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1. Introduction

A consultation document published in 1998, *Statistics: A Matter of Trust*¹, described the Government's aims for statistics in the following way 'Quality needs to be assured. Official statistics must be sufficiently accurate and reliable for the purposes for which they are required ... the production and presentation of official statistics needs to be free from political interference, and to be seen as such, so that the objectivity and impartiality of statistics is assured'.

Both the Government and the UK Statistics Authority have more recently endorsed that statement. However, the statistical service is more than just the figures themselves. Statistics must, of course, be as accurate and reliable as they reasonably can be, and free from political interference, but they must also be planned to meet the future needs of society and communicated in ways that are as helpful as possible to those who rely on them to inform their decisions – and, in some respects, that is all of us.

The UK has a decentralised statistical system. The Office for National Statistics (ONS) is the UK's National Statistical Institute but it is far from being its only producer of official statistics. Statistical production occurs across a wide range of government departments, the devolved administrations and other public bodies, covering all areas of public policy.

This highly decentralised approach, while uncommon internationally, offers some real benefits. But it also creates challenges in organisation and management. These challenges are, in some respects, different from those faced by more centralised statistical systems in other countries. In particular, the assurance of common standards and a common approach to planning to meet future needs, and to coherent communication of the statistics to the user, require an approach that can work across a large number of substantially autonomous organisations. The UK's new Code of Practice – the *Code of Practice for Official Statistics*² – and the assessment process, backed by the force of legislation, have been developed with the characteristics of the UK's decentralised system in mind.

Under the provisions of the *Statistics and Registration Service Act 2007*³, the Statistics Authority has a statutory function to assess sets of statistics against the Code of Practice for Official Statistics, with a view to determining whether it is appropriate for the statistics to be designated, or to retain their designation, as National Statistics. The Code has been informed by, and is consistent with, both the *UN Fundamental Principles of Official Statistics* and the *European Statistics Code of Practice*. The Statistics Authority has adopted a structure broadly similar to the European Code, which sets out a number of high-level principles, each of which is further amplified by a series of more detailed practices (or 'indicators' in the European Code). The European Code has proved an effective basis for the international process of 'peer review' and the Statistics Authority believes that a similar approach will provide a sound foundation for the Statistics Authority's assessment function. The new Code was deliberately more demanding than previous codes, in order to help drive up standards.

Each Assessment is published in an assessment report⁴, which includes a statement about designation as National Statistics. Designation as National Statistics means that the statistics are

¹ http://www.statistics.gov.uk/about_ns/downloads/GreenPaperSummaryofResponses.pdf

² <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/code-of-practice-for-official-statistics.pdf>

³ http://www.opsi.gov.uk/ACTS/acts2007/ukpga_20070018_en_1

⁴ <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html>

deemed to comply with the Code. Compliance may be broadly interpreted to mean that the statistics meet identified user needs; are produced, managed and disseminated to high standards; and are well explained. It also signifies that the Statistics Authority judges the statistics to be readily accessible, produced according to sound methods, and managed impartially and objectively in the public interest. (Several hundred sets of statistics already have National Statistics designation, by virtue of the legislation, and each of these will be subject to formal assessment in the period 2009 to 2012.)

Designation as National Statistics will sometimes be granted in cases where some changes still need to be made to meet fully the requirements of the Code, on condition that steps (called 'Requirements'⁵) are taken by the producer body, within a stated timeframe, to address the weaknesses. In those cases, the producer body is required to report to the Statistics Authority the steps taken, prior to unconditional designation being confirmed (or the statistics de-designated). To date, all Assessments have led to conditional designation, partly reflecting the higher standards required by the new Code. Following publication of the assessment report, the producer body is required to report back to the Statistics Authority what it has done to meet the requirements. Once the requirements have been met, the Authority Board, on the recommendation of the Assessment team, will designate the statistics unconditionally.

2. Assessment

2.1 The Assessment Programme

The collection and analysis of information about Code compliance proceeds as follows.

First, initial meetings are held with producers, to agree the scope and timing of the assessments, to explain the assessment process, and to discuss the type of evidence that the Assessment team needs to see. Following the meeting, producers are asked to provide some background information about the statistics and details of known users, then to complete a *Written Evidence for Assessment (WEfA)* template containing evidence about how the Code is complied with relating to the set of statistics being assessed.

In parallel, the Assessment team undertakes its own research and consults with a range of users, suppliers and other stakeholders as it considers appropriate. The Assessment team then reviews the evidence, discussing any gaps in evidence in a follow up meeting with the producers. The team then prepares an assessment report that documents the main findings. The statistical producers and National Statistician are given the opportunity to comment on the factual accuracy of the draft report. Reports are subsequently signed off by a subgroup of the Authority Board – The Assessment Committee – before being approved by the Board itself.

Many individual statistics are produced as part of suites of outputs that meet users' needs in different ways. Typically, a group of statistics could have common users, be based on the same data and be produced by the same team. It is therefore logical and efficient to assess those outputs together. The list of approximately 1200 existing National Statistics was grouped together, for the purpose of assessment, into around 250 groups. Groups were formed based on advice from statistical producers. The programme of assessments is prioritised, helpfully informed by statistical producers' information about what they saw as the relative priorities for the assessment of the groups of statistics that they are responsible for. This judgement was based on their consideration of a number of detailed elements of importance.

The overall approach to assessment outlined above applies to all groups of statistics, whether they be of high or low importance. However, for statistics that we consider to be relatively non-contentious a streamlined assessment process is in place. The Assessment team takes account of

⁵ A 'Requirement' is a formal recommendation in an assessment report. Reports also make 'Suggestions', which are not formally required for compliance with the Code.

the importance of the statistics in determining the level of evidence needed to demonstrate compliance with the Code. For non-contentious statistics, we are content to collect more evidence face-to-face, supplemented with any relevant documentation we need to see afterwards. We also write a shorter form of report for non-contentious statistics, based on exception reporting – listing those areas where enhancements are needed, and only writing text to support views on good practice and the enhancements required.

Moving towards grouped assessments allowed the team to make much faster inroads into the full programme of the 1200 or so National Statistics products than would otherwise have been possible. Taking account of the perceived level of importance ensures that the level of scrutiny is proportionate to the level of risk. Streamlining the approach to evidence gathering and meetings with producers will make for a more efficient assessment process, saving time for both producers and the Assessment team.

2.2 Measuring Success

The following might be regarded as a suite of indicators that will help us to reach a view about the effectiveness of assessment.

- i. *The number and nature of requirements and suggestions per assessment report.* We would expect the number of these to reduce over time and for the nature of them to change from more to less significant. For example, we might expect to see less frequent references to the need for producers to engage with a broader user base.
- ii. *The proportion of assessments that result in unconditional designation.* It would be expected that the number of these would increase over time as producers learn from their and other organisations' experience of assessment.
- iii. *Proactive behaviour prior to assessment.* This may be evidenced by producers proactively seeking advice from the National Statistician, prior to assessment, to ensure they are able to comply with the Code or at least are aware of areas that need improvement.
- iv. *Positive feedback from producers about the process and the actions of the Assessment team.* This would imply that the relationship between the producer and the Assessment team has been positive and that the producers found the overall process positive, and might lead to producers promoting the process when speaking with other producers.
- v. *Identification and uptake of 'best practice'.* If the Assessment team identifies activities or behaviours that it regards as particularly positive, this best practice might be adopted elsewhere.
- vi. *Positive feedback from users about the process.* This would imply that the users of statistics think the assessment process is worthwhile in stimulating change that meets their needs.
- vii. *Positive feedback from opinion formers.* While we might not expect opinion formers to be aware of the details of assessment, we might expect them to become aware of the Statistics Authority's activities, in particular that the Statistics Authority has processes to monitor and improve Code compliance, and we might expect them to be aware that these processes are consistent with the Statistics Authority's aims and objectives.
- viii. *Adoption of similar processes in other countries.* This idea is proposed on the basis that imitation is the sincerest form of flattery. Other than the peer review approach used across the European Statistical System, we are not aware of any country that systematically and publicly monitors compliance with their codes of practice.

3. Strengths and weaknesses

The Statistics Authority introduced the Code of Practice for Official Statistics, after public consultation, in January 2009. The Code was explicitly designed to set a challenging standard across all aspects of the production and publication of official statistics. It thus incorporated some pressure for continuing development and it was not therefore surprising that none of the sets of statistics that were covered in the first assessment reports were found to be Code compliant in every respect. However, the degree of compliance was in each case sufficient for a conditional

designation as National Statistics to be given. As at April 2010, the Authority Board had confirmed designation of 35 sets of statistics from 20 assessment reports.

While the degree of compliance with the main principles of the Code was generally good, this varied from one principle to another. Compliance with those parts of the Code relating to user needs and user engagement, frankness and accessibility and release practices was weakest, reflecting the fact that the new Code introduced more challenging standards in these areas than previously. Compliance with the other principles, particularly those relating to integrity, proportionate burden and resources was strongest.

The term ‘user’ of statistics is used here to mean any organisation or person whose decisions or actions are beneficially influenced by official statistics; and similarly ‘potential user’ is anyone who might be so influenced. This need not mean that the user directly inspects statistics or performs calculations. It may be more a matter of being influenced by messages derived from the statistics – for example, if crime statistics suggest that thefts of mobile phones are increasingly common, steps to prevent such thefts are deemed to be a use of statistics; and such uses create their own demand for statistical data to be available in particular forms and levels of detail. This interpretation is central to the Code.

Figure 1 shows the aggregate proportion of Code practices⁶ that were complied with in the first 27 assessment reports (those published in 2009) as a whole. Whilst this illustrates the extent of Code compliance, it should be noted that it, in effect, attributes equal weight to each practice. In reality, users of statistics might regard some practices as more essential than others, for example those relating to the explanation of the quality and reliability of the statistics.

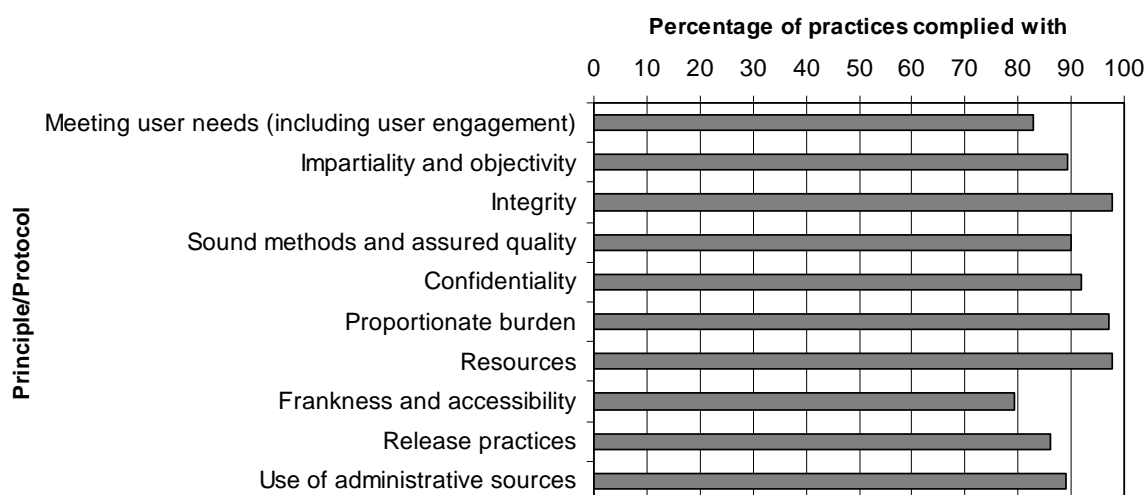


Figure 1: Percentage of practices complied with, by Principle and Protocol

The Assessment team identified three broad areas for statistical producers to improve Code compliance.

First, bearing in mind that statistics only realise their full potential when they are used in ways that serve the public interest, it would enhance value for money if there were more systematic engagement with those organisations and individuals whose decisions, or actions, are informed by official statistics. In particular, engagement with users, and potential users, outside government would help producers to understand both the nature of that use and how best to support it. Central government users tend to be well placed to make their needs known and ensure they are met, so the greatest return on further development is likely to come from supporting the wide diversity of beneficial uses of official statistics outside central government.

⁶ A practice is a specific element of the Code. There are 74 practices in total. The percentages in this chart are based on the 27 reports together.

Second, in the context of supporting the effective use of statistics, it would be beneficial to explain the statistics more fully, including trends over time and geographical patterns. Enhancing the narrative (commentary) accompanying statistics will help the user understand and make effective use of the data. That commentary needs to include appropriate details about the context in which the statistics are produced, the main features, and above all, their known limitations. The Code requires that ‘information on the quality and reliability of statistics in relation to the range of potential uses’ should be published alongside the statistics themselves. It would be helpful if producer organisations were to review their outputs ahead of the formal assessment process to ensure compliance with the Code.

Third, the Code requires a range of background documents to be published by each producer organisation. Publishing such documents makes a wide range of information readily available, thereby increasing transparency and demonstrating the openness, integrity and trustworthiness of those aspects of the statistical production process. Most of the information needed for these documents should already exist in some form, and hence publishing them should be relatively straightforward and we recommend that any gaps in documentation be addressed ahead of formal assessment reports.

The remainder of this section develops these points.

3.3 Meeting user needs and user engagement

The Code of Practice for Official Statistics increases the emphasis on the role of the user, and the need for statistical producers to consider the wider use that is – or may be – made of statistics. In addition to meeting specific policy needs within government, there is increasing demand by people working in research, academia, business, policy think-tanks, and from the wider public, for statistics on many aspects of social and economic life. Statistics must, of course, be as accurate and reliable as they reasonably can be, and free from political interference. In addition, they must also be planned to meet the future needs of society, and communicated in ways that are as helpful as possible to those who rely on them to inform their decisions.

The Statistics Authority recognises that the needs of the users of statistics, now and in the future, should be central to the standards set for producers of official statistics. The Code encapsulates the need to engage effectively with users in order to maximise the public value derived from the considerable investment in official statistical activity.

The first assessments found considerable evidence of producers engaging effectively with users within government. Examples of good practice in doing so included:

- working groups and technical/advisory groups;
- seminars and presentations; and
- a range of other meetings.

However, we found that producers often knew less about the users or use made of their statistics beyond their own organisation. Effective engagement with users, and therefore compliance with the Code, may be achieved through many different means – for example, meetings, seminars, newsletters, consultations, internet feedback, and the use of tear-off slips in publications. The important element is that the engagement is effective in identifying the needs of users, and proportionate to the importance of the statistics under consideration, in order that the producer can understand and consider how best to meet those needs.

We acknowledge that it may take some time for statistical producers to become fully engaged with a wide range of users, and to identify new users. We would be content, at this stage, with producers making, and publishing, ‘reasonable’ assumptions about uses and potential uses – which users can then comment upon themselves.

The Code also requires producers to understand and summarise the requirements of users in relation to the quality of the statistics, given their decision making needs. Producers should also provide information about significant unmet needs – either relating to the statistical information itself, or to aspects of quality. They should also provide any plans to meet these needs, or the reasons why they remain unmet, together with the implications for particular users.

Similarly, the commentary accompanying statistics rarely says much about the use made of the statistics, and the strengths and weaknesses of the figures in relation to those uses. We think that this is relatively easy to do at a general level, and should be possible for producers to address as part of enhancing their understanding about how their statistics are, and might be, used.

3.2 Frank and accessible commentary

The Code requires statistics to be accompanied by commentary to aid their interpretation. The characteristics of helpful commentary include that:

- the main messages be summarised, early in the commentary;
- it describes the policy or operational context for the statistics, including any targets that the statistics are used to measure progress against;
- it describes the statistics in neutral language, and where appropriate, shows a balance of 'positive' and 'negative' points;
- comparisons over time be presented relative to a baseline that is chosen for statistical reasons;
- it avoids specialist terms and jargon in order to make it accessible to non-expert readers; and
- it explains to the user the ways that the statistics can be used, and any limitations.

We identified some cases where data were released with no accompanying commentary. The Assessment team recognised that some of these statistics are of a specialist nature, but considered that a short commentary, drawing attention to the main trends, would improve accessibility for the non-expert user.

In addition to commentary about the statistics themselves, the Code requires that 'information on the quality and reliability of statistics in relation to the range of potential uses' be published. Many statistics were accompanied by good documentation about their quality. The Code does not set down absolute levels of quality – statistics that are fit-for-purpose for one user, or for one purpose, may be less fit for another. The Code requires producers to ensure that statistics are of a level of quality that meets users' needs, and to explain the quality of published statistics in terms of the quality dimensions agreed by the European Statistical System: relevance, accuracy, timeliness and punctuality, accessibility and clarity, comparability, and coherence. The presentation of quality measures may therefore range from the quantification of sampling errors, through to higher-level indications of the usefulness of estimates in relation to different uses.

The publication of quality measures was generally not as wide-ranging as that implied by the European Statistical System's definition of quality. Sampling errors are often relatively simple to measure and present for survey estimates. Non-sampling errors, such as coverage errors, measurement errors and processing errors – which relate to statistics produced from surveys, censuses and administrative data alike – are often more difficult to measure, but may be at least as important as sampling errors. Producers should ensure that the whole range of potential errors is considered when presenting information about quality. In the absence of quantified information, we would be content with a basic description of the types of biases that may exist in statistics, their likelihood, and an indication of their magnitude – together with evidence of plans to improve users understanding of their potential impact on the figures. This will help users to be able to understand the strengths and limitations of the statistics more clearly.

Some weaknesses in the standard of presentation of charts and tables became apparent in these early assessments, and we think that these should be relatively straightforward to address. The presentation of statistics was the subject of a Statistics Commission report – *Releasing Official*

*Statistics – A Review of Statistical First Releases*⁷, in 2008. The Statistics Authority supplemented this in January 2009 with a *Monitoring and Assessment Note*⁸ which outlined a range of criteria to help producers to consider the quality of the presentation of their statistics.

The accessibility of statistics, and information about statistics, is a central theme of the Code. Most statistics are available now on departmental websites and through the National Statistics Publication Hub. However, users have repeatedly pointed out to us that information, while available in plentiful supply, is often difficult to locate on websites. The accessibility of ONS's statistics on its website is seen as particularly problematic.

3.3 Publication of documents

In the interest of openness and transparency, the Code requires producer bodies to publish a range of documentation. We recommend that these be clearly linked from the statistics home page (or equivalent) to enhance clarity and accessibility. The types of documents that the Code requires are:

- a timetable of National Statistics releases over the coming year;
- a confidentiality statement relating to the National Statistics are produced;
- reports of any identified errors in National Statistics;
- reports on any areas where the production of National Statistics is exempt from the Code or where the Code has not been applied properly (breaches);
- a revisions policy;
- a statement of administrative sources, outlining the steps taken to maximise the opportunities for re-use of existing data; and
- lists of those people who have pre-release access to the statistics.

4. Improvements made to statistics following assessment

To date, improvements have been reported to the Statistics Authority relating to 35 statistical outputs assessed. Many of the improvements that have been made relate to making more documentation available, and more accessible on producers' websites. This section briefly describes some examples of improvements made to statistics following assessment.

The Scottish Government has published a brief statement about users and uses of its Scottish Health Survey⁹. This statement includes details of the types of uses – monitoring trends, assessing long-term impacts of health policies, teaching, research, data linkage for further analysis – along with the users and links to further information. We think that the publication of such information is important partly because it provides an accessible rationale for the resources invested in the production of statistics, and partly because it allows other users and potential users to respond with other uses which they have of the statistics – in turn strengthening the 'business case' material.

The Department for International Development (DfID) had previously removed the National Statistics status from one of its statistics for non-statistical reasons. The Secretary of State for International Development has confirmed that DfID now complies with the requirements of the relevant aspect of the Code – namely that the statistical Head of Profession has sole responsibility for deciding on statistical methods, standards and procedures, and on the content and timing of statistical releases.

Reported Road Casualty Statistics produced by the Department for Transport (DfT), provide a good example of improvements made to methods and documentation following assessment. The

⁷ <http://www.statscom.org.uk/uploads/files/reports/Releasing%20Official%20Statistics%20final.pdf>

⁸ <http://www.statisticsauthority.gov.uk/assessment/monitoring-and-assessment-notes/monitoring---assessment-note-2-2009.pdf>

⁹ <http://www.scotland.gov.uk/Topics/Statistics/Browse/Health/scottish-health-survey/uses>

existing statistics are based on a police data reporting system, which leads to under-reporting of road casualties. Alternative sources of data confirm the under-reporting. Following the assessment of those statistics, DfT has now set out its best estimate of the total number of road casualties based on the National Travel Survey, and other sources. These are published alongside the statistics based on the police reporting system. DfT has also provided a wide range of additional contextual information about these statistics.

The Department for Children, Schools and Families (DCSF) has taken positive steps to exploit existing data sources related to looked-after children by creating links between different datasets. At the time of the assessment, DCSF was involved in two data-matching projects to make better use of existing data sources on looked-after children in England. It aimed to link data collected in the new Children in Need Census to replace the data collection on the ethnicity of looked-after children. It is also developing a link between the Outcome Indicator data and the National Pupil Database. This matched data source will provide information to replace part of the data collection for the Outcome Indicators without altering the information it is able to publish. DCSF told us that it also hopes to improve the information on comparisons between looked-after children and their peers.

5. Concluding remarks

The assessment system is beginning to deliver real benefits and has given us a large portfolio of reports that will both help to push improvements along and demonstrate that for the most part, high standards are being met.

In response to the early assessment programme, we are beginning to see improvements to the way that statistics are produced and presented. We are also beginning to see better engagement with the requirements of the Code, for example through producer bodies seeking to identify improvements that need to be made ahead of the formal assessment of their statistics.

Feedback on the assessment process from statisticians employed in bodies that produce official statistics has been mixed. Some statisticians have commended the process, others found it unhelpful and overly negative. This is the first time that their work has been subject to systematic public assessment and the standards against which judgements are made in assessment reports are often new or subject to revised interpretation.

The assessment process is still evolving. Compliance and the associated designation and use of the National Statistics label are intended to be strong positive endorsements in themselves. The Statistics Authority takes the view that achieving that endorsement should properly involve a degree of challenge and pressure for continuing improvement. We believe the statistical service is more worthy of public confidence, and international and professional respect, precisely because it is subject to a testing external regime of assessment.

It is probably too early to canvass feedback from other stakeholders – the opinion formers that were referred to in Section 2.2. However, the Parliamentary committee that scrutinises government activity on transport matters used the Road Casualty Statistics assessment report as the basis for a formal hearing in November 2009, at which the Head of Assessment was questioned about the assessment of those statistics.