Data Analysis and Dissemination

La description

Data Analysis

There are different types of analysis:

- **Descriptive analysis:** Descriptive statistics is the term given to the analysis of data that helps describe, show or summarize and organize data in a meaningful way such that, for example, patterns might emerge from the data. Descriptive statistics do not, however, allow us to make conclusions beyond the data we have analysed or reach conclusions regarding any hypotheses we might have made. They are simply a way to describe our data. Examples are: counts, maximum, minimum, range, average, median, mode, text analysis (such as word clouds). The results of a descriptive analysis can be displayed in cross-tabulations, pie graphs, bar graphs or time series. These analyses can be used to produce standard/ad-hoc reports, query drill-downs or alerts.
- **Inferential analysis:** Inferential statistics are techniques that allow us to use samples to make generalizations about the populations from which the samples were drawn. Inferential statistics arise out of the fact that sampling naturally incurs sampling error and thus a sample is not expected to perfectly represent the population. The methods of inferential statistics are (1) the estimation of parameter(s) and (2) testing of statistical hypotheses. For testing association between variables, the following statistical tests can be used: chi squared, Goodman and Kruskal's Gamma, T-test, F-test.
- Furthermore, other statistical techniques, most commonly **regression**, can be done to produce ex-post factum analyses, forecasts, predictive modelling or optimisation models.

The type of analysis to choose depends on which DTM component the data is generated from.

DTM Component	Examples of standard analysis
Baseline	Population breakdowns by administrative level or by population categories (sex-age, nationalities, caseload, type of shelter, type of camp). Time series analysis. *
Site assessment	Sectoral analysis by administrative level. Critical factor analysis at the site level to generate alerts. Time series. *
Flow monitoring updates	Time series analyses, cross comparison with policy updates.
Flow monitoring surveys	Descriptive analysis by nationalities or survey countries. Association tests such as chi squared, gamma test. Trends analysis when the sample allows for it.
Registration	Breakdown by population categories.
Other surveys	Depending on the focus of the survey (return intention, community perception, displacement solutions), the analyses will vary.

*If the dataset includes sufficient number of observations at different times (rounds).

When approaching a dataset, a plan must be defined. Initially, the objective of the analysis and the intended audience must be clearly stated to determine a suitable way of organizing the data. This is helpful to prepare templates prior to the analysis.

Common mistakes to avoid in analysis

- Aggregation mistakes (for example, increases in water supply in one administrative unit do not mean improvements in all sites inside the administrative unit)
- Interpretation mistakes (when reporting on trends over time the analysis must take into account the changes of the

total number of sites assessed)

- Incorrect use of absolute numbers vs. relative numbers (in WASH part of the analysis make sure to report the ratio of toilets per person; do not use absolute numbers)
- Failure to compare to standards (when reporting on the ratio of toilets per person, compare the observed ratio to the emergency standard of 50 individuals per toilet)
- Data visualization mistakes (when creating bar charts, pay attention to the scale, so that data is accurately portrayed; when comparing two indicators during a certain time period, it is preferable to use bar charts, not pie charts; pie charts become difficult to read if too many categories exist)
- Oftentimes the same data sends a very different message depending on how it is framed and communicated. For example, if reporting on arrivals of migrants to a given location / country, a comparison between the current and the last reporting period may show a large increase in arrivals, whilst comparing the figure to the number of arrivals recorded in the same period the previous year may yield a very different picture, and so on.

Info Package

As the Info Package is a compilation of resources relating to the latest round of data collection. This Package is usually shared via email upon official release or publication of the latest data.

Narrative reports	PDF document including data analysis, maps, data credibility, with a highlights section on the first page. Sample reports can be found on the Global DTM website and on the Migration Portal/Document Section
DTM datasets	Excel book or Google spreadsheets with different tabs (data, summary tables, glossary). It is strongly encouraged to share the Excel book in line with IOM guidance on data protection, data governance, and data sharing.
DTM dashboards	Site profiles, factsheets, and infographs: complementary products to support the narrative report, useful for meetings and quick overview of the displacement situation, main figures. Usually PDFs.
GIS products	Maps, kmz, CODs – static and interactive geographic information products to support visualization of data. DTM is also many times the main provider of the CODs. Share GIS products as PDFs or URL links to interactive platforms.

Reports

DTM reports are the interface between the average DTM data user and the data. It is therefore extremely important that reports are maintained at the highest quality and no DTM report should be published or shared without the review and endorsement of the designated focal person in country (e.g DTM coordinator, emergency coordinator, Chief of Mission etc.). While there is no standardized template for DTM reports, DTM reporting adheres to a set of central minimum technical standards. Please refer to the DTM Reporting and Publications Standard [link forthcoming] for further detailed guidance on this as well as quality assurance processes. Contact DTM Reporting for more information.

Data Dissemination

DTM data is intended to have operational value in the design and adjustment of programmes and interventions – for this to be the case, the info package needs to be disseminated to all relevant actors. You may have some key partners with whom you can share the data directly via e-mail or in meetings, however it is always hard to tell who else might find the information useful. Make sure to share DTM data via **Humanitarian Response**, **HDX** and **Reliefweb**, on the **global and (where existing) country specific DTM websites** and through other means suitable in your context. Build synergies and coordinate with other IM actors in country to ensure everyone is aware of the available information and persisting data gaps. Ensure DTM products are visible and follow up with partners to see if the information is relevant, timely, and actionable. How is DTM info used to adapt programming and support advocacy?

Make sure to devise a feedback mechanism into your dissemination process and ensure that this informs changes to future rounds of data collection and analysis. Outputs should always reflect information needs on the ground and DTM teams should be quick to respond to feedback from data users to ensure that data and analysis remains relevant.

Sensitive data should be shared in line with agreed information sharing protocol with relevant actors only.

Info Package Labelling (example)

Product	Labelling Convention	File Details
REPORT	01_IOM DTM Preliminary Report "Country"_Round"x"_20150330 01_IOM DTM Report"Country"_Round"x"_20150330 01_IOM DTM Weekly Flow Compilation Report"Region"_Round"x"_20160330	PDF (narrative and graphs / tables etc.)
DASHBOARDS	02_IOM DTM Dashboard "Country"_"Overview"_Round"x"_20150330 03_IOM DTM Dashboard"Country"_"Displacement Sites"_Round"x"_20150330 04_IOM DTM Dashboard"Country"_"Displacement Flows"_Round"x"_20150330	PDF (maps and graphs)
DATASET	05_IOM DTM Dataset"Country"_Round"x"_20150330	Excel (file with the data to be published, dictionary of content, proper alias for the fields and a pivot summary, different tabs for baseline and site assessment)
KMZ	06_IOM DTM Displacement Sites"Country"_Round"x"_20150330 07_IOM DTM Baseline assessment"Country"_Round"x"_20150330	KMZ (simple kmz files displaying locations and main figures on pop-up)
SITE PROFILES	08_IOM DTM Site Profiles"Country"_Round"x"_20150330	PDF (single set of pdf pages with all the site profiles listed in a table of content on the first page)

Références et outils

Autres entrées dans ce sujet

- Public Information in Emergencies

Contacts

For more information, please contact the DTM Support Team: DTMSupport@iom.int.

Dernière mise à jour du document: Dec 2022