), and for which beneficiaries (for Whom).
Cluster Rapid Needs Assessment (IRNA) tool	Different organizations	The purpose of the IRNA questionnaire is to provide an immediate and quick overview of the emergency situation in order to identify the immediate impacts of the crisis, make initial rough estimates of the needs of the affected population for assistance, and define the priorities for humanitarian action. This questionnaire includes a special section on education, which in turn includes information on assistance, learning materials/spaces, etc. (IRNA,2012).
Educational Development Data		
EMIS Annual Education Census (AEC)	Ministry of General Education and Instruction (MoGEI)	The AEC is the main data exercise conducted by MoGEI directly through its staff, and covers the following key variables: student enrolment and characteristics, teachers, school infrastructure, language of instruction and curriculum used in the school, access to school feeding, and school governance and supervision.
South Sudan Schools' Attendance Monitoring System (SAMS)	Charlie Goldsmith Associates MoGEI	SAMS collects information on all primary and secondary school learners at the stage of admission through a paper-based 'Pupil Admission Register' questionnaire completed at the beginning of each school year. It also contains information on daily attendance and changes in enrolment (e.g. new enrolments, transfers, dropouts).
Human Resource Information System database (HRIS)	Mott MacDonald under the EU-funded IMPACT project	This database contains relevant information on teachers (e.g. number of teachers, academic qualification, length of service).
Contextual Data (security, population movement, etc.)		
• Displacement Tracking Matrix (DTM) • Village Assessment Survey (VAS)	IOM	The DTM collects and analyses data on the mobility, vulnerabilities, and needs of displaced and mobile populations. It includes some information on education. In the same vein, the Village Assessment Survey also collects data on education (e.g. teachers, students, and access to teaching and learning materials).

Source: Most of the information comes from the study conducted by UNESCO and NORCAP (2021): *Strengthening Education Management Information Systems (EMIS) and Data for Increased Resilience to Crisis. Country case study: South Sudan.* When other sources are consulted, they are listed in the table with the corresponding hyperlinks.

Table 12. Main data sources identified for Syria in the country study

Data source	Who collects the data?	What data are collected?
Humanitarian Education Response Data		
• Humanitarian Needs Overview (HNO) • Strategic Response Plan (SRP)	UN, Clusters, partners	The HNO contains information on populations in need by sector and contextual information (e.g. number of people in need by gender, population groups, age). In the same vein, the SRP also provides a humanitarian profile by sector.
ACU data collections	Assistance Coordination Unit (ACU)	The ACU is a Syrian non-governmental, non-profit institution. It conducts assessments that enable, among other things, identification of humanitarian needs. Its studies cover over 80 sub-districts in northwest and northeast Syria, in addition to all IDP camps. In particular, in 2019, the ACU conducted a study on out-of-school children (Joint Education Needs Assessment).
4Ws (WHO does WHAT, WHERE, WHEN)	UN, Clusters, partners	Mapping tools that show partner and operational presence in emergency situations (Who), the type of intervention they provide (What), in which locations (Where), and during which period (When). In Syria, the 4Ws report includes data collected from all 75 organizations working on education in the country.
World Food Programme (WFP)	WFP	WFP provides emergency food assistance to vulnerable and conflict-affected Syrians through its food distribution programme in all 14 Syrian governorates, subject to access. Its planning is based on assessments conducted by the education sector and other education partners. WFP's field offices also conduct their own assessments. Specifically, they interview principals, teachers, children, and non-school stakeholders involved in the various school feeding activities. Some of the indicators that are analysed are the number of schools assisted by WFP and the amount of fortified food provided.
Educational Development Data		
Annual school census	MoE	The Annual School Census was designed to capture essential data at the school level to inform rapid decision-making in a changing context, and collects essential data at the school level. It is the short-term strategy to collect the main education data while the new SIMIS is developed and deployed.
School Integrated Management Information System (SIMIS)	MoE	The School Integrated Management Information System (SIMIS) was conceived as a comprehensive system to capture information on schools, students, teachers, infrastructure, and classroom assessment, among others, accessible at all levels within the MoE from school to district to governorate and MoE headquarters levels. At the time when the study was conducted, the SIMIS was still in its early stages of piloting, with only a few schools in Damascus and rural Damascus connected to the system, due in part to the need to reinforce connectivity and continually enhance the SIMIS software to address operational issues.

Data source	Who collects the data?	What data are collected?
Syrian Society for Social Development (SSD)	SSD	The SSD is a Syrian NGO. Its education-related projects include, but are not limited to, the maintenance and rehabilitation of schools and back-to-school campaigns for children who dropped out. The SSD has a computerized system that is used for data collection and analysis. The system can count all beneficiaries and sort them according to activity, school class, and number of dropouts, among others.

Source: All information comes from the study conducted by UNESCO and NORCAP (2021): *Strengthening Education Management Information Systems (EMIS) and Data for Increased Resilience to Crisis. Country Case Study: Syria*. When other sources are consulted, they are listed in the table with the corresponding hyperlinks.

Table 13. Main data sources identified for Uganda in the country study

Data source	Who collects the data?	What data are collected?
Humanitarian Education Response Data		
Refugee response data	UNHCR	This contains information on refugee influxes. This initiative, although coordinated by UNHCR, is mostly actioned by international NGO partners programming in those areas.
Educational Development Data		
EMIS	Ministry of Education and Sports (MoES)	The EMIS consists almost entirely of data collected through the Annual School Census (ASC) and supports two main outputs produced annually: comprehensive statistical summaries focusing on basic education statistics (e.g. enrolment, efficiency ratios) and a sector performance report containing information on budgetary matters and policy aims and outcomes.
Teacher Management Information System (TMIS)	MoES Planning Department	An online system where all government teachers are required to register (with e.g. their age, gender, qualifications, and recent training) and upload their certificates.
DEOs Data	District Education Offices (DEOs)	DEOs collect data from government and private schools. Most data collected are focused on verifying information provided by schools and parishes (such as enrolment and attendance data).
EduTrac	UNICEF	EduTrac is an initiative supported by UNICEF designed to enable DEOs to monitor education indicators on a more regular basis than the ASC allows. The system collects a variety of data, such as pupil attendance for primary 3 and primary 6 classes and teacher attendance data.
Strengthening Education Systems for Improved Learning (SESIL)	DFID	The SESIL project uses an SMS data collection tool to capture a small number of indicators based on five core priorities to improve learning outcomes, collected from primary schools on a monthly basis. The current indicators are average learner attendance, teacher attendance, time on task, and student engagement.

Source: All information comes from the study conducted by UNESCO and NORCAP (2021): *Strengthening Education Management Information Systems (EMIS) and Data for Increased Resilience to Crisis. Country Case Study: Uganda.*

Appendix 2. Typical data sources relevant for EiE

Table 14. Data sources relevant for EiE

Data source	Frequency (approximate)	Who collects the data?	What data are collected?
Humanitarian Education Response Data (available in humanitarian crisis/emergency)			
• Humanitarian Response Plans (HRPs) and Humanitarian Needs Overviews (HNOs) • Needs Assessments (e.g. Education Cluster Assessment, Education, partner assessment, Reach assessments)	Annually (Frequency of needs assessments varies from context to context and as needed)	UN system, Clusters, partners	HRPs and HNOs contain information on populations in need by sector and contextual information (e.g. number of children in need of educational assistance, number of IDPs). HNO reports are produced at the beginning of a response cycle and HRPs are subsequently developed with this information. In the same vein, needs assessments identify priority needs and populations in need to inform the education response (e.g. number of conflict-affected persons). Information from these three resources is available at the national and sub-national levels.
Humanitarian dashboards	Monthly	UN, Clusters, partners	Humanitarian dashboards are one of the key tools often used to monitor and report progress of humanitarian activities. Specifically, the Education Cluster Response Dashboards show progress towards reaching target indicators, and sometimes contain contextual indicators, including the number of beneficiaries reached by gender and total number of temporary learning classrooms, among others. Information is available at national and sub-national levels.
3/4/5W reports (WHO does WHAT, WHERE, WHEN, and for WHOM)	Monthly	UN, Clusters, partners	Mapping tools that show partner and operational presence in emergency situations (Who), the type of intervention they provide (What), in which locations (Where), during which period (When), and for which beneficiaries (for Whom). Information is available at national and sub-national levels.
Financial Tracking Service (FTS)	Monthly	UNOCHA	FTS is an online platform, managed by UNOCHA, that hosts information on humanitarian funding flows. It makes it possible, for example, to analyse where funds come from and where they go. Information is available at the global/national level.

Data source	Frequency (approximate)	Who collects the data?	What data are collected?
Educational Development Data (mostly available before/after emergency)			
International data aggregators: • UNESCO Institute for Statistics (UIS) • Education Policy and Data Center (EPDC) • World Bank Education Statistics (EdStats) • UNESCO World Inequality Database on Education (WIDE)	Annually	UN, governments, others	UIS, EdStats, and EPDC each have an online database that contains international educational data by country. These databases include information, in particular, on access, retention, completion, educational resources, literacy, and learning outcomes. Unlike UIS and EdStats, EPDC includes information at the national and sub-national levels. WIDE contains 26 education indicators that allow comparison of education outcomes 'between countries, between groups within countries, and between overlapping disparities, according to factors that are associated with inequality' (UNESCO,2022).
National EMIS	Annually	Governments	National EMIS contain administrative data on education systems. More specifically, they are designed to collect and analyse data on education systems for multiple purposes, including planning, resource allocation, monitoring, diagnosis, policy formulation, and decision-making (IIEP-UNESCO, 2022).
International learning assessments (e.g. TIMSS, PIRLS, EGRA, PISA, assessments run by UNESCO-LLECE, SACMEQ, PASEC)	Every 3–5 years	IEA, OECD, USAID, UNESCO	These international assessments provide information on the performance of the education system relative to other countries (The World Bank, 2019).
National learning assessments	Every 1–3 years	Governments	Tests and examinations provide information about the effectiveness of the teaching and learning process and are usually used to make important planning and evaluating decisions at many stages and in many aspects of education systems (IIEP-UNESCO, 2022). These assessments may test, for example, students' ability to read letters, sentences, or even short paragraphs, as is the case with the Mozambique national learning assessment (UNESCO, 2017).

Data source	Frequency (approximate)	Who collects the data?	What data are collected?
Other national: household surveys	Every 1–3 years	National statistical offices	Household surveys are regularly administered surveys from governments, usually at the national level, and are an important source of social and demographic statistics. Questions in the surveys range over social, economic, and demographic topics, and convey information on socioeconomic status, employment, health, education, and so on (IIEP-UNESCO, 2022). Some questionnaires are designed to collect information on a specific topic, as is the case of the National Household Education Survey (NHES), which collects information on homeschooling and education financing, among others.
Multiple Indicator Cluster Surveys (MICS)	Every 3 years	UNICEF	MICS is an international survey developed by UNICEF. It contains indicators related to children and their families, ranging from health, wellbeing, and education to child protection and water and sanitation (UNICEF, 2022). MICS provides rich information for tracking progress on the SDGs, as it collects information for 33 SDG indicators. Furthermore, MICS provides estimates for about 130 indicators that are internationally comparable. MICS surveys are statistically representative at the national and sub-national levels.
The Demographic and Health Surveys (DHS)	Every 5 years	USAID	DHS are nationally representative household surveys that collect information on family planning, fertility, maternal and child health, nutrition, gender, HIV/AIDS, education (e.g. literacy, attendance, highest level achieved).

Data source	Frequency (approximate)	Who collects the data?	What data are collected?
Other international organizations: • Human Development Reports (HDR) • ILOSTAT	Annually	UN, partners	The Human Development Report, elaborated by UNDP, includes the Human Development Index (HDI). This index was introduced to analyse the development of a country beyond economic growth. It has three dimensions: long and healthy life, knowledge, and a decent standard of living. In 2020, information was available for 189 countries. In addition to the HDI, the report also includes, for some countries, the Gender Development and Inequality index (GDI/GII) as well as the Multidimensional Poverty Index (MPI). ILOSTAT is an international source that provides information on labour issues such as child labour, labour force participation rates and unemployment rates by sector, and employment rates by educational level, among others.
Global Coalition to Protect Education from Attack (GCPEA)	Monthly	Multiple sources	GCPEA produces policy and advocacy reports on attacks and threats to education in conflict settings. The information includes, among other things, the number of attacks on schools, students, and education personnel. Reports are produced at the global/national level.
Contextual Data (security, population movement, etc.)			
• UNHCR PopStats • Internal Displacement Monitoring Centre (IDMC) • Uppsala Conflict Data Programme (UCDP)	Annually	UN, partners	UNHCR PopStats is an online database that contains demographic information on 'populations of concern' (e.g. number of refugees, IDPs, returned refugees/IDPs, and asylum seekers by status determination/location). In the same vein, the IDMC represents one of the main sources of data and analysis on global internal displacement. More specifically, it includes information on the total number of IDPs, and the number of new displacements due to conflict and natural disasters, among others. The information is available at the national level. The UCDP contains specific information on war, civil unrest, and organized violence. The information is also available at the national level.

Data source	Frequency (approximate)	Who collects the data?	What data are collected?
• IOM Displacement Tracking Matrix (DTM) • Armed Conflict Location and Event Data Project (ACLED)	Monthly	UN, partners	The DTM collects and analyses data on the mobility, vulnerabilities, and needs of displaced and mobile populations. In some contexts, there is information on educational needs and resources. Like the UCDP, ACLED also contains information on conflict events. More specifically, it collects information on the dates, actors, locations, fatalities, and types of all reported political violence and protest events around the world. Information for DTM and UCDP is available at the national and sub-national levels.

Source: Adapted from Smiley and Cremin, 2019. When other sources are consulted, they are listed in the table with the corresponding hyperlinks.

References

Buckner, E. et al. 2019. 'A New Way of Thinking About Education in Emergencies Data'. In: M. Mendenhall (ed.) NORRAG Special Issue 02. Data collection and evidence building to support education in emergencies, 19–21. Geneva: NORRAG.

GADRRRES (Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector). 2022. Comprehensive School Safety Framework 2022–2030 for Child Rights and Resilience in the Education Sector.

IFRC (International Federation of the Red Cross). 2019. Enhanced Vulnerability and Capacity Assessment. Version 1 – for field testing.

IIEP-UNESCO. 2021a. *Education Sector Analysis Methodological Guidelines. Vol. 3: Thematic Analyses*. Paris: IIEP-UNESCO.

IIEP-UNESCO. 2021b. 'Using data and information for crisis-sensitive educational planning'. IIEP Online Specialized Course, EPA 305, module 2. Paris: IIEP-UNESCO.

IIEP-UNESCO. 2021c. 'Using data and information for crisis-sensitive educational planning'. IIEP Online Specialized Course, EPA 305, module 3. Paris: IIEP-UNESCO.

IIEP-UNESCO, 2023. *Conceptual framework for EiE data*. Paris: IIEP-UNESCO.

INEE (Inter-Agency Network for Education in Emergencies); NORRAG; USAID; Swiss Agency for Development and Cooperation (SDC). 2019. *Education in Emergencies Data: A Long-Term Vision and Action Agenda*.

Nicolai, S.; Anderson, A.; Hodgkin, M.; Magee, A.; Kahn, A. 2020. *Strengthening Coordinated Education Planning and Response in Crises*. Global Analysis Framework. ODI Report. London: ODI.

OECD (Organisation for Economic Co-operation and Development). 2008. 'Glossary of statistical terms'. Paris: OECD.

Open Data Institute. 2021. Data Landscape Playbook.

Smiley, A.; Cremin, S. 2019. 'Overview of the Education in Emergencies (EiE) data landscape'. Webinar in the series 'The 4Ws of Education in Emergencies (EiE) data: Who has what data? Where can I find it? And why is this so complicated?'. FHI360, USAID, Social Impact, INEE.

UIS-UNESCO (UNESCO Institute for Statistics). 2017. *SDG 4 Data Digest. The Quality Factor: Strengthening National Data to Monitor Sustainable Development Goal 4*. Montreal: UIS-UNESCO.

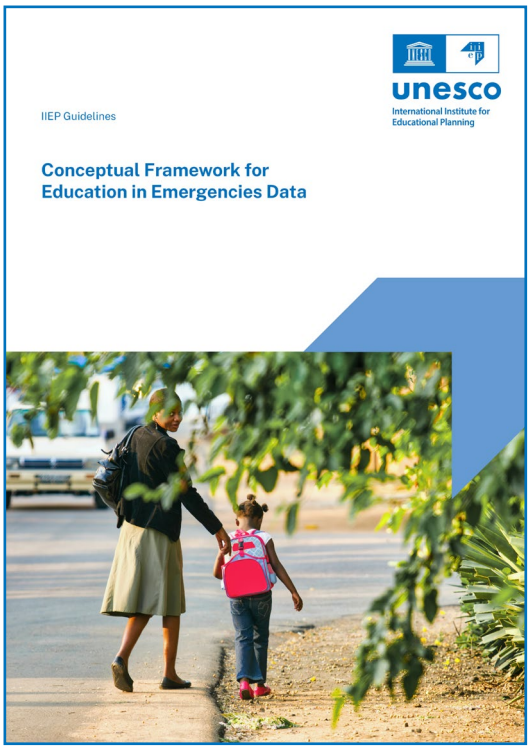
UNDRR (United Nations Office for Disaster Risk Reduction). 2020. *UNDRR/ISC Sendai Hazard Definition and Classification Review Technical Report*. UNDRR: Geneva.

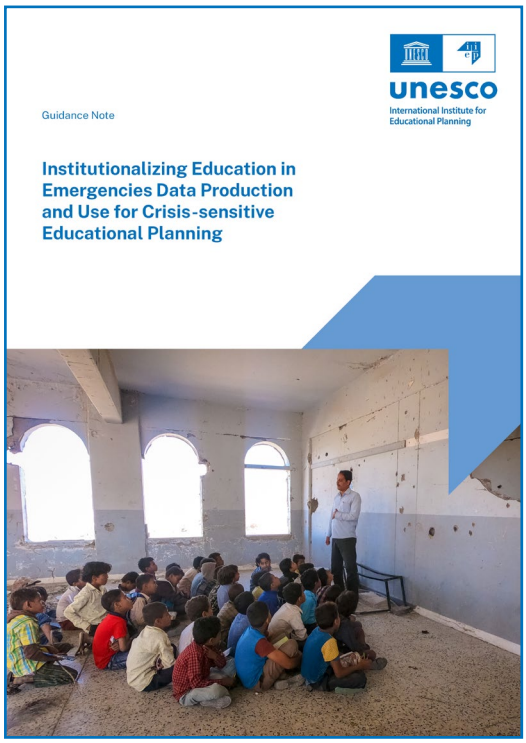
UNESCO. 2023. *Indicator Matrix for the Regional Monitoring Framework for Students on the Move*. Paris: UNESCO.

UNHCR (United Nations High Commissioner for Refugees); Global Education Cluster; INEE. 2020. *Education in Emergencies Coordination: Harnessing Humanitarian and Development Architecture for Education 2030. A Report on the Global Partners Project*.

UNSD (United Nations Statistics Division). 2019. *United Nations National Quality Assurance Frameworks Manual for Official Statistics*. New York: United Nations Department of Economic and Social Affairs.

Other publications developed as part of this project





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