Assessment of compliance with the Code of Practice for Official Statistics

Northern Ireland Multiple Deprivation Measure

(produced by Northern Ireland Statistics and Research Agency)
About the UK Statistics Authority
The UK Statistics Authority is an independent body operating at arm’s length from government as a non-ministerial department, directly accountable to Parliament. It was established on 1 April 2008 by the Statistics and Registration Service Act 2007.

The Authority’s overall objective is to promote and safeguard the production and publication of official statistics that serve the public good. It is also required to promote and safeguard the quality and comprehensiveness of official statistics, and good practice in relation to official statistics.

The Statistics Authority has two main functions:
1. oversight of the Office for National Statistics (ONS) – the executive office of the Authority;
2. independent scrutiny (monitoring and assessment) of all official statistics produced in the UK.

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The Statistics and Registration Service Act 2007 gives the UK Statistics Authority a statutory power to assess sets of statistics against the Code of Practice for Official Statistics. Assessment will determine whether it is appropriate for the statistics to be designated as National Statistics.

Designation as National Statistics means that the statistics comply with the Code of Practice. The Code is wide-ranging. Designation can be interpreted to mean that the statistics: meet identified user needs; are produced, managed and disseminated to high standards; and are explained well.

Designation as National Statistics should not be interpreted to mean that the statistics are always correct. For example, whilst the Code requires statistics to be produced to a level of accuracy that meets users’ needs, it also recognises that errors can occur – in which case it requires them to be corrected and publicised.

Assessment Reports will not normally comment further on a set of statistics, for example on their validity as social or economic measures. However, Reports may point to such questions if the Authority believes that further research would be desirable.

Assessment Reports typically provide an overview of any noteworthy features of the methods used to produce the statistics, and will highlight substantial concerns about quality. Assessment Reports also describe aspects of the ways in which the producer addresses the ‘sound methods and assured quality’ principle of the Code, but do not themselves constitute a review of the methods used to produce the statistics. However the Code requires producers to “seek to achieve continuous improvement in statistical processes by, for example, undertaking regular reviews”.

The Authority may grant designation on condition that the producer body takes steps, within a stated timeframe, to fully meet the Code’s requirements. This is to avoid public confusion and does not reduce the obligation to comply with the Code.

The Authority grants designation on the basis of three main sources of information:

i. factual evidence and assurances by senior statisticians in the producer body;
ii. the views of users who we contact, or who contact us, and;
iii. our own review activity.

Should further information come to light subsequently which changes the Authority’s analysis, it may withdraw the Assessment Report and revise it as necessary.

It is a statutory requirement on the producer body to ensure that it continues to produce the set of statistics designated as National Statistics in compliance with the Code of Practice.
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Summary of findings

1.1 Introduction

1.1.1 This is one of a series of reports\(^1\) prepared under the provisions of the Statistics and Registration Service Act 2007\(^2\). The report covers publications of the Northern Ireland Multiple Deprivation Measure produced by the Northern Ireland Statistics and Research Agency\(^3\) (NISRA), the most recent version of which was Northern Ireland Multiple Deprivation Measure 2010\(^4\) (NIMDM 2010). Electronic versions of the general report, user guidance, blueprint document and description of indicators, along with links to the data and the interactive mapping facility, can all be found on the NIMDM web pages\(^5\).

1.1.2 This report was prepared by the Authority’s Assessment team, and approved by the Board of the Statistics Authority on the advice of the Head of Assessment.

1.2 Decision concerning designation as National Statistics

1.2.1 The Statistics Authority judges that the statistics covered by this report are readily accessible, produced according to sound methods and managed impartially and objectively in the public interest, subject to the caveats in this report. The Statistics Authority confirms that the statistics detailed in 1.1.1 are designated as National Statistics, subject to NISRA implementing the enhancements listed in section 1.5 and reporting them to the Authority by April 2011.

1.3 Summary of strengths and weaknesses

1.3.1 NISRA has undertaken extensive user consultation about the content of its Multiple Deprivation Measures (NIMDM), and has involved users in its development through advisory groups. The most recent consultation informed the development of NIMDM 2010 and also identified issues to be considered in future methodological reviews.

1.3.2 Although information is provided about the quality of the individual indicators, there is a lack of such information for the domain indices and the overall index. There is also a lack of information published about statistical disclosure control methods.

1.3.3 Similar indices of multiple deprivation are produced across the four UK administrations and regular contact between the statisticians producing the indices helps ensure all four administrations continue to follow similar methods.

\(^{1}\) http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html
\(^{3}\) NISRA is an executive agency of the Department of Finance and Personnel.
\(^{5}\) http://www.nisra.gov.uk/deprivation/nimdm_2010.htm
The administrations also work together to solve common methodological problems.

1.4 Detailed recommendations

1.4.1 The Assessment team identified some areas where it felt that NISRA could strengthen its compliance with the Code. Those which the Assessment team considers essential to enable designation as National Statistics are listed in section 1.5. Other suggestions, which would improve the statistics and the service provided to users but which are not formally required for their designation, are listed at annex 1.

1.5 Requirements for designation as National Statistics

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
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<tbody>
<tr>
<td>Requirement 1</td>
<td>Publish more information about how the domain weights are derived (para 3.6)</td>
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<td>Requirement 2</td>
<td>Publish information about the quality of the domain indices and the overall index (para 3.7)</td>
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<td>Requirement 3</td>
<td>Publish information about the disclosure control methods used in NIMDM (para 3.12)</td>
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<td>Requirement 4</td>
<td>Ensure that current supporting documentation is sufficient to enable users to make informed use of the data, and have plans in place to ensure that supporting documentation is available for future publication of NIMDMs (para 3.17)</td>
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<tr>
<td>Requirement 5</td>
<td>Review the Statement of Administrative Sources to ensure that it includes all administrative data sources used in the production of official statistics (para 3.24).</td>
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2 Subject of the assessment

2.1 The Northern Ireland Multiple Deprivation Measures identify the relative level of multiple deprivation in small areas across Northern Ireland in a consistent way. Early deprivation measures for Northern Ireland were based on the 1971, 1981 and 1991 Censuses. Since the late 1990s, the methodology for producing deprivation indices has been significantly developed by the Department of Social Policy and Social Work, University of Oxford (now the Social Disadvantage Research Centre (SDRC))\(^6\). NISRA commissioned the Centre to produce updated deprivation measures, primarily based on data from administrative sources; these were published in 2001\(^7\) and updated in 2005\(^8\).

2.2 NIMDM 2010 is constructed from seven domains, representing different but often related, types of deprivation, which are combined to produce a single overall ranking of multiple deprivation. The following seven domains are constructed from 52 indicators:

- Income
- Employment
- Health and disability
- Education, skills and training
- Proximity to services
- Living environment
- Crime and disorder

2.3 NIMDM 2010, principally based on the methodology developed by SDRC, was produced by NISRA statisticians, overseen by a steering group\(^9\), and peer reviewed by SDRC.

2.4 NIMDM 2010 is published for super output areas and Census 2001 output areas\(^10\). Domain indices are published for smaller areas (Census output area) for income, employment, proximity to services and crime and disorder domains, for which the indicator data are sufficiently robust. Summary statistics about deprivation are also provided for electoral wards, local government districts and Northern Ireland Assembly areas.

2.5 NIMDM 2010 is produced from Census data and a range of administrative data, including police recorded crime, Incapacity Benefit claimant numbers and the number of people in households in receipt of Income Support (from the Department for Social Development), and the number of people in households

\(^6\) http://www.spsw.ox.ac.uk/fileadmin/static/sdrc/media/OCSI.html
\(^7\) http://www.nisra.gov.uk/deprivation/nimdm_2001.htm
\(^8\) http://www.nisra.gov.uk/deprivation/nimdm_2005.htm
\(^9\) The steering group comprised representatives from the Northern Ireland (NI) Government departments, NI Housing Executive, Rural Development Council, NI Council for Voluntary Action, Society for Local Authority Chief Executives and the Equality Commission.
\(^10\) Super output areas are geographical units constructed from Census output areas (approximately 150 households). They were designed for the purposes of disseminating small area statistics, and were constructed to have similar population size (average of 2000 people), and follow electoral ward boundaries http://www.nisra.gov.uk/aboutus/default.asp90.htm
in receipt of Working and Child tax credit from HM Revenue and Customs). The next major update is planned for 2013-14, to use data from the 2011 Census.

2.6 NIMDM is used by a wide range of organisations from central and local government to charitable trusts, academic researchers and community groups. Uses include: targeting geographic areas for policy intervention and funding; for the urban regeneration strategy ‘Neighbourhood Renewal’; for the Acute Hospitals resource allocation formula by the Northern Ireland Department of Health, Social Services and Public Safety (DHSSPS); and to illustrate how the wider social environment affects health. NIMDM was also used to support applications for economic aid from the International Fund for Ireland in the 1990s and 2000s, and European Structural Funds via the Peace II programme.

2.7 Broadly equivalent indices are produced for England by the Department for Communities and Local Government (DCLG), for Scotland by the Scottish Government (SG) and for Wales by the Welsh Assembly Government. The assessments of the Scottish and Welsh indices were carried out in parallel with the Northern Ireland assessment and the reports have been published. The English index will be considered for assessment later, once the future plans for the English IMD are clearer.

2.8 NIMDM is funded by the research budget of the Equality and Social Needs Steering Group, which is chaired by NISRA and made up of senior NI government officials from all Northern Ireland Government departments. The total cost of producing NIMDM is £104,000.

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11 [http://www.dsdni.gov.uk/index/urcdg-urban_regeneration/neighbourhood_renewal.htm](http://www.dsdni.gov.uk/index/urcdg-urban_regeneration/neighbourhood_renewal.htm)
13 [http://www.dfpni.gov.uk/index/finance/european-funding/eu-peace-2.htm](http://www.dfpni.gov.uk/index/finance/european-funding/eu-peace-2.htm)
3 Assessment findings

Principle 1: Meeting user needs

The production, management and dissemination of official statistics should meet the requirements of informed decision-making by government, public services, business, researchers and the public.

3.1 NISRA engages with key users of NIMDM via the Deprivation Steering Group which includes representatives of users of the NIMDM within central government departments, local government, the community and voluntary sector and the rural sector. The member list and terms of reference for this group, as well as presentations given at the meetings and minutes, are published on the NIMDM web pages.

3.2 NISRA carried out a consultation exercise between July and November 2009 to inform decisions about changes to domains for the NIMDM 2010. The responses to this consultation were published on the NIMDM web pages along with a Blueprint document which summarises the main concerns and suggestions for the NIMDM 2010.

3.3 NISRA has identified NIMDM users via this consultation and via planned events. NISRA keeps a log of NIMDM queries received via email and telephone as a record of some of the uses and users of the data. NISRA use this information to feed into plans for further guidance and training. We suggest that NISRA develop a mechanism for encouraging feedback from users to increase its awareness of the users and uses of the data.

19 http://www.nisra.gov.uk/deprivation/nimdm_2010.htm (Steering Group section)
Principle 2: Impartiality and objectivity

Official statistics, and information about statistical processes, should be managed impartially and objectively.

3.4 NIMDM 2010 is available in both hard copy and free of charge on the internet, via the National Statistics Publication Hub and the NISRA’s website. The statistics are presented impartially and objectively.
Principle 3: Integrity

At all stages in the production, management and dissemination of official statistics, the public interest should prevail over organisational, political or personal interests.

3.5 No incidents of political pressures, abuse of trust or complaints relating to professional integrity, quality or standards were reported to or identified by the Assessment team.
Principle 4: Sound methods and assured quality

Statistical methods should be consistent with scientific principles and internationally recognised best practices, and be fully documented. Quality should be monitored and assured taking account of internationally agreed practices.

3.6 Details of the methods used to produce NIMDM 2010 are described in the NIMDM 2010 Report. This report also describes the background to the development of spatial measures of deprivation in Northern Ireland. The Blueprint document published following the consultation in 2009, describes the process for selecting the indicators used in the index. The NIMDM 2005 Report describes the general approach to deriving weights but does not give details of the process. As part of the designation as National Statistics, NISRA should publish more information about how the domain weights are derived (Requirement 1).

3.7 The NIMDM 2010 includes a description of each of the indicators within the domains, highlights differences in the domains from the NIMDM 2005, and discusses how issues raised in the 2009 consultation have been addressed. The report also provides guidance about how to interpret the domain and sub-domain scores when provided. Further detail about the indicators, including timeliness, methodological and data quality issues are included in a supplementary report. However, no information is provided about the quality of either the domain indices or the overall index. As part of the designation as National Statistics, NISRA should publish information about the quality of the domain indices and the overall index (Requirement 2).

3.8 NISRA is currently working with the Office for National Statistics (ONS) to develop quality guidelines and in the interim are using the ONS publication Guidelines for Measuring Statistical Quality as a framework for reporting on data quality issues.

3.9 Indices of multiple deprivation are published in the four UK administrations using similar methods. Any differences reflect policy priorities, legislative systems and data availability. NISRA is a member the Four Nations IMD working group which is made up of representatives from each producer department. ONS also participates in the group in an advisory role. This group has discussed the need for a UK-wide index. It concluded that the development
of a single UK measure was not appropriate due to insufficient demand and because it would be limited by the lack of data available at a consistent, UK-wide small area geography. The group has developed guidance for the use of IMDs in allocating resources consistently across the UK\(^3\). Some users who contacted us as part of this Assessment identified a need for a UK-wide index, and felt that even a partial UK-wide index would be a step forward from having no UK-wide index. We suggest that NISRA work with the Welsh Assembly Government, the Scottish Government and DCLG to investigate and more fully explore the user need, data availability and options for a common geographical basis for an experimental UK-wide index.

3.10 ONS provides guidance on the use of small area statistics. It provides a page on its website\(^3\) which summarises the four UK administrations’ indices of multiple deprivation and provides links to their websites. The way in which the methods are described, the dissemination of the underlying data, and the methods used to summarise the deprivation within a local area, differ between administrations. This makes it difficult and time consuming for users who are interested in analysis of the indices from more than one administration. We suggest that NISRA work with the Welsh Assembly Government, the Scottish Government and DCLG to review the feasibility of providing documentation and data in a common format for each of the administrations’ indices, liaising with ONS as appropriate.

Principle 5: Confidentiality

Private information about individual persons (including bodies corporate) compiled in the production of official statistics is confidential, and should be used for statistical purposes only.

3.11 NISRA uses confidential data from existing sources to produce NIMDM. It has assured us that it takes all necessary steps to protect the confidentiality of the data it uses. NISRA follows the National Statistician’s guidance on confidentiality protection.\(^{35}\)

3.12 NIMDM and its domains are published as ranks and associated scores, which are not disclosive. The accompanying publication of underlying indicators is of non-disclosive data. NISRA applies disclosure control methods to ensure that individuals cannot be identified, but there is no information published on the disclosure control methods used. As part of the designation as National Statistics, NISRA should publish information about the disclosure control methods used in NIMDM\(^{36}\) (Requirement 3).


\(^{36}\) In relation to Principle 5 Practice 4 of the Code of Practice.
Principle 6: Proportionate burden

The cost burden on data suppliers should not be excessive and should be assessed relative to the benefits arising from the use of the statistics.

3.13 The data included in the NIMDM 2010 are from existing data sources so there is little burden on data suppliers. NISRA told us that recommendations for future deprivation measures will be developed in conjunction with data suppliers, taking data availability into account to ensure that the burden is minimised.
Principle 7: Resources

The resources made available for statistical activities should be sufficient to meet the requirements of this Code and should be used efficiently and effectively.

3.14 NISRA statisticians told us that in a recent review of the research programme of the Equality and Social Needs Steering Group (ESNSG), NIMDM was identified as the most widely used and relevant output they funded\(^{37}\).

3.15 The inter-departmental Statistics Coordinating Group (SCG) coordinates the identification of new work and prioritises resources across government. In addition to resources from ESNSG, any additional resources needed for NIMDM are agreed with data suppliers, with any conflicts addressed by SCG.

3.16 Staff are recruited centrally using the recruitment services for Northern Ireland government departments\(^{38}\). NISRA statisticians use learning and development plans and competency frameworks which have been developed centrally by NI Civil Service Human Resources. Professional and Technical competences are drafted by NISRA Corporate Services and cleared with Human Resources in the Department for Finance and Personnel.

\(^{37}\) [http://www.ofmdfmni.gov.uk/cross_departmental_equity_and_social_needs_research_strategy_evaluation.pdf_22.9mb_.pdf](http://www.ofmdfmni.gov.uk/cross_departmental_equity_and_social_needs_research_strategy_evaluation.pdf_22.9mb_.pdf)

\(^{38}\) [http://www.nicsrecruitment.gov.uk/](http://www.nicsrecruitment.gov.uk/)
Principle 8: Frankness and accessibility

Official statistics, accompanied by full and frank commentary, should be readily accessible to all users.

3.17 The 2010 indices were published on 31 March, while the accompanying NIMDM 2010 Report was not published until 26 May 2010. When the data were released, information was available in the Blueprint document about the methods adopted, as well as in a Guidance document 39 relating to the NIMDM 2005. This meant that, for this two month period, insufficient commentary and information about the quality of these data were available. NISRA statisticians told us that the reason for the later publishing of the report was because they published the statistics as soon as they were judged ready. As part of the designation as National Statistics, NISRA should ensure that current supporting documentation is sufficient to enable users to make informed use of the data, and have plans in place to ensure that supporting documentation is available for future publication of NIMDMs 40 (Requirement 4).

3.18 The NIMDM 2010 Report contains a well-organised analysis of the data with complementary charts and maps to illustrate the statistics. The commentary is clear with well presented tables and maps. A range of supporting documents and maps is available on NISRA’s website with some of the maps in fixed format and others user-generated. A large print version of the report is available on NISRA’s website and a Braille version is available on request.

3.19 The majority of the data used in compiling these statistics are made available through the Northern Ireland Neighbourhood Statistics System 41, although due to data confidentiality, these are not always available for super output areas. Information about the availability of data is included in the Description of Indicators report 42. We suggest that NISRA consider whether it would be possible to make more data available and whether there is a need for associated guidance to enable the analysis and re-use of the underlying indicator data.

3.20 NIMDM is a relative measure of deprivation and as such cannot be used to measure change over time or to describe absolute levels of deprivation. This is explained in several documents including the NIMDM 2010 and User guidance 43, but some users commented that they needed more guidance to help them interpret the index, including change over time. NISRA statisticians told us that they have plans to develop case studies to illustrate the various ways NIMDM can be used. We suggest that they work with colleagues in the other UK administrations to develop consistent advice and guidance.

40 In relation to Principle 8 Practice 1, Principle 8 Practice 6 and Protocol 1 Practice 4
41 http://www.ninis.nisra.gov.uk
Protocol 1: User engagement

Effective user engagement is fundamental both to trust in statistics and securing maximum public value. This Protocol draws together the relevant practices set out elsewhere in the Code and expands on the requirements in relation to consultation.

3.21 The requirements for this Protocol are covered elsewhere in this report.
Protocol 2: Release practices

Statistical reports should be released into the public domain in an orderly manner that promotes public confidence and gives equal access to all, subject to relevant legislation.

3.22 The pre-release access list for NIMDM - six people - is published on the NISRA website.

3.23 Releases of statistics by NISRA are at 9.30 am and are pre-announced on the National Statistics Publication Hub.

Protocol 3: The use of administrative sources for statistical purposes

Administrative sources should be fully exploited for statistical purposes, subject to adherence to appropriate safeguards.

3.24 The Department for Finance and Personnel (DfP) has published a Statement of Administrative Sources. This is not complete as some of the data used in NIMDM or with potential to be used are derived from administrative sources not included in the statement. As part of the designation as National Statistics, DfP should review the Statement to ensure that it includes all administrative data sources used in the production of official statistics (Requirement 5).


46 In relation to Protocol 3 Practice 5a and Protocol 3 Practice 5c of the Code of Practice.
Annex 1: Suggestions for improvement

A1.1 This annex includes some suggestions for improvement to NIMDM, in the interest of the public good. These are not formally required for designation, but the Assessment team considers that their implementation will improve public confidence in the production, management and dissemination of official statistics.

Suggestion 1
Develop a mechanism for encouraging feedback from users to increase its awareness of the users and uses of the data (para 3.3)

Suggestion 2
Work with colleagues in the other UK administrations to investigate and more fully explore the user need, data availability and options for a common geographical basis for an experimental UK-wide index (para 3.9)

Suggestion 3
Work with colleagues in the other UK administrations to review the feasibility of providing documentation and data in a common format for each of the UK indices (para 3.10)

Suggestion 4
Consider whether it would be possible to make more data available and whether there is a need for associated guidance to enable the analysis and re-use of the underlying indicator data (para 3.19).

Suggestion 5
Work with colleagues in the other UK administrations to develop consistent advice and guidance (para 3.20)
Annex 2: Summary of assessment process and users’ views

A2.1 This assessment was conducted from April to August 2010.

A2.2 The Assessment team – Elspeth Maclean, Cecilia Macintyre, Ed Swires-Hennessy and Emma Bowditch - agreed the scope of and timetable for this assessment with representatives of NISRA in April 2010. The Written Evidence for Assessment was provided on 10 June 2010. The Assessment team subsequently met NISRA in July 2010 to review compliance with the Code of Practice, taking account of the written evidence provided and other relevant sources of evidence.

Summary of users contacted, and issues raised

A2.3 Part of the assessment process involves our consideration of the views of users. We approach some known and potential users of the set of statistics, and we invite comments via an open note on the Authority’s website. This process is not a statistical survey, but it enables us to gain some insights about the extent to which the statistics meet users' needs and the extent to which users feel that the producers of those statistics engage with them. We are aware that responses from users may not be representative of wider views, and we take account of this in the way that we prepare assessment reports.

A2.4 The Assessment team received 19 NIMDM specific responses and 12 responses covering all four UK countries from the user consultation. The respondents were grouped as follows:

- Northern Ireland Devolved Government 7
- Central Government 1
- Local Government 1
- Academia 10
- NHS 2
- Other public sector 3
- Charities 4
- Other 3

A2.5 Overall, the users who responded were satisfied with the statistics, the presentation of them and the accompanying commentary. Some users made particular reference to the usefulness of the interactive maps and the efficiency of NISRA in responding to queries. User requests received via the consultation included the development of a UK measure, further guidance on using the data, a specific disability measure and the ability to examine absolute changes in or between geographic areas.

Key documents/links provided

Written Evidence for Assessment document