

“A success story: Implementation of quality management in the Statistical System of Mongolia”

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Abstract

Principle 10 of the UN FPOS “International cooperation” describes the unique benefit and necessity of bilateral and multilateral cooperation in statistics for the improvement of systems of official statistics in all countries: “Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries” [15]. The UN FPOS implementation guidelines further emphasise the aspect that it is of benefit for both sides: “Continuous exchange of views and knowledge between Statistical Institutes is an essential prerequisite to ensure effectiveness in the Statistical Cooperation for both sides – the recipients and providers of assistance“ [16].

The investment in partnerships at the European and international levels, which also includes statistical capacity building, counts among the strategic goals of the Federal Statistical Office of Germany (Destatis) [10]. Since the early 1990s Destatis has been actively engaged in bilateral partnerships and Twinning projects, such as the World Bank funded Twinning Project “Strengthening the National Statistical System of Mongolia” from 2010 to 2014.

More than 2,900 activities have been implemented in more than 35 national statistical offices in the EU as well as in other European and Asian target countries in line with the German foreign and development policy. Since 2004, Destatis has been increasingly providing management trainings and consulting for executives of statistical offices of partner countries in the domain of quality management. Today, approximately 20 per cent of all consultations within Twinning projects relate to this area.

Keywords: *Statistical capacity building, quality management, United Nations Fundamental Principles of Official Statistics (UN FPOS), UN FPOS Implementation Guidelines, International Statistical Institute Declaration of Professional Ethics (ISI DPE), European Code of Practice (COP), Twinning Partnership*

1. Strategic partnerships: The World Bank Twinning Project with the National Statistics Office of Mongolia

Since 1993, there has been a bilateral cooperation partnership between Destatis and the National Statistics Office of Mongolia (NSO). It reached its first climax within the World Bank Twinning project “Strengthening the National Statistical System of Mongolia” (2010 to 2014). Destatis has been conducting Twinning since the early 1990s and has made excellent experiences with such type of administrative partnerships.

A Twinning partnership is a co-operation instrument between public authorities facilitating sustainable exchange of knowledge, which originally was established by the European Union with the aim to support countries with accession prospects. The World Bank defines Twinning from the perspective of a beneficiary country as “[...] pairing of one institution with a similar but usually more mature institution for a mutually beneficial partnership” [12].

As many as 376 consulting days were covered by international experts within the World Bank Twinning project mentioned above. In total, 49 expert missions to the National Statistics Office of Mongolia and 35 study visits to consortium partners and third countries were carried out by 80 experts, coming from Destatis and the Land Statistical Offices of Germany as well as from Statistics Korea as junior partner, from the Czech Statistical Office, Statistics Finland, the Turkish Statistical Institute and Statistics Norway.

The Twinning project comprised four components, which were sub-divided into 17 sub-components dealing with subject matter statistical domains as well as cross-sectional issues (see table 1).

Table 1: Project components and sub-components

Component A:	Component B:
Improving policy, regulatory framework and organisational structure	Improving Statistical Infrastructure
<ul style="list-style-type: none"> • Institutional framework and structure • Relations between data users and producers • Data dissemination 	<ul style="list-style-type: none"> • Registers • Classifications and standards • Sampling methods • Data quality

<ul style="list-style-type: none"> • Human resources 	<ul style="list-style-type: none"> • Seasonal adjustment • Questionnaire design
<p>Component C: Upgrading the Statistical Operations</p>	<p>Component D: Upgrading the IT Infrastructure and Equipment</p>
<ul style="list-style-type: none"> • National accounts • Price statistics • Population and Housing Census • Economic and social statistics 	<ul style="list-style-type: none"> • IT Plan • IT Network

The structure of the domains for which the NSO required consultations reflects current developments in similar cooperation projects. Subject-matter statistics form an integral part of World Bank Twinning projects, however cross-sectoral topics in the domain of quality management, such as institutional framework and structure, data quality, human resources, etc. constitute objects of consideration, too. Hence, one third of all consultation activities in this project were part of component A. Moreover, four consultations of component B were provided in the domain of data quality.

Cross-sectoral topics, especially in the domain of quality management, are essential because the overall aim of statistical capacity projects is to improve the statistical output, i.e. data of high quality in compliance with international quality standards. This is only possible if the institutional environment is modernised (e.g. the legal basis, financial and human resources, impartiality) and if adequate statistical processes are established (e.g. sound methodologies, priority setting). The triad of institutional environment, statistical processes and statistical output is as well reflected in the majority of the professional and ethical frameworks worldwide, for example in the European Code of Practice [2].

2. Consultations in the domain of quality management

A total of 18 activities (half of them study visits and half of them expert missions) in the domain of quality management were conducted by experts of Destatis within the World Bank Twinning project.

Firstly, the consultations started with the assessment of the status quo of the NSO in regard to a certain issue of the mission written down in the Terms of Reference which were provided by the NSO prior to the mission. The assessment was done in close cooperation with the Mongolian staff, for example by a group work exercise in which the Mongolian staff assessed the weaknesses and strengths of the Mongolian statistical system according to each of the 15 principles of the European Code of Practice [2].

Secondly, the experts of Destatis introduced the Mongolian colleagues to internationally approved good practices and instruments, and also to experiences which had proved to be of great value during the implementation process in the Federal Statistical Office of Germany or in other National Statistical Institutes. In this context, the experts frequently made reference to professional and ethical frameworks, such as the ISI Declaration of Professional Ethics (ISI DPE) [4], the UN Fundamental Principles (UN FPOS) [15] and the European Code of Practice (COP).

In a third stage the theoretical knowledge was transferred to Mongolian specifics, which happened in close interaction with the Mongolian staff by brainstorming, group work and round tables.

3. A stepwise approach for implementation of a data quality management system

Based on the identified strengths and weaknesses of the Mongolian Statistical System, the experts of Destatis recommended to implement a stringent quality management system in several steps within the Twinning project and beyond.

STEP 1 comprises the commitment to data quality stating that Mongolian statistics is ready to comply with international standards in order to serve the needs of international institutions, the Mongolian government, research institutions, businesses and the public in general.

A first concrete action would be the production of quality reports which provide metadata in a standardised form for all statistical data produced (from external producers, e.g. ministries, too). Quality reports have the benefit of documenting essential core facts about a certain statistics, e.g. sample size, sampling errors, etc. and to facilitate the evaluation of statistics provided by external data producers.

In parallel, the recommendation was made to develop a Mongolian Code of Practice by which European and UN Standards were to be adapted to Mongolian specifics.

STEP 2 - As establishing the basis for quality was recommended for step one, further specification was advised for step two, i.e. especially the implementation of an error policy. This is an effective policy concerning internal mistakes, e.g. in the case of accidental publishing of wrong figures [9]. Moreover, the NSO was required to set up guidelines concerning misinterpretations of results by external users (e.g. in cases in which media interpret data in a wrong way).

Furthermore, a standardized design for all questionnaires of the National Statistics Office of Mongolia was strongly recommended. Therefore, an additional consulting mission was conducted within the project for designing standardised questionnaires especially for the Macro-Economic Statistics Department and the Population and Social Statistics Division.

Thirdly the implementation of a process model in line with the UN model named "GSBPM" [13] was recommended. The advantage of using such a process model would be that recommendations of the quality team could be systematically categorised according to the different processes and stages.

For STEP 3 a self-assessment of the data quality of selected statistics according to the European DESAP questionnaire was proposed and envisaged [3]. As this is a very time-consuming and comprehensive method, it was advised to carefully consider, for which statistics it is most advantageous.

Besides these concrete actions, the experts of Destatis additionally recommended that the National Statistics Office of Mongolia should enhance the communication with other data providers by regular meetings (with regional offices as well as with data providers in Mongolian ministries). Additionally it was advised to increase the statistical literacy of all users of Mongolian Statistics, e.g. by trainings with data users such as journalists, the scientific community, etc.

4. Outcomes

By the end of the project in 2014, the NSO had implemented the majority of the recommendations.

In regard to the Institutional Environment:

1. National Program for the development of Official Statistics

The NSO established a Program for defining the mid and short-term goals and objectives, to determine the vision, mission, policies and strategic objectives and the ways to achieve these goals, as well as the necessary funds and required human capacities. This Program follows the recommendations of the UN Statistical Commission and the Marrakech Action Plan for Statistics [7].

2. Quality policy for Mongolian Official Statistics

The NSO established a quality policy for Mongolian Official Statistics, which relies on the eight quality management principles as defined in the ISO-9000 and the quality components as defined by the UN ECE and enshrined in the European Code of Practice and the Mongolian Code of Practice (see aspect 4 below). The quality policy lists criteria for ensuring the quality of statistical products and services, and key principles for implementing this mission and vision.

3. Quality team

In the framework of the Twinning project, a permanent quality team was established in the National Statistics Office of Mongolia. This team consists of 16 staff members from different departments and divisions. The team leader is the Director of the Policy Implementation and Coordination Department, which is the department in charge of quality. The mandate of the quality team is to develop a quality policy and implement it throughout the NSO.

4. Mongolian Code of Practice

Based on the recommendations of the experts, the NSO established a „Mongolian Code of Practice“, which defines standards for the quality management of Mongolian official statistics, such as relevance, accuracy, timeliness, punctuality, accessibility, clarity, comparability and consistency [5]. The Mongolian Code of Practice is based on the European Statistical Code of Practice.

5. National Statistics Council

The NSO is assisted by the National Statistics Council, which consists of representatives of the government, scientific research institutes and users. This body advises and supports the National Statistics Office of Mongolia in its activities and is involved in the establishment and monitoring of the NSO and the exchange of users' interests. It supports the NSO to ensure that the statistical information and data by the government, its ministries and agencies do not overlap and duplicate with official statistics, to ensure the integrity of methodological support, to approve and endorse indicators, methodologies and procedures and to evaluate the coverage and accuracy of statistical information [6].

In regard to Statistical Processes:

1. Memorandum of Understanding with several data providers:

In the Mongolian Statistical System, many data are delivered by external data producers. Therefore the NSO agreed on several Memoranda of Understanding with diverse institutions, e.g. the Ministry of Population Development and Social Protection, the General Authority of State Registration, the Bank of Mongolia, the Ministry of Finance, the Ministry of Economic Development, the Ministry of Environment and Green Development, the Ministry of Education and Science, the Ministry of Health, and the Customs Authority.

2. Training of staff

To raise the awareness for quality issues, the National Statistics Office of Mongolia conducts regular trainings for staff from regional offices and ministries, but also for journalists and other data users. Within the Twinning project, 120 representatives from ministries participated in various trainings relating to the domain of statistical literacy. In addition, internal trainings on quality management were organised by the NSO for staff of the NSO and from regional offices. Trainings for the level of management and leadership were conducted, too.

3. Self-assessment questionnaires and self-assessments for several statistics

In the domain of the labour force survey and income and expenditure survey, the National Statistics Office of Mongolia conducted first self-assessments to evaluate the quality of its statistics and to consider improvement measures. The questionnaire is based on the DESAP questionnaire, which is used within the European Statistical

System and which permits to reflect the whole process of a survey from the very early stages until the final steps.

In regard to Statistical Output:

1. Quality reports

Quality reports are a documentation of the main characteristics of a statistics, e.g. sample size, standard errors, variables, etc., and they facilitate the assessment of the quality of a statistical survey. The National Statistics Office of Mongolia developed quality reports for price statistics, labour force, educational statistics, and agricultural statistics, and will continuously extend the reports to further statistics.

2. Policy on and Basic Guidelines for Statistical Data Dissemination

The Policy on and Basic Guidelines for Statistical Data Dissemination provide the framework for the dissemination of official statistics in Mongolia. This policy lays down principles which guarantee that official statistics are made available on an equal basis to society, the economy and the population of Mongolia in general. The dissemination policy is published on the Mongolian website. [8]

3. Quality glossary

A glossary was produced which comprises terminology and explanations of concepts and terms from quality management. This glossary is mainly used for internal purposes and for other data providers. It helps to strengthen the awareness for quality management issues on the part of all bodies involved in producing official statistics.

4. Error Policy

The experts of Destatis advised the NSO to establish a guideline determining how to react in the case of errors in published data, which cannot always be avoided although all staff members of an office take great care in performing their tasks. To restore confidence in official statistics in such a case, it is important to react reasonably as a Statistical Institute, and also in a uniform and transparent manner according to internationally accepted quality standards [9]. The NSO planned to develop such a guideline for error policy.

5. Conclusion

On initiative of the NSO, the Mongolian Statistical System was officially assessed at the end of the project in 2014 by EFTA, UN ESCAP and UN ECE. A quote from the report of the so-called “Adopted Global Assessment (AGA)” reads as follows: “First of all, it has to be mentioned that [the NSO] is eager to produce statistical information in compliance with internationally agreed methodology, definitions and recommendations. The [World Bank Twinning] project and other technical cooperation programmes have efficiently contributed to enhancing compliance of statistical output towards the highest quality standards. However, there is still room for improvement and recommendations provided hereunder could support this process.” [14]

This coincides with the feedback of the Destatis experts, stating that a major step in the direction towards a comprehensive data quality management system was undertaken by the NSO by raising the awareness for quality issues within the NSO and all bodies responsible for producing data within the Mongolian Statistical System.

Besides the exemplary commitment of the two statistical offices, the consultations of Destatis and implementation by the NSO were so successful due to the existence of worldwide applicable standards, which are laid down in professional and ethical quality frameworks, such as the ISI DPE, the UN FPOS and the EU COP.¹ They constitute an essential source of reference in any consulting activities. These frameworks offer a clear orientation for the beneficiary office for initiating key steps towards sustainable development and continuous innovation, irrespective of different cultural backgrounds and national specifics of statistical institutes. The clarity and precision of the codes in regard to professional and ethical aspects enable statisticians worldwide to act in line with an internationally acknowledged basis and to establish effective processes and methodologies.

Especially the UN FPOS implementation guidelines, which were published in 2015 by the UN, provide a useful orientation by making concrete recommendations for activities that enhance the practical implementation of the UN FPOS and ensure the independence of national statistical systems. The UN FPOS implementation guidelines contain concrete examples and experiences of implementation by UN Member States and a collection of statistical laws.

¹ Further examples for quality frameworks are, e.g. the Code of Good Practice in Statistics for Latin America and the Caribbean as well as the ASEAN Community Statistical System Code of Practice and the African Charter on Statistics and many more.

Professional and ethical frameworks are essential for building statistical capacities in statistical offices in developing countries. In addition to this, statisticians worldwide can rely on those codes and quality assurance structures once statistical independence is in danger [11]. The bodies of the ISI and the IAOS provide assistance in case of infringements and thus strengthen the National Statistical Offices and statisticians in their practical work.

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