
Executive Certificate in Humanitarian Project Management and Evaluation

Monitoring, Evaluation, and Learning for Humanitarian Projects

Monitoring is the systematic, continuous collection of data on project activities, outputs and immediate results. In humanitarian contexts it provides real-time insight into whether relief actions such as food distributions, shelter provision or health interventions are being carried out as planned. For example, a field team may record the number of families receiving tents each day, the condition of the tents upon arrival, and any delays caused by logistics. This data is then entered into a simple spreadsheet or a mobile data-capture tool, allowing managers to spot deviations from the work plan and take corrective action before gaps widen.

Evaluation differs from monitoring by focusing on assessing the relevance, effectiveness, efficiency, impact and sustainability of a humanitarian response after a defined period, often at the end of a phase or the whole project. An evaluation might ask whether a nutrition programme reduced the prevalence of acute malnutrition among children under five by a statistically significant margin. It typically uses a mix of quantitative methods (such as pre- and post-intervention surveys) and qualitative approaches (focus group discussions, key informant interviews) to generate evidence that can inform future programming and accountability to donors and affected populations.

Learning is the process of interpreting monitoring and evaluation findings, extracting lessons, and integrating those lessons into decision-making, policy revision and capacity building. In practice, learning may involve a workshop where field staff review the results of a rapid needs assessment, discuss what worked and what did not, and then amend the standard operating procedures for the next emergency. Effective learning ensures that knowledge gained from one crisis is not lost but becomes part of the organizational memory and contributes to improved preparedness.

Indicator refers to a specific, measurable sign that reflects progress toward a result. Indicators can be input-, output-, outcome- or impact-oriented. For instance, an output indicator for a water, sanitation and hygiene (WASH) project could be “number of households provided with safe drinking water containers,” while an outcome indicator might be “percentage of households reporting a reduction in water-borne disease incidence.” Good indicators are SMART: Specific, Measurable, Achievable, Relevant and Time-bound.

Baseline data represent the starting point against which change is measured. Collecting a baseline before implementing a humanitarian intervention is essential for establishing a reference for later comparison. In a displacement camp, a baseline survey might document the initial prevalence of mental health symptoms, the number of children out of school, and the average distance to the nearest health facility. Without a reliable baseline, it becomes difficult to attribute observed changes to the project rather than to external

factors.

Target is the level of performance that an organization aims to achieve for a given indicator within a specified timeframe. Targets should be realistic yet ambitious, grounded in the baseline and informed by the context. If the baseline shows that 30% of households have access to latrines, a target for the next six months might be to increase that proportion to 60%. Setting clear targets helps focus monitoring efforts and provides a benchmark for evaluating success.

Logical Framework (often abbreviated as logframe) is a matrix that links project inputs, activities, outputs, outcomes and impacts to specific indicators, means of verification and assumptions. In humanitarian project management the logframe serves as a planning and reporting tool that clarifies causal pathways. For example, a logframe for an emergency cash transfer programme would list "cash vouchers distributed" as an output, "improved household food security" as an outcome, and "reduced morbidity from hunger-related diseases" as an impact, each with corresponding indicators and data sources.

Result Chain is a visual or narrative representation of the sequence from activities to impact, emphasizing the logical connections and dependencies. While the logframe is a structured table, the result chain often appears as a flow diagram that can be more intuitive for field staff. Understanding the result chain helps teams identify where monitoring points should be placed, such as at the activity level (e.g., distribution of kits), the output level (e.g., number of beneficiaries who receive kits), and the outcome level (e.g., reduction in shelter-related injuries).

Outcome denotes the short- to medium-term effects of project outputs on the target population. In humanitarian settings outcomes may include increased food security, improved health status, or enhanced protection. Outcomes are typically measured within months of the intervention, whereas impacts may take years to materialize. For instance, after a rapid response vaccination campaign, an outcome could be "percentage of children under five who have received the measles vaccine," while the impact would be "reduction in measles-related mortality over the following year."

Impact refers to the long-term, broader changes that occur as a result of the humanitarian response, often extending beyond the project's immediate sphere. Impacts are influenced by many external variables, making attribution challenging. A successful emergency livelihood programme might ultimately contribute to "increased household income stability three years after the crisis," which would be considered an impact. Impact evaluation therefore requires robust methodology, such as quasi-experimental designs or longitudinal studies.

Attribution is the process of establishing a causal link between the intervention and observed changes. In humanitarian contexts, attribution is complicated by the presence of multiple actors, overlapping programmes, and rapidly changing environments. Techniques such as contribution analysis, theory-driven evaluation, or the use of control groups (where ethical and feasible) help strengthen attribution claims. Clear attribution is essential for donor reporting and for informing future funding decisions.

Contribution Analysis is a methodology that assesses how a programme contributed to observed results, acknowledging that multiple factors are at play. It involves developing a theory of change, gathering evidence for each step, and examining alternative explanations. For example, a contribution analysis of a disaster-risk reduction (DRR) training might show that while the training improved community knowledge, the reduction in flood damage was also due to early warning systems installed by the government.

Data Quality Assurance (DQA) encompasses the procedures used to ensure that collected data are accurate, complete, reliable and timely. In field operations DQA may involve spot checks, double-entry verification, and validation rules built into mobile data collection platforms. A common challenge is the trade-off between speed and thoroughness; during acute emergencies, rapid data collection is vital, yet poor data quality can lead to misguided decisions. Implementing a tiered DQA approach—where critical indicators undergo rigorous checks while less critical ones receive lighter verification—helps balance these demands.

Triangulation is the use of multiple data sources, methods or perspectives to cross-validate findings. In humanitarian monitoring, triangulation might combine satellite imagery of flood extents, ground-level GPS coordinates of displaced households, and community leader interviews to verify the location and number of affected families. This approach reduces the risk of bias inherent in any single method and strengthens the credibility of the evidence base.

Rapid Assessment denotes a quick, often low-cost information-gathering exercise conducted early in a crisis to inform immediate response. Rapid assessments typically use tools such as the Multi-Cluster/Sector Initial Rapid Assessment (MIRA) or the Humanitarian Needs Overview (HNO). While they provide valuable situational awareness, rapid assessments have limitations in depth and representativeness, and should be followed by more comprehensive surveys when the situation stabilizes.

Humanitarian Needs Assessment (HNA) is a systematic process that identifies and prioritizes the needs of affected populations. An HNA may cover sectors such as food security, health, shelter, water, sanitation, protection and education. The assessment results feed directly into the development of the Humanitarian Response Plan (HRP) and guide resource allocation. A well-conducted HNA uses both quantitative data (e.g., prevalence of disease) and qualitative insights (e.g., community coping strategies).

Humanitarian Response Plan (HRP) is a coordinated, multi-partner plan that outlines the strategic objectives, activities, budgets and expected results for a humanitarian operation. The HRP is built on the HNA and aligns with the cluster system's sectoral plans. Monitoring the HRP involves tracking the implementation of each activity against its schedule and budget, as well as measuring progress on the associated indicators. Deviations are reported to the Humanitarian Country Team (HCT) for corrective action.

Cluster System is a coordination mechanism used by the United Nations and humanitarian actors, grouping partners by sector (e.g., WASH, Nutrition, Shelter). Each cluster has a designated lead agency responsible for ensuring that monitoring and evaluation across the sector are harmonized. For instance, the WASH cluster may adopt a common set of indicators such as "percentage of households with access to safe water within

500 m," facilitating comparative analysis across agencies.

Beneficiary refers to the individual or group that receives assistance from a humanitarian programme. Beneficiaries can be identified through registration processes, community mapping or vulnerability assessments. Maintaining an accurate beneficiary list is critical for both monitoring (to track service delivery) and accountability (to ensure assistance reaches the intended people). Challenges often arise when populations are mobile, when registration systems are weak, or when there are cultural sensitivities around data collection.

Registration is the process of recording basic information about beneficiaries, such as name, age, gender, household composition and location. In many emergencies, digital registration platforms (e.g., KoboToolbox, CommCare) are used to speed up data capture and enable real-time dashboards. However, registration must respect data protection principles, including informed consent, confidentiality and the principle of "need-to-know" access.

Data Protection encompasses the policies and technical measures that safeguard personal information collected during monitoring and evaluation. Humanitarian actors must comply with standards such as the UN's Humanitarian Data Exchange (HDX) guidelines and, where applicable, the EU's GDPR. Practical steps include anonymizing datasets before sharing, encrypting mobile devices, and limiting data access to authorized personnel.

Participatory Monitoring involves beneficiaries and community members directly in the collection, analysis and validation of data. Techniques include community scorecards, focus group discussions and citizen-reporting apps. Participatory approaches increase the relevance of indicators, empower affected populations, and can surface hidden issues such as gender-based violence that might be missed by top-down monitoring. Nonetheless, they require careful facilitation to avoid bias and to ensure that vulnerable voices are not silenced.

Gender-Sensitive Monitoring ensures that data capture reflects differences in needs, access and outcomes between men, women, boys and girls. Key gender indicators might include "percentage of female-headed households receiving cash assistance" or "incidence of sexual exploitation and abuse reported."

Disaggregating data by sex and age is essential for detecting inequities and for designing interventions that promote gender equity.

Sex-and-Age Disaggregation (SADD) is the practice of breaking down data by gender and age categories (e.g., 0-4, 5-17, 18-59, 60+). SADD enables programme managers to identify vulnerable sub-groups, such as children with disabilities or elderly women living alone, and to tailor responses accordingly. While SADD is a standard requirement for most donors, collecting accurate age data can be challenging in contexts where official documentation is lacking.

Outcome Mapping is a methodology that focuses on changes in behaviour, relationships and actions of key actors rather than solely on measurable outputs. In humanitarian settings, outcome mapping may be used

to track shifts in community leadership practices after a protection training, documenting whether leaders adopt more inclusive decision-making processes. This approach is particularly useful for complex, adaptive interventions where linear cause-effect relationships are hard to prove.

Real-Time Monitoring leverages technology to provide immediate visibility into programme performance. Mobile data collection, GPS tracking of delivery trucks, and automated dashboards allow managers to see, for example, that 80% of a food convoy has reached the target location within the planned 12-hour window. Real-time monitoring supports rapid decision-making but also raises issues of data security, bandwidth constraints and the need for staff with digital literacy.

Dashboard is a visual display of key performance indicators (KPIs) that summarizes monitoring data in an accessible format. Dashboards can be built using tools such as Tableau, PowerBI or open-source platforms like DHIS2. A well-designed dashboard for a health emergency might show indicators such as “cases of cholera reported per day,” “stock levels of oral rehydration salts,” and “percentage of health facilities reporting.” The challenge lies in selecting the most relevant metrics and updating them frequently enough to be useful.

Key Performance Indicator (KPI) is a quantifiable measure that reflects the critical success factors of a programme. In humanitarian projects KPIs often align with the Sustainable Development Goals (SDGs) and the Sphere standards. Examples include “time taken from needs assessment to distribution of relief items” (efficiency KPI) and “percentage of children under five with mid-upper arm circumference (MUAC) above 12.5 cm” (effectiveness KPI). Over-monitoring with too many KPIs can overwhelm staff; therefore a balanced scorecard approach is recommended.

Efficiency measures how well resources are used to achieve outputs. Efficiency indicators might track cost per beneficiary, logistical turnaround time, or staff per activity ratio. For instance, an evaluation could reveal that the cost per household receiving a solar lamp decreased from US\$ 45 in the first quarter to US\$ 30 after streamlining procurement. While efficiency is important, it must not compromise effectiveness or quality of assistance.

Effectiveness assesses the extent to which a programme achieves its intended outcomes. Effectiveness is often measured by comparing baseline and end-line data for outcome indicators. A cash-for-work programme that reports a 70% increase in household income relative to baseline would be considered highly effective. However, effectiveness can be masked by external shocks (e.g., a second flood) that affect outcomes independently of the programme.

Relevance examines whether the intervention addresses the actual needs and priorities of the affected population. Relevance is typically assessed through stakeholder consultations, beneficiary feedback mechanisms and alignment with the HNA. A project that provides winter blankets in a tropical region would score low on relevance, regardless of its efficiency or effectiveness.

Impact Evaluation is a systematic investigation of long-term changes attributable to an intervention, often

employing rigorous designs such as randomized controlled trials (RCTs), propensity score matching or difference-in-differences analysis. Conducting impact evaluations in humanitarian emergencies is challenging due to ethical constraints, security risks and the fluidity of the context. Nevertheless, where feasible, impact evaluations provide the strongest evidence for learning and advocacy.

Process Evaluation focuses on how a programme is implemented, examining fidelity to the design, the quality of service delivery, and the functioning of management systems. Process evaluations answer questions such as “Were training sessions delivered as scheduled?” and “Did the supply chain operate without bottlenecks?” Findings from process evaluations help explain why outcomes were achieved or not.

Theory of Change (ToC) is a visual or narrative model that articulates the pathway from inputs to impact, including assumptions and external factors. In humanitarian projects a ToC might depict how rapid cash transfers (input) lead to food purchases (output), improve household food security (outcome), and ultimately reduce malnutrition (impact). Developing a ToC with partners enhances shared understanding and guides indicator selection.

Assumption in a ToC represents a condition that must hold true for the causal pathway to function. Assumptions are often external to the programme’s control, such as “markets remain functional” or “security conditions allow safe movement of aid.” Explicitly stating assumptions enables monitoring teams to track whether they remain valid and to adjust strategies if they break down.

Risk Register is a documented list of potential threats to programme success, along with their likelihood, impact and mitigation measures. Risks in humanitarian settings include security incidents, supply chain disruptions, donor funding cuts, and epidemiological spikes. Monitoring risk indicators (e.g., “number of security incidents reported per month”) helps managers anticipate and respond proactively.

Mitigation Strategy outlines actions taken to reduce the probability or impact of identified risks. For example, a mitigation strategy for supply chain disruption may involve pre-positioning stock in multiple warehouses and establishing backup transport contracts. The effectiveness of mitigation strategies is evaluated through periodic risk reviews.

Accountability in humanitarian monitoring and evaluation refers to the obligation of organisations to be answerable to donors, host governments, and, most importantly, the affected populations. Mechanisms for accountability include feedback and complaints handling systems, public disclosure of monitoring reports, and community verification meetings. Transparent reporting builds trust and can improve programme uptake.

Feedback Mechanism enables beneficiaries to express concerns, suggestions or complaints about the assistance they receive. Common tools include hotlines, suggestion boxes, SMS surveys, and community liaison officers. Effective feedback mechanisms must be accessible, culturally appropriate, and linked to a clear response protocol so that issues are addressed promptly.

Complaints Management is a structured process for receiving, recording, investigating and resolving grievances. In humanitarian contexts, complaints may relate to the quality of aid, discrimination, or protection violations. A robust complaints management system tracks the time taken to resolve each case, the outcome, and any systemic changes implemented as a result.

Protection Monitoring focuses specifically on safeguarding vulnerable groups from harm, including monitoring indicators such as “incidence of gender-based violence (GBV) reported” or “percentage of displaced persons with secure shelter.” Protection monitoring often requires specialized training for staff to handle sensitive information and to ensure survivor confidentiality.

Gender-Based Violence (GBV) monitoring is a critical component of humanitarian evaluation. GBV indicators may include the number of cases reported, the proportion of survivors receiving psychosocial support, and the existence of safe spaces. Accurate GBV monitoring is hampered by stigma, under-reporting, and cultural barriers, necessitating trust-building and survivor-centred approaches.

Displacement Tracking Matrix (DTM) is a data collection and analysis tool used to monitor the movements, needs and assistance received by internally displaced persons (IDPs) and refugees. The DTM captures information on location, household composition, and assistance status, enabling coordination across agencies. Maintaining DTM data quality requires regular validation and updates as populations relocate.

Humanitarian Data Exchange (HDX) is an open-source platform that facilitates the sharing of humanitarian data among organisations, governments and the public. Uploading monitoring datasets to HDX promotes transparency, reduces duplication of effort, and supports secondary analysis. Data uploaded to HDX must be anonymized and comply with data protection standards.

Secondary Data refers to information that has been collected for purposes other than the current monitoring or evaluation activity, such as census data, satellite imagery, or health surveillance reports. Leveraging secondary data can enrich analysis, reduce data collection costs, and provide historical context. However, secondary data may be outdated, incomplete, or not fully aligned with programme objectives.

Primary Data is data collected directly for the specific purpose of monitoring or evaluating a humanitarian project. Methods include household surveys, key informant interviews, focus groups, and direct observation. Primary data collection allows for tailoring questions to the programme’s theory of change but requires resources, time and careful ethical considerations.

Sampling is the process of selecting a subset of the population to represent the whole for the purpose of data collection. In emergencies, cluster sampling, systematic sampling or purposive sampling are commonly used. Sampling must balance statistical rigor with feasibility; for instance, a rapid nutrition survey may use a 30-cluster design to estimate prevalence within acceptable confidence intervals.

Confidence Interval provides a range within which the true population parameter is expected to fall, given a certain level of confidence (usually 95 %). When reporting the prevalence of acute malnutrition, a result of

$12\% \pm 3\%$ indicates that the true prevalence is likely between 9% and 15%. Understanding confidence intervals helps decision-makers assess the reliability of findings.

Margin of Error quantifies the amount of random sampling error in a survey estimate. A smaller margin of error generally requires a larger sample size, which may be difficult to achieve in insecure or hard-to-reach areas. Programme managers must weigh the need for precision against operational constraints.

Ethical Review is the process of examining a monitoring or evaluation protocol to ensure that it adheres to ethical principles such as respect for persons, beneficence, and justice. In humanitarian contexts, ethical review committees may be internal (within the NGO) or external (institutional review boards). Common ethical concerns include informed consent, risk of retraumatization, and data confidentiality.

Informed Consent is the voluntary agreement of participants to take part in data collection after being fully informed about the purpose, procedures, risks and benefits. Consent forms must be written in the local language and, where literacy is low, explained verbally. Documenting consent is essential for ethical compliance and for protecting both participants and the organisation.

Do No Harm principle reminds humanitarian actors that interventions should not exacerbate existing vulnerabilities or create new risks. Monitoring for unintended negative consequences—such as market inflation caused by large food distributions or social tensions arising from unequal aid allocation—is a core responsibility. Indicators for “Do No Harm” might include “price changes in local markets” or “reports of community conflict related to aid distribution.”

Cost-Effectiveness Analysis (CEA) compares the relative costs and outcomes of different intervention options. In a CEA, a programme might be evaluated on the basis of “cost per case of severe acute malnutrition averted.” While CEA provides valuable insight for resource allocation, it requires reliable cost data and robust outcome measurement, which can be challenging in volatile settings.

Cost-Benefit Analysis (CBA) goes further by assigning monetary values to both costs and benefits, allowing the calculation of net present value or benefit-cost ratio. For humanitarian projects, monetizing benefits (e.g., lives saved, productivity gains) involves assumptions and can be ethically contentious, yet CBA can support advocacy for increased funding.

Budget Tracking is the ongoing monitoring of actual expenditures against planned budgets. Effective budget tracking uses financial management software that integrates with monitoring dashboards, enabling real-time visibility of spend by activity, location, and cost category. Discrepancies flagged early allow for re-allocation before cash flow problems arise.

Financial Reporting provides donors and senior management with a summary of how funds were utilised, often accompanied by narrative explanations of variances. Financial reports must be aligned with monitoring reports so that financial performance can be linked to programme results (e.g., “US\$200,000 spent on water treatment resulted in 10% increase in safe water access”).

Logistics Management involves planning, implementing and controlling the efficient flow of goods, services and information. Monitoring logistics includes tracking shipment dates, delivery confirmations, stock levels, and cold-chain integrity for medicines. Logistics indicators such as “percentage of kits delivered within 48 hours of dispatch” are critical for assessing timeliness.

Supply Chain Visibility refers to the ability to see the status of goods at each stage of the supply chain. Digital tools like barcode scanning and GPS tracking enhance visibility, allowing managers to anticipate delays and intervene proactively. However, limited connectivity in remote camps can impede real-time visibility, requiring offline data capture and periodic uploads.

Beneficiary Satisfaction surveys measure the perceived quality and relevance of assistance from the perspective of recipients. Questions may cover timeliness, adequacy, dignity of service, and overall satisfaction. High satisfaction scores are often correlated with better uptake of services, whereas low scores can signal gaps that need corrective action.

Outcome Evaluation assesses whether the intermediate changes anticipated by the theory of change have occurred. Unlike impact evaluation, outcome evaluation focuses on the period shortly after implementation and may use less complex designs such as pre-post surveys or matched comparison groups. Outcome evaluations provide timely feedback for programme adaptation.

Mid-Term Review (MTR) is a systematic assessment conducted halfway through a project’s life cycle. The MTR examines progress toward targets, relevance of activities, and emerging challenges. Findings from the MTR may lead to adjustments in the work plan, re-prioritisation of activities, or re-allocation of resources.

End-Line Evaluation occurs at the conclusion of a project or programme phase and measures the extent to which objectives have been met. The end-line evaluation synthesises data from monitoring, mid-term reviews, and any impact studies, producing a comprehensive final report for donors and stakeholders.

After-Action Review (AAR) is a rapid, reflective discussion held after a specific event or activity (e.g., a mass vaccination campaign). Participants examine what went well, what did not, and what can be improved. AARs capture tacit knowledge that might not be reflected in formal monitoring data, enriching organisational learning.

Knowledge Management involves capturing, organising, storing and sharing lessons learned, best practices and evidence. Effective knowledge management systems use searchable databases, tag-based categorisation, and regular dissemination through webinars or newsletters. In humanitarian settings, timely sharing of lessons can prevent repeat mistakes in successive emergencies.

Lessons Learned are documented insights derived from experience, highlighting both successes and failures. A typical lessons-learned entry includes a description of the context, the action taken, the outcome, and recommendations for future practice. For instance, a lesson might note that “pre-positioned stock in regional hubs reduced delivery time by 30 % during the flood response.”

Best Practice refers to a method or approach that has consistently demonstrated superior results compared to alternatives. Best practices are identified through systematic analysis of multiple projects and are often codified into standard operating procedures (SOPs). While best practices provide valuable guidance, they must be adapted to local contexts to remain effective.

Standard Operating Procedure (SOP) is a documented set of step-by-step instructions that describe how to perform a specific task consistently. SOPs for monitoring may detail procedures for data entry, verification, and reporting. Adherence to SOPs enhances data quality and ensures that staff across locations follow the same methodology.

Capacity Building in MEL refers to strengthening the skills, tools and institutional structures that enable organisations and partners to conduct effective monitoring, evaluation and learning. Capacity-building activities include training workshops on survey design, mentorship for data analysts, and provision of mobile data collection devices. Sustainable capacity building involves transferring ownership of MEL processes to local actors.

Local Partner is an organisation based in the affected country that collaborates on programme implementation and monitoring. Engaging local partners can improve data relevance, cultural sensitivity, and sustainability. However, challenges may arise around differing data standards, resource constraints, and varying levels of MEL expertise.

Donor Requirements are the specific monitoring, reporting and evaluation expectations set by funding agencies. Common donor requirements include quarterly progress reports, disaggregated results, and compliance with the International Aid Transparency Initiative (IATI). Failure to meet donor requirements can jeopardise future funding, making alignment a critical task for programme managers.

International Aid Transparency Initiative (IATI) is a global standard for publishing aid information in a transparent, comparable format. Humanitarian organisations report financial flows, programme objectives and results using IATI codes. IATI data can be integrated into dashboards, enabling stakeholders to track how funds move from donor to beneficiary.

Humanitarian Standards such as the Sphere Handbook, Core Humanitarian Standard (CHS) and the Red Cross Red Crescent standards provide benchmarks for quality and accountability. Monitoring against these standards involves specific indicators—for example, “percentage of households with access to safe water within 30 minutes of collection” (Sphere). Compliance with standards is often a donor requirement and a key component of accountability.

Sphere Minimum Standards cover areas like water supply, sanitation, nutrition, shelter and health. Each standard includes performance indicators and recommended measurement methods. For instance, the Sphere standard for nutrition states that “the prevalence of global acute malnutrition should be less than 10%.” Monitoring these thresholds helps ensure that assistance meets internationally recognised quality levels.

Core Humanitarian Standard (CHS) focuses on accountability, quality and learning. CHS commitments include “we involve affected people in programme design” and “we monitor and evaluate our work.” Organizations often conduct self-assessments against CHS to demonstrate compliance and to identify improvement areas.

Protection Principles guide the integration of safety and dignity considerations into all programme activities. Monitoring protection principles may involve tracking indicators such as “percentage of beneficiaries who report feeling safe in the camp” or “number of protection referrals made.” Protecting vulnerable groups is both an ethical imperative and a requirement under international humanitarian law.

International Humanitarian Law (IHL) establishes the legal framework governing the conduct of armed conflict and the protection of civilians. While IHL does not prescribe specific monitoring indicators, compliance with IHL is a fundamental accountability measure. Humanitarian organisations often monitor incidents of violence, access restrictions and violations of the right to assistance.

Human Rights Based Approach (HRBA) integrates human rights standards into programme design, implementation and evaluation. HRBA monitoring includes indicators such as “percentage of women who can freely choose their place of residence” or “access to legal assistance for victims of exploitation.” Aligning MEL with HRBA ensures that programmes respect, protect and fulfil rights.

Ethical Dilemmas arise when programme decisions involve conflicting values, such as choosing between rapid aid delivery and thorough data verification. Monitoring teams must have clear guidance on how to navigate such dilemmas, often through ethics committees or senior-level deliberations. Documenting the decision-making process adds transparency and accountability.

Security Protocols are procedures designed to protect staff and beneficiaries from threats such as armed conflict, crime or disease outbreaks. Monitoring security incidents (e.g., “number of staff injuries per month”) helps managers assess risk levels and adjust operations. Security considerations may also affect data collection methods, limiting access to certain areas.

Remote Monitoring leverages satellite imagery, drone footage, mobile phone data and third-party reports to assess programme performance when physical access is restricted. Remote monitoring can verify the presence of temporary shelters, track the movement of displaced populations, or estimate agricultural damage. However, remote data often lacks the granularity of field observations and may require validation.

Satellite Imagery provides high-resolution visual data that can be used to map damage, monitor settlement growth, or estimate water source availability. Humanitarian analysts overlay pre- and post-event images to quantify the extent of destruction. Interpreting satellite data requires technical expertise and may be limited by cloud cover or resolution constraints.

Mobile Data Collection tools such as KoBoToolbox, ODK Collect and SurveyCTO enable enumerators to capture data offline on smartphones or tablets, synchronising later when connectivity is available. Mobile

collection improves data quality through built-in validation rules, reduces transcription errors and accelerates reporting timelines.

Data Visualization transforms raw data into charts, maps and infographics that are easier to interpret. Effective visualizations highlight trends, outliers and geographical patterns. For humanitarian stakeholders, a heat map showing the concentration of cholera cases can quickly guide the deployment of treatment centres.

Data Triangulation combines quantitative survey results, qualitative interview insights and secondary data sources to strengthen conclusions. For example, a decline in reported food insecurity may be corroborated by market price data, satellite-derived vegetation indices, and focus group narratives describing improved access to food.

Statistical Analysis involves the application of quantitative techniques to interpret data, such as regression analysis, chi-square tests or survival analysis. Statistical analysis helps identify relationships between variables—for instance, examining whether proximity to health facilities predicts vaccination coverage. Proper statistical training is essential to avoid misinterpretation.

Qualitative Analysis examines non-numerical data, using methods like thematic coding, content analysis or narrative analysis. Qualitative insights reveal underlying reasons for observed trends, such as cultural barriers that prevent women from attending health clinics. Software such as NVivo or Atlas.ti assists analysts in organising and retrieving coded excerpts.

Mixed-Methods Approach integrates quantitative and qualitative techniques to provide a comprehensive understanding of programme performance. In a mixed-methods evaluation of a livelihood programme, quantitative data might show income increases, while qualitative interviews explain how community cohesion contributed to those gains. Mixed-methods designs enhance validity and depth.

Baseline Survey is the initial data collection exercise that establishes the pre-intervention status of key indicators. Conducting a robust baseline requires careful questionnaire design, pilot testing, and training of enumerators. Baseline results serve as the reference point for all subsequent comparisons and are essential for demonstrating impact.

Endline Survey repeats the baseline questionnaire (or a comparable version) after the intervention to assess change. Maintaining consistency between baseline and endline instruments is crucial for valid comparisons. In volatile contexts, endline surveys may need to be adapted to reflect emerging realities while preserving core indicators.

Control Group is a set of participants who do not receive the intervention, used to isolate the effect of the programme. In humanitarian settings, establishing a control group can be ethically sensitive, but quasi-experimental designs such as propensity score matching can approximate a control by comparing similar beneficiaries who received assistance with those who did not.

Propensity Score Matching statistically pairs treated and untreated individuals based on observable characteristics, reducing selection bias. This technique is valuable when randomisation is not feasible, enabling a more credible estimation of programme impact. However, it cannot account for unobserved variables that might influence outcomes.

Randomized Controlled Trial (RCT) allocates participants to intervention or control groups randomly, providing the highest level of causal evidence. Conducting RCTs in humanitarian emergencies is rare due to ethical considerations, logistical constraints and the urgency of aid delivery. When feasible, RCTs can generate powerful evidence for scaling effective interventions.

Ethical Clearance is the formal approval from an ethics review board to conduct research involving human participants. Obtaining clearance ensures that the study respects participants' rights, minimises harm and follows international ethical standards. Documentation of ethical clearance must be kept on file and referenced in reports.

Data Management Plan outlines how data will be collected, stored, processed, analysed, shared and destroyed. A robust plan addresses security protocols, backup procedures, access controls and compliance with data protection regulations. Clear documentation of the data management plan facilitates transparency and accountability.

Data Repository is a secure location—often cloud-based—where collected datasets are stored for future use. Repositories should include metadata describing the data's purpose, collection methods, variables and any limitations. Properly curated repositories enable secondary analysis and support knowledge sharing.

Metadata provides contextual information about a dataset, such as who collected it, when, where, how, and what each variable represents. Including comprehensive metadata ensures that future users can understand and correctly interpret the data, reducing the risk of misuse or misinterpretation.

Data Sharing involves providing access to datasets for partners, donors, researchers or the public. Sharing data promotes transparency, facilitates collaborative analysis and maximises the value of the information collected. Data sharing agreements must define the scope, purpose, confidentiality obligations and citation requirements.

Open Data is data that is freely available for anyone to use, modify and share, subject only to attribution. Humanitarian organisations increasingly adopt open-data policies to enhance accountability and foster innovation. However, open data must be carefully anonymised to protect vulnerable populations.

Anonymisation removes personally identifiable information (PII) from datasets, reducing the risk of re-identification. Techniques include data masking, aggregation, and suppression of rare categories. Anonymisation is a prerequisite for publishing data publicly, especially in conflict-affected settings.

Re-identification Risk refers to the likelihood that anonymised data can be linked back to an individual using

auxiliary information. Assessing re-identification risk involves evaluating the uniqueness of data points and the availability of external datasets. Mitigation strategies may include further aggregation or perturbation of data.

Data Ethics encompasses the moral principles guiding data collection, analysis, storage and dissemination. Core tenets include respect for privacy, informed consent, fairness, and minimizing harm. In humanitarian contexts, data ethics also demands sensitivity to power dynamics and the potential for data to be weaponised.

Learning Cycle describes the iterative process of planning, doing, reflecting and adapting. After each monitoring cycle, teams review findings, extract lessons, and adjust strategies before the next cycle begins. Embedding the learning cycle into organisational culture ensures continuous improvement.

After-Action Report (AAR) expands on the after-action review by documenting