Chapter 4 – Principles for Implementation

The Fundamental Principles of Official Statistics (see annex) were adopted by the UN General Assembly at its 68th Session in 2014. (A/RES/68/261). The following brief discussion on principles for implementation of DRSF is based on Implementation of DRSF is developed based on the Guidelines for Implementation for the Fundamental Principles of Official Statistics, developed and finalized by the UN Statistics Commission in 2015.¹ Disaster-related statistics is an emerging area of official statistics, with special characteristics that are unusual for other more traditional domains of official statistics. However, it is recommended that disaster-related statistics be viewed as integrated extension of the broader national statistics system, which should be developed in alignment with the Fundamental Principles as adopted by the UN General Assembly.

Statistical Coordination

Statistical coordination is especially important factor for implementing DRSF because most of the relevant combinations involve a close collaboration between statistics offices, disaster management agencies, and (in most cases) many other producers of official data.

The Fundamental Principles Implementation Guideline describes the scope of good practices in Statistical Coordination as follows:

“The issue of statistical coordination is based on the conceptualization of coordination as the set of processes and procedures for consolidating and achieving official statistics within an institution or between institutions. Coordination usually involves two fields, conceptual harmonization and institutional management.

The conceptual harmonization implies that, for all participants institutions in the management of an official statistics, the variables have the same definition, are known and shared by national or international classifications of the subject, are encoded in the same way, the methodology is shared

in all phases of the life cycle of the statistical operation, and in the best scenario, the databases are shared.

Interagency coordination and management aims at the efficient management process within or between institutions, i.e., mechanisms of communication, monitoring and control, and processes and procedures of articulation.”

Legal framework,

The Fundamental Principles Implementation guidelines provided links to examples of good practices of national legal frameworks and related codes of practice for organizing and implementing statistical work programmes. Legal frameworks provide clear responsibilities for production of statistics and can help data producers to identify and consult with users.

For some components in the DRSF, disaster management agencies may be involved in both the production or use of official statistics and their application in the analyses used to formulate policies. Thus, the Fundamental principles of independence and impartiality of the statistics programmes should be emphasized. “A strong position of independence is essential for a statistical agency in order to establish credibility among its users.” (see UN Handbook of Statistical Organization 2003, page 5)

It means that “Choices of sources and statistical methods as well as decisions about the dissemination of statistics are only made by statistical considerations. (See Fundamental Principle 2)

Principle 1 – Relevance, Impartiality and Equal Access Official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honor citizens' entitlement to public information.

Metadata

The documentation of methods and core descriptions of data is an indispensable component of any dataset or compilation used in official statistics. The Fundamental Principles of Official Statistics Implementation Guide states: “Metadata is an important part of the standard dissemination procedure for official statistics.”

“For the qualified users it is necessary not only to read the pure statistical results but also to have a professional understanding of how the statistics have been produced. The qualified user will reach the necessary understanding on how to use the statistical results only after knowledge
Many of the currently available data sources, internationally and nationally, of disaster-related statistics are insufficiently documented, which limits their practical utility for users. Collection of data is never free, it’s an investment of resources. Comprehensive documentation of the outputs from a data source is like a form of insurance, protecting the value of the investment for future use.

Metadata is a cornerstone for creating coherence across occurrences or across datasets. Metadata needs must go beyond definitions of concepts or variables, and included explanations of scope of measurement, in practice.

The International Household Survey Network (IHSN) has published comprehensive guidance on metadata documentation of datasets. Although the founding focus for IHSN is survey datasets, the IHSN recommendations on scope\(^3\) for metadata are broadly applicable for all types of datasets in DRSF. The Fundamental Principles Implementation Guideline also provides the generally applicable guidelines for dissemination of micro data (see pgs. 55-56)

Some advice on metadata documentation specific to the disasters domain have been described in this handbook, particularly in the tables and in descriptions for a basic range of disaster-related statistics in Chapter 5. Any centralized database on disaster-related statistical must include a strategically designed system of unique identifiers and coding for individual disaster occurrences and their main characteristics. Identifier codes within the datasets are an efficient method for linking data with metadata and to establish explicit links between related variables within the database.

Units of measurement, scope of measurement, definitions for key technical terms, method for monetary valuation, are all key examples of methodological choices, for which multiple options are always possible, so documentation of these choices, in a comprehensive manual or technical annex of concepts, definitions, units, and the population (or universe) addressed by the statistics.

**Confidentiality**

“In order to maintain the trust of respondents it is the utmost concern of official statistics, to secure the privacy of data providers (like households or enterprises) by assuring that no data is published that might be related to an identifiable person or business.” National Statistics offices are well experienced with protecting confidentiality of respondents, as a longstanding fundamental principle for the practice of official statistics. Statistics offices rely on public goodwill and cooperation and trust of respondents as a basic factor for producing timely and accurate statistics.

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\(^3\) [http://www.ihsn.org/documentation-scope](http://www.ihsn.org/documentation-scope)
Disaster statistics pose somewhat of a special case given that disasters are, by definition, unusual, extreme events. In many cases there is a need for fairly detailed geographic disaggregation of statistical information. However, the focus of DRSF tables is on summary statistics, i.e aggregations and statistical summaries of information, which do not include references to identifying characteristics of individual households or businesses. In cases, where access to microdata (i.e. raw data sets) are required, for research purpose, for data sources for assessing disaster risks or impact, methods are available for anonymizing microdata prior to release to researchers. The IHSN has developed guidance on anonymization procedures for household surveys\(^4\), including links to tools like software and statistical programming codes that have been tested for anonymization of various survey datasets.

**Transparency and Accessibility of Data**

Principle 1 of the Fundamental Principles for Official Statistics states:

“Official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honour citizens’ entitlement to public information.”

The resolution A/RES/68/261 of UN General Assembly stated that countries need to” facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of the statistics.”

It is also mentioned in the Sendai Framework Priority for Action 1 that countries need to “promote and enhance, through international cooperation, including technology transfer, access to and the sharing and use of non-sensitive data and information, as appropriate, communications and geospatial and space-based technologies and related services.”

Besides the improvement in data accessibility, countries should also enhance the transparency on the sources, methods and procedures used to produce official statistics, i.e metadata (see above).

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\(^4\) [http://www.ihsn.org/anonymization](http://www.ihsn.org/anonymization)