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Dissemination and Communication Standards and Issues: State of the Art in the UNECE Region

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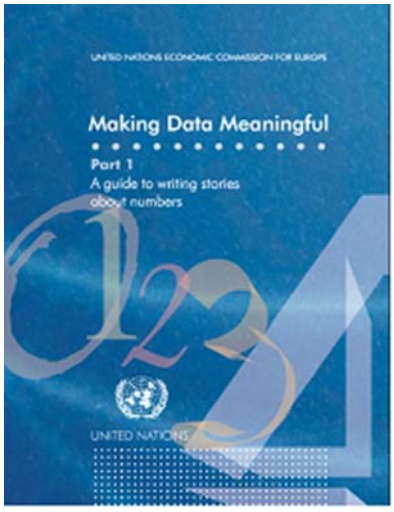
1. Introduction

This paper outlines the current standards and issues relating to statistical dissemination and communication in the UNECE region. In doing so, draws on the findings of a recent in-depth review of this topic by the Conference of European Statisticians.[1] It ends with a summary of the main activities and groups working in these topics in the UNECE region.

2. Standards

The Conference of European Statisticians has created a Steering Group on Statistical Dissemination and Communication, with a mandate to develop standards and guidelines in this field. The current work of this group is focused on developing a series of guides on different aspects of statistical communication under the title of "Making Data Meaningful"[2]. These guides have been prepared by groups of experts from national and international statistical organisations, and are designed to offer practical advice and highlight good practices. This series currently includes the following titles:

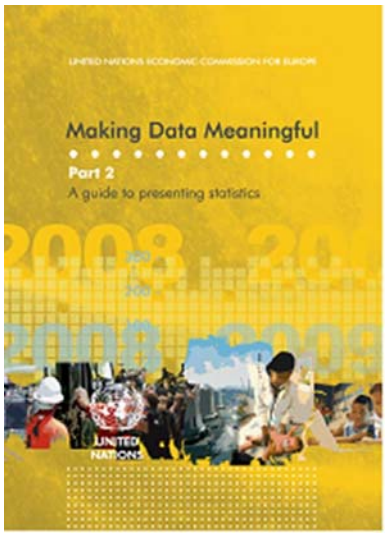
Making Data Meaningful Part 1: A guide to writing stories about numbers



This guide was published in 2006, and is now available in English, Russian, Spanish and Croatian. Other language versions are being prepared by voluntary translators in several countries including Japan and Italy. It is intended as a practical tool to help managers, statisticians and media relations officers use text, tables, graphics and other information to bring statistics to life using effective writing techniques. It contains suggestions, guidelines and examples – but not golden rules, and recognizes that there are many practical and cultural differences among statistical offices, and that approaches vary from country to country.

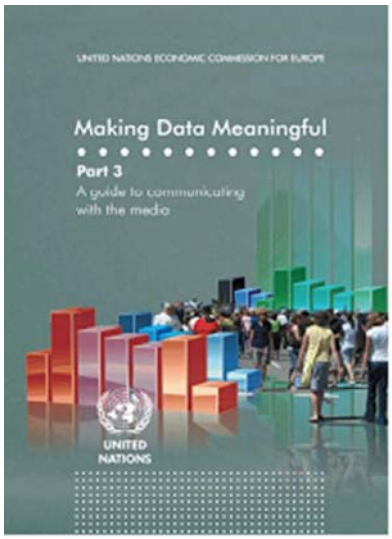
[1] See: http://www.unece.org/stats/documents/ece/ces/2010/1.add.1.e.pdf
[2] See: http://www.unece.org/stats/documents/writing/

Making Data Meaningful Part 2: A guide to presenting statistics



This volume was published in 2009, and is currently available in English and Russian, though, as for Part 1, other language versions are in preparation. It is intended to help producers of statistics to present data in a clear and meaningful way. It provides advice on preparing effective tables, charts and maps, and using other forms of visualizations to bring statistics to life. It also suggests how to avoid bad or misleading presentation of data.

Making Data Meaningful Part 3: A guide to communicating with the media



This volume is due to be published in late 2010, and provides an update to the very popular 2004 UNECE publication “Communicating with the Media: A Guide for Statistical Organizations”. This new version considers in much more depth how to use new and developing web-based communication tools, and provides advice on training statisticians to handle media requests, monitoring media coverage, and dealing with crisis situations.

Making Data Meaningful Part 4: A guide to improving statistical literacy

Work started on preparing this volume following a specific request from the June 2010 plenary session of the Conference of European Statisticians. Text is being drafted to cover topics including the importance of statistical literacy, strategies for different user groups, improving statistical outputs to make them better understood, and evaluating the impact of statistical literacy activities.

In addition to the “Making Data Meaningful” guides, the UNECE has also published a number of other standards relating to statistical dissemination and communication,

including “Best practices in designing websites for dissemination of statistics” (2001)[3], and “Recommendations on formats relevant to the downloading of statistical data from the Internet” (2001)[4].

3. Issues

An in-depth review of statistical dissemination, communication and publications by the Conference of European Statisticians in 2010 highlighted the following issues:

A. Managing communication

Communication of statistics is about a dialogue between users and producers of statistics. This differs from dissemination, which is about spreading statistical data by making them available through publications, output databases and other means. Communication activities include:

(a) Developing and implementing a communication and publishing strategy;
(b) Monitoring reputation;
(c) Monitoring and servicing the media;
(d) Preparing news releases;
(e) Maintaining website(s);
(f) Marketing publications;
(g) Building relationships with stakeholders and users;
(h) Conducting user satisfaction surveys;
(i) Implementing design and/or style standards;
(j) Educating colleagues in effective communication;
(k) Editing and improving language;
(l) Maintaining the intranet and other channels of internal communication.

These activities may be the responsibility of one organizational unit but may also be shared between two or more organizational units within national and international statistical organizations.

Statistical communication has evolved considerably over recent years. Traditionally, statistical organizations focused on dissemination and one-way communication of information through few media channels (e.g. newspapers, radio and television). It was not until the 1990s that they acknowledged the need to do more than just disseminate data and hesitantly began employing communication professionals. Widespread use of the Internet has significantly changed methods of communication and dissemination, as well as increased numbers and diversity of end-users.

Discussions at the 2008 and 2009 UNECE Work Sessions on Statistical Dissemination and Communication revealed that the statistical systems of individual countries have a

[3] http://www.unece.org/stats/publications/websitebestpractice.pdf
[4] http://www.unece.org/stats/publications/downloadingformats.pdf

range of approaches when it comes to managing communication functions. The placement of these functions within the organizational structure will impact on their effectiveness. Governance processes should ensure that communication of statistical data receives the same level of attention from management as dissemination activities and the associated technological infrastructure. More work is needed on measuring the impact of different communication practices.
User feedback suggests that improving communication should be a priority for many statistical organizations, particularly in the current financial crisis. More effort is needed to reach mainstream users, such as media and policy makers, not just hard-to-reach groups. Increasing competition from other data producers means that there is an increasing need to professionalize communication of statistical organizations.

B. Ethics and independence of statistical organizations

Ethics and independence are fundamental issues for statistical organizations. This is reflected in the Fundamental Principles of Official Statistics and the European Statistics Code of Practice. Statistical organizations face challenges to develop dissemination and communication strategies that reflect their independence, such as disseminating data on minority groups and policies on pre-release embargoes and access to information by the media.

For example, data on ethnic minorities or specific regions may be needed to meet policy demands, but carry a risk of giving or reinforcing negative perceptions of these groups or regions. A possible solution could be to avoid these issues by not identifying these groups, such as by not collecting sensitive variables or by disseminating only broad aggregates. A more balanced approach would be to consider sensitive aggregates in terms of the normal confidentiality and quality criteria, fine-tune them to eliminate structural effects and add an impartial commentary. According to the fourth fundamental principle of official statistics, statistical organizations should react to and try to correct any erroneous interpretation of data. This requires systematic monitoring of the media and a policy on how and when to react. Further discussion on this point is needed, and exchanging experiences and collecting good practices would be useful.

Good communication practices in areas such as pre-release access, the use of release calendars, and dealing with erroneous use and misunderstandings are vital to improve the credibility and independence of statistical organizations. It is important, on the one hand, to minimize errors by disseminating statistics of a high quality and, on the other hand, to develop policies and procedures for reacting when errors are discovered. Experience in the UNECE region has shown that, in order to maintain credibility, it is important to be transparent and to communicate loudly and clearly to the public when errors occur. The importance of data quality is increasingly stressed in staff training, quality checklists and error reporting.

There are some differences amongst CES member countries in their policies on pre-release embargoes, with some national statistical organizations banning all pre-release access and others supporting controlled pre-release as a mechanism to help the media

or policy makers prepare more effective communication for the public. The differences may be related to different stages in the development of relationships with user groups. When pre-release access is provided, it is important to inform the public on the rules and procedures (who can get access, why, how early in advance, etc.) in a clear and transparent way. The statistical community would benefit from an exchange of experiences in pre-release of data and the collection of good practices.

C. Emerging tools for data visualization and communication of statistics

Emerging tools and techniques provide new opportunities for visualizing data. Many national statistical organizations now offer access to statistical databases through their website, allowing users to query and download statistical information. This is often complemented by a suite of visualization tools enabling users to create tables, charts or maps online, without having to download the data and work in another application. There may be concerns about the consequences of giving this level of control to the user, who could produce nonsensical charts or maps, or inappropriate correlations. To minimize potential problems, it is important to provide critical metadata in a clear and obvious way, offer support and monitor any misuse. The impact and value for money of these new visualization tools should also be better assessed.

Further work is needed to make data more understandable and easier to find and access by taking advantage of the new developments in web search technology. The use of Statistical Data and Metadata eXchange (SDMX) and other metadata standards is important in this respect.

New web technologies are changing the way statistical organizations communicate with their users. Blogs, wikis and social networks provide new communication channels that have the potential to reach a wider global audience. These channels permit users to comment or post data and related information, ad add a new dimension to statistical data dissemination and communication, increasing the number of intermediary providers of statistics. International exchange of experiences and good practices in this field will become increasingly useful.

Statistical organizations are gradually moving away from printed publications, but it may be useful to maintain some paper outputs. Short, cross-cutting publications, with more emphasis on graphics, are becoming increasingly popular with users. In some countries, combining data with economic analyses has helped to make statistics more attractive and popular. Exchanges of experiences help to spread good practices in this respect.

D. Communicating with hard-to-reach groups

This issue was discussed at the May 2009 UNECE Work Session on the Communication and Dissemination of Statistics. Statistical organizations are faced with the challenge of reaching many target audiences for a variety of purposes, such as conducting population or business censuses and surveys of all kinds. Without a doubt,

each country has segments of their population with whom it is difficult to communicate and secure active participation.

Solutions on communicating with hard-to-reach groups range from technological to educational. Rapid advances in technology provide potential solutions (e.g. blogs, podcasts and social networking) for communicating with some audiences. It should be possible to identify good practices and examples by continuing to share experiences between statistical organizations through regular meetings on dissemination and communication.

E. Education programs for improving statistical literacy

Improving statistical literacy relies on identifying user groups and developing strategies to increase users' understanding of statistical concepts and how to use statistical information, and to enhance knowledge within the statistical organizations of the issues faced by users in understanding and using statistics. Statistical organizations need to improve their explanations, provide definitions for specialists, as well as for everyday people, and enhance public education in order to raise confidence in official statistics.

The shift from an audience of experts to widespread general interest in statistics has contributed to increasing pressures on organizations to address different levels of statistical literacy. At the 2006 UNECE Work Session on Statistical Dissemination and Communication, it was recommended that the international statistical community establish activities to improve statistical literacy.

F. Pricing and licensing issues

The approach to providing statistical information free of charge or at a cost was discussed at the 2009 UNECE Work Session on the Communication and Dissemination of Statistics. Reports from participating organizations revealed that many offer a combination of chargeable and free-of-charge information. Usually, the statistical material which is directly retrievable on the Web is non-chargeable, whereas printed publications, customized tabulations and services, microdata and sensitive variables are usually chargeable services. Charges for customized services allow organizations to control the number of requests and manage the subsequent impact on resources.

The scope and frequency of demands for statistical information have increased considerably since data have become more accessible through the Internet. At the 2008 Work Session on Statistical Dissemination and Communication, Professor Hans Rosling (Gapminder Foundation / Karolinska Institute, Sweden) gave a keynote presentation on 'Communicating Statistics in the Information Age'. He noted that a variety of different terms and conditions, often restrictive, are applied to statistical data by different organizations. Adopting a common access license for official statistics may facilitate response to this demand by providing a consistent approach across countries. There are a number of licensing issues to be resolved, such as standardising references to the

original source, protection of the original data and metadata, conditions for re-use and sharing of data and metadata.

G. International data dissemination

The collection and dissemination of official statistics by international organizations have a significant impact on national statistical systems. Where possible, international organizations source data directly from the dissemination systems of national and supranational statistical organizations, but until electronic data and metadata exchange standards are widely implemented, national statistical systems have to manage the burden of manually providing data for international reporting.

Initiatives that aim to integrate statistics published by international organizations into a single database or portal raise further complexities, as differences and discrepancies become more apparent and users are challenged to correctly understand and interpret similar data from different sources. In the longer term, however, integration of data from different sources can help to improve harmonization by exposing unnecessary differences and increasing pressure to resolve them.

H. Improving discoverability and linking data into the scholarly network

Datasets are a significant part of the scholarly catalogue and are being published with increasing frequency, either formally or informally. Many publishers are beginning to link to datasets from their journals, and authors are trying to cite them in their articles. Librarians would like a way to manage datasets alongside other publications. Authors cite data in a variety of ways, often to the organization name, organizational, departmental websites or broken links. Authors and publishers are clearly unsure about how they should cite data sources. Librarians are also making attempts to catalogue datasets yet often do not manage to lead the users directly to the datasets.

There is no accepted system for how datasets should be cited and catalogued. Now that datasets are becoming more widely available and so many publishers are getting involved, there is a need for a bibliographic system to help authors cite, publishers manage and librarians catalogue datasets.

Many datasets are being updated on a rolling basis, adding new data as and when received. Occasionally, revisions are made to the entire dataset which changes the historical data. All of these changes are noted and explained in the statistical metadata. A citation, however, is supposed to link the reader back to the same object which the citing author used. In the case of a dynamic dataset, linking back to a dataset as it was when an author used it to write a paper is clearly impossible. This poses a significant challenge. The OECD has written a white paper proposing some standards for citing and bibliographic management of datasets and data tables. There is increasing interest among scholarly publishing and research librarian communities in data discoverability and data management.

4. Current activities

There are several international groups that meet regularly to discuss issues relating to statistical dissemination and communication. This work includes the development of guidelines and resources to assist statistical organizations in the effective management of dissemination and communication. Current groups operating in the UNECE region include:

A. UNECE Work Sessions on Statistical Communication

These annual meetings aim to facilitate the exchange of experience in statistical dissemination and communication and develop guidelines summarizing good practices in national and international statistical organizations. The focus is on subjects related to the organization of dissemination and communication, and not on technical questions dealt with by other groups (e.g. statistical metadata, output databases, interchange standards).

B. Eurostat

Eurostat organizes regular meetings of the Dissemination Working Group, bringing together experts from Member States to discuss issues related to statistical dissemination. Eurostat's main role is to process and publish comparable statistical information at European level. National statistical organizations are the main - although not the only - partners. Eurostat cooperates intensively with Member States, as well as with other international institutions, to define common statistical concepts and a common methodological basis for the statistics.

C. International Marketing and Output Database Conference (IMAODBC)

This annual conference is coordinated by a small, independent network of national and international statistical organizations (representing approximately 25 organizations). The responsibility for hosting and organizing the meeting is rotated amongst the group. The IMAODBC provides an informal environment and focuses on dissemination issues that are more technical in nature, in particular the relationship between technical solutions and marketing and dissemination strategies.

D. OECD "Turning Statistics into Knowledge" seminars

The Organisation for Economic Co-operation and Development (OECD) has organized several seminars on this theme, including in Washington in July 2009, Stockholm in 2008 and Rome in 2007, as well as an international exhibition on "Innovative tools to transform information into knowledge" held during the second OECD World Forum on "Statistics, Knowledge and Policy" in Istanbul in 2007. The purpose of these seminars is to contribute to the development of tools to help people transform statistics into knowledge and decisions.