

Assessment of compliance with the Code of Practice for Official Statistics

English Indices of Deprivation

*(produced by the Department for Communities and
Local Government)*

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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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NATIONAL STATISTICS STATUS

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.



All official statistics should comply with all aspects of the *Code of Practice for Official Statistics*. They are awarded National Statistics status following an assessment by the Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is a producer's responsibility to maintain compliance with the standards expected of National Statistics, and to improve its statistics on a continuous basis. If a producer becomes concerned about whether its statistics are still meeting the appropriate standards, it should discuss its concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

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1 Summary of findings

1.1 Introduction

- 1.1.1 This is one of a series of reports¹ prepared under the provisions of the *Statistics and Registration Service Act 2007*². The Act allows an appropriate authority³ to request an assessment of official statistics against the *Code of Practice for Official Statistics*⁴ in order for them to gain National Statistics status. This report is in response to such a request. The report covers the *English Indices of Deprivation*⁵ (*IoD*), produced by the Department for Communities and Local Government (DCLG)⁶.
- 1.1.2 This report was prepared by the Authority's Assessment team, and approved by the Regulation Committee on behalf of the Board of the Statistics Authority, based on the advice of the Director General for Regulation.

1.2 Decision concerning designation as National Statistics

- 1.2.1 The Statistics Authority judges that the statistics covered by this report do not fully comply with the *Code of Practice for Official Statistics* in the ways summarised in section 1.5. The Authority judges that the statistics published in *English Indices of Deprivation* cannot be designated as new National Statistics until the Authority has confirmed that appropriate actions have been taken by DCLG to meet the Requirements listed in section 1.5. DCLG is expected to report its completed actions to the Authority by August 2015 and prior to the publication of the 2015 Indices in September.
- 1.2.2 DCLG has informed the Assessment team that it has started to implement the Requirements listed in section 1.5. The Statistics Authority welcomes this.

1.3 Summary of strengths and weaknesses

- 1.3.1 DCLG has undertaken a comprehensive programme of activities involving users during the course of the updating of the Indices of Deprivation. It has sought to ensure that the preparation of *IoD 2015* is underpinned by a full understanding of the use made of the Indices, and user needs. Users were very positive about the engagement for the Indices. DCLG has also established effective working arrangements with its contractor, Oxford Consultants for Social Inclusion (OCSI).
- 1.3.2 OCSI acted promptly and thoroughly to respond to the Authority's guidance in the *Quality Assurance of Administrative Data*, and compiled a systematic

¹ <http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html>

² http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga_20070018_en.pdf

³ Subsection 12(7) of the Act defines 'appropriate authority' as Ministers of the Crown, Scottish Ministers, Welsh Ministers, Northern Ireland departments or the National Statistician

⁴ <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>

⁵ <https://www.gov.uk/government/collections/english-indices-of-deprivation>

⁶ <https://www.gov.uk/government/organisations/department-for-communities-and-local-government>

review of the quality issues for each administrative data source used in producing the Indices. DCLG says that it will respond to user feedback about the need for clearer statistical commentary and supporting material as it prepares *IoD 2015*, to aid the use and interpretation of the Indices.

1.4 Detailed recommendations

1.4.1 The Assessment team identified some areas where it felt that DCLG should improve the production and presentation of the *English Indices of Deprivation*. Those which are essential for DCLG to address in order to strengthen its compliance with the *Code* and to enable designation as National Statistics are listed – as Requirements – in section 1.5, alongside a short summary of the key findings that led to each Requirement being made. Other recommended changes, which the Assessment team considers would improve the Indices and the service provided to users but which are not formally required for their designation as National Statistics, are listed – as Suggestions – in section 1.6.

1.5 Requirements for designation as National Statistics

1.5.1 This section includes those improvements that DCLG is required to make in respect of its *English Indices of Deprivation (IoD 2015)* in order to fully comply with the *Code of Practice for Official Statistics*, and to enable designation as National Statistics.

Finding	Requirement	
DCLG has conducted a wide range of user engagement activities. It has not published reports describing users' views and experiences and the nature of their use of the Indices. DCLG should:	1	a) Accompany <i>IoD 2015</i> with a description of the use made of the statistics and the types of decisions that they inform b) Document the needs of users, how these needs have been met in <i>IoD 2015</i> , and the issues that it has not been able to meet and why (para 3.3).
Users asked for greater clarity over the timing of the preparation of IoDs. DCLG should:	2	Outline its plans for the future development and publication of the Indices, and explain how it intends to involve users in the development and evaluation of the statistics (para 3.4).
DCLG's user engagement strategy has focused on the	3	Put in place a process for managing user support and make this process clear to users (para 3.5).

<p>development of the Indices for release in 2015 and not yet addressed the need to support users after the release of the Indices. DCLG should:</p>		
<p>DCLG has yet to prepare the supporting quality information for the Indices and underlying data to accompany <i>IoD 2015</i>. DCLG should:</p>	<p>4</p>	<p>a) Provide straightforward explanations of the quality assurance arrangements b) Explain the statistical methods adopted c) Make clear how the quality of the statistics are produced to a level that meets users' needs (para 3.10). In meeting this requirement, DCLG should take into consideration the Authority's <i>Administrative Data Quality Assurance Toolkit</i>.</p>
<p>DCLG is currently preparing its statistical outputs for <i>IoD 2015</i>. Users told us that they find statistical commentary helpful in gaining a fuller understanding of the Indices, and any limitations, as well as in supporting their own analysis of the data. DCLG should:</p>	<p>5</p>	<p>Provide plain language commentary in <i>IoD 2015</i> so that it aids user interpretation of the Indices and supports the use of the local and small area data (para 3.13). As part of meeting this Requirement DCLG should consider the points detailed in annex 1 and annex 2.</p>
<p>DCLG appears to provide contradictory guidance for comparing levels of area deprivation over time. DCLG should:</p>	<p>6</p>	<p>Provide users with clear guidance to support the appropriate use of <i>IoD 2015</i>, including comparing and interpreting changes over time and prominently explaining the selection and impact of the weights chosen for each domain in the IMD (para 3.15).</p>

1.6 Suggestions for extracting maximum value from the statistics

1.6.1 This section includes some suggestions for improvement to DCLG's *English Indices of Deprivation* 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.

We suggest that Department for Communities and Local Government:

1	Develop a process map to illustrate the supply of data for the Indices and the assurance measures and safeguards taken by data suppliers and the statistical producer teams (para 3.10).
2	Regularly update users about its plans for further developing the Indices, including achieving greater consistency among each of the UK countries' IoDs, and on how it will incorporate changes to the benefit system with the introduction of Universal Credit (para 3.11).

2 Subject of the assessment

- 2.1 The *English Indices of Deprivation (IoD)* are an important tool for identifying the most disadvantaged areas and for supporting decisions about addressing local needs. They are widely used by central and local government and community organisations to target their services. At the time of the last release in 2010, an estimated 1 per cent of government spending had been allocated using the Index of Multiple Deprivation (IMD)⁷. The Indices also provide a rich dataset that supports further analyses of different aspects of deprivation, providing greater insight into the nature of disadvantage for all users, whether in academia, the voluntary sector, business or the general public.
- 2.2 This section provides contextual information describing the value of the Indices. It describes the development of the statistics; provides an overview of how they are produced; and summarises recent methodological and other developments. It describes the extent of comparability with statistics produced in other parts of the United Kingdom. And it brings out the wide range of uses for these statistics, which has been a salient factor in our assessment of them.
- 2.3 Department for Communities and Local Government (DCLG) produces the *English Indices of Deprivation (IoD)*, which includes the Index of Multiple Deprivation (IMD). The Indices are an area-based measure of relative deprivation, designed to identify the extent of deprivation within small areas in England. The method has remained largely unchanged since it was first devised for the Indices in 2000. Subsequent Indices were published in 2004, 2007 and 2010. DCLG is currently preparing the Indices for 2015. It has contracted Oxford Consultants for Social Inclusion (OCSI)⁸ to produce the Indices, following an open competitive tendering process. OCSI appointed several sub-contractors from the Building Research Establishment and Universities of Edinburgh, York, Cambridge and Staffordshire, to produce specific indicators.
- 2.4 The Indices are comprised of a range of separate indicators, grouped into seven distinct domains; each Index represents a different aspect of deprivation (see Table 1).

Table 1: The deprivation domains in *IoD* with example indicators

Domain	Example indicators
Income	<ul style="list-style-type: none">Adults and children in Jobseekers Allowance familiesAdults and children in Pension Credit (Guarantee) familiesAsylum seekers in receipt of subsistence support accommodation support or both
Employment	<ul style="list-style-type: none">Claimants of Jobseeker's Allowance aged 18-59/64Claimants of Employment Support Allowance, aged 18-59/64Claimants of Severe Disablement Allowance, aged 18-59/64
Education, Skills	<ul style="list-style-type: none">Key stage 2 attainment: average points score

⁷ <http://www.ocsocialinclusion.co.uk/news/2011/03/24/why-the-imd-is-still-important-in-the-open-data-age/>

⁸ Oxford Consultants for Social Inclusion (OCSI) are a spin-out research consultancy from the Social Disadvantage Research Centre at the University of Oxford, which was the original developer of the Indices of Deprivation led by Professor Michael Noble

and Training	<ul style="list-style-type: none"> • Secondary school absence • Staying on in education
Health and Disability	<ul style="list-style-type: none"> • Years of potential life lost • Comparative illness and disability ratio • Acute morbidity
Crime	<p>Recorded crimes rates for:</p> <ul style="list-style-type: none"> • burglary • violence • theft • criminal damage
Barriers to Housing and Services	<ul style="list-style-type: none"> • Road distance to GP • Household overcrowding • Homelessness
Living Environment	<ul style="list-style-type: none"> • Housing in poor condition • Houses without central heating • Road traffic accidents

2.5 The Indices are based on a comparison of local areas in England in terms of the individual deprivation ranking for each Lower-layer Super Output Area⁹ (LSOA). For each of the seven domains, each LSOA is ranked according to its individual deprivation score. As each domain has its own scores and ranks, users can compare the deprivation ranks between different local areas, for each separate domain. The seven domains are then also combined to produce the overall *Index of Multiple Deprivation (IMD)*, as shown in Figure 1 and Figure 2. The overall IMD measure allows users to identify the most and least deprived local areas in England, and to rank them. DCLG also produces summary deprivation measures for higher-level geographies, including local authority summaries at the upper and lower tier, and two supplementary Indices: the *Income Deprivation Affecting Children Index* and the *Income Deprivation Affecting Older People Index*.

2.6 Figure 2 shows the weights used in constructing the IMD in 2010. The same weights are to be used for the 2015 IMD. Low income and dislocation from the labour market were thought to be key drivers of the other domains, such as poor health outcomes and educational attainment, and so given a greater weight. They have remained unchanged since 2004 when the Index was expanded to include the crime domain. Research was conducted by the University of St Andrews in 2007¹⁰ into the weighting scheme, including a sensitivity analysis. It demonstrated that swapping the weights for employment deprivation with the health and disability domain did not have a large impact. DCLG decided to not propose a change to the weights in 2015 due to the high level of support for retaining the weights in previous consultations¹¹.

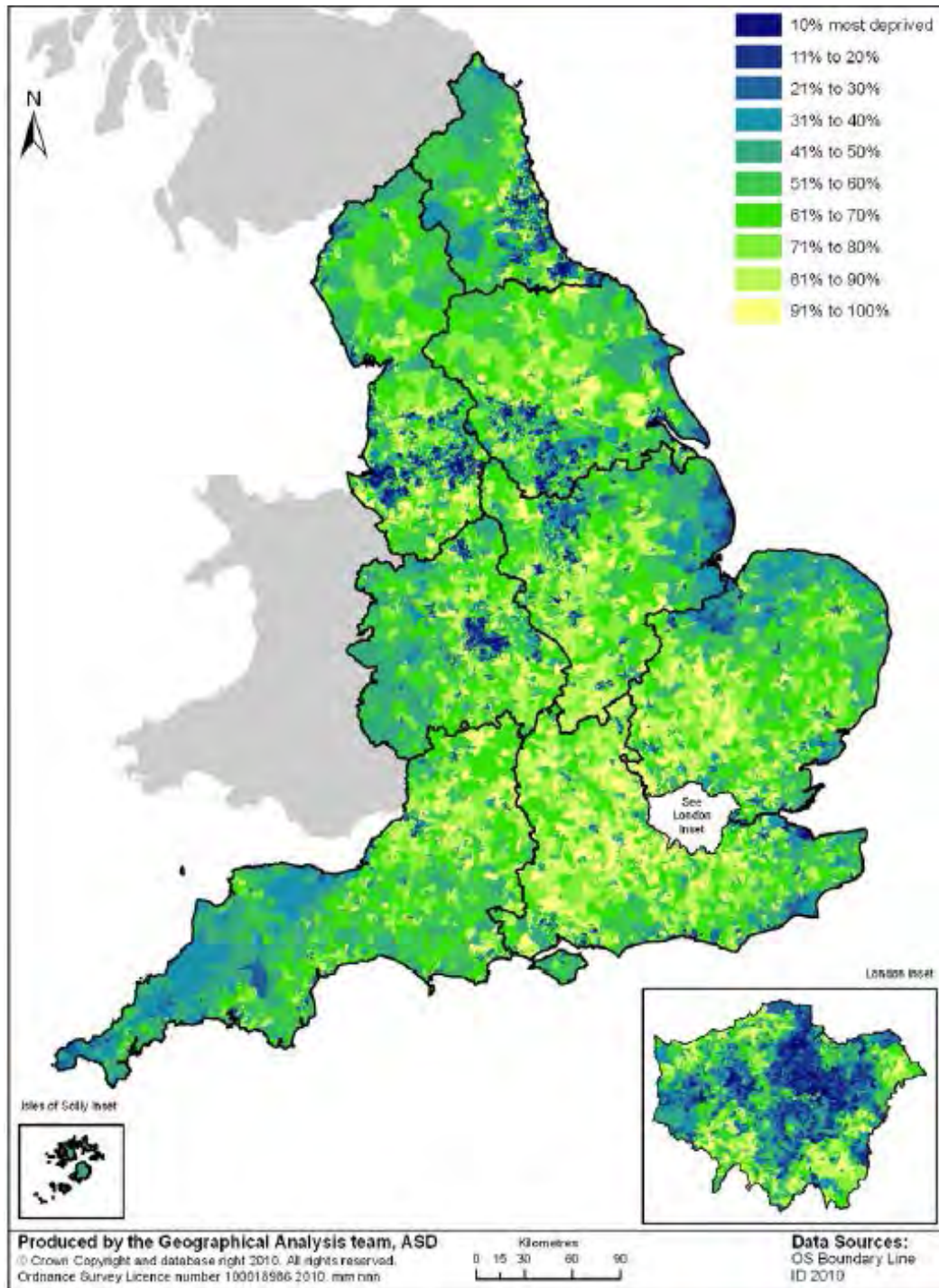
⁹ There are around 32,400 LSOAs in England, with population sizes of around 1500 residents and 650 households

¹⁰ <http://webarchive.nationalarchives.gov.uk/20100410180038/http://www.communities.gov.uk/publications/communities/investigatingimpact>

¹¹ See para 4.5.5:

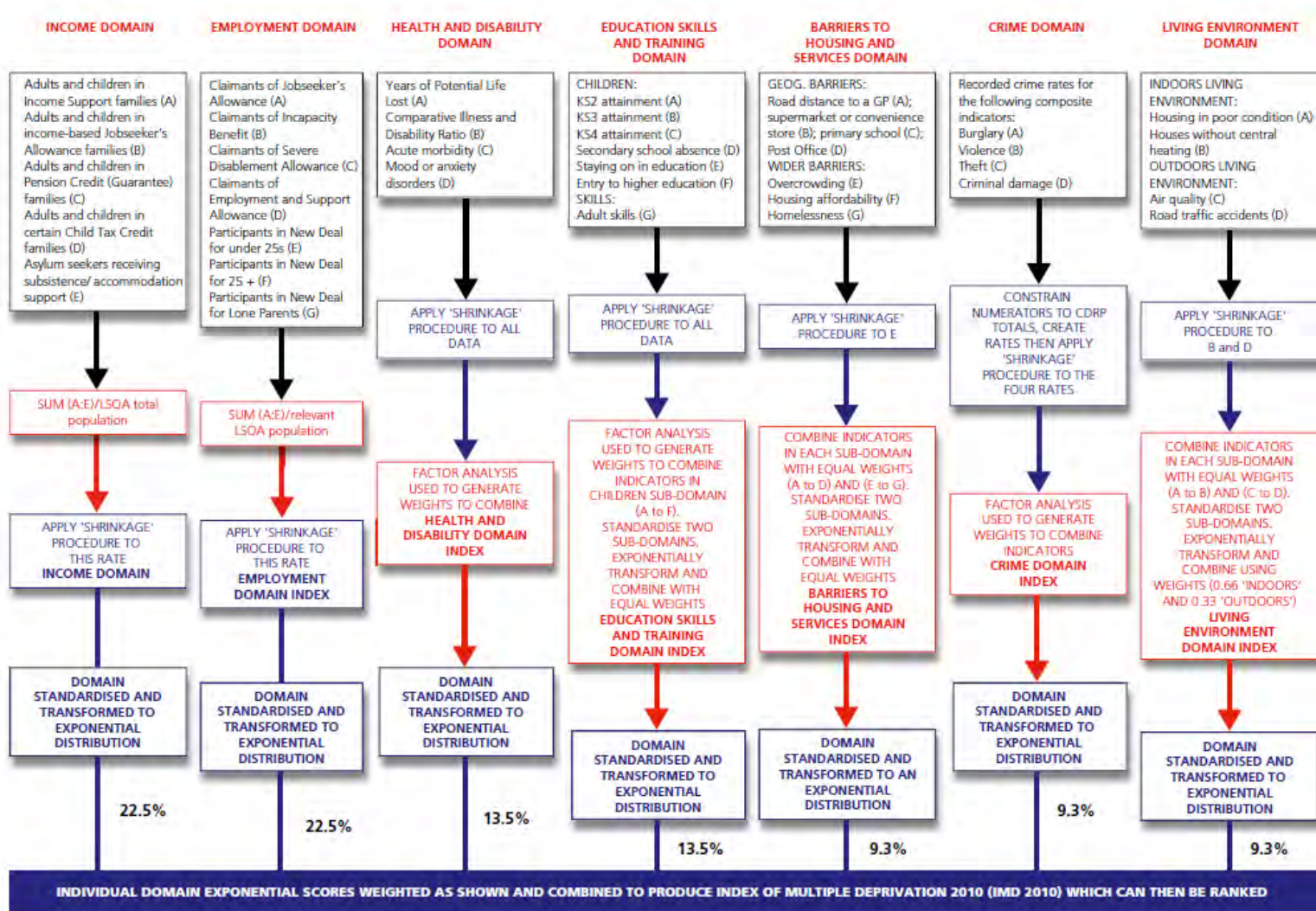
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/374567/Updating_the_English_Indices_of_Deprivation_RfC.pdf

Figure 1: The Index of Multiple Deprivation, 2010



Source: English Indices of Deprivation, 2010

Figure 2: Components of the index of Multiple Deprivation 2010¹²



¹² p118: <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2010-technical-report>

- 2.7 The Indices are compiled using administrative sources wherever possible. For example, the income domain includes benefit data from the Department for Work and Pensions, tax credit data from HM Revenue and Customs, and asylum seekers data from the Home Office. For some indicators census data need to be used – for example, DCLG is using 2011 Census for *IoD 2015* for the adult skills measure of the proportion of working age with no or low qualifications and the proportion who cannot speak English well. The IoD team in OCSI is obtaining crime data for 2015 predominantly through secure access to the event-level police recorded crime data from police.uk¹³ (see paragraph 3.9 for further discussion about the crime domain).
- 2.8 The detailed nature of the Indices means that they are extensively used by local government to target the allocation of funding and the provision of local services to specific areas. Local government also uses the Indices as an evidence base for making investment and funding applications at the regional and national levels. The Indices are also commonly used by charities and Members of Parliament, to help them to better understand the level of deprivation, both within, and between, particular local areas. The Indices are used extensively in combination with a range of other administrative sources and survey datasets, which are either based on, or include, the same geographic referencing information. This allows the IMD and IoD domains to be used as explanatory variables in local-level health and educational research, as well as in academic research more generally.
- 2.9 England is not the only country to make use of deprivation indices. Broadly equivalent indices are also produced for Scotland¹⁴ by the Scottish Government, Northern Ireland¹⁵ by the Northern Ireland Statistics and Research Agency (NISRA) and Wales¹⁶, by the Welsh Government. The UK Statistics Authority Assessments of the Scottish, Northern Ireland, and Welsh Indices were carried out in parallel in 2010¹⁷, and the three Indices were designated as National Statistics in 2011. The Assessment of the English Indices was postponed at the time, pending further consideration of the future of the Indices by DCLG.
- 2.10 While the four separate indices allow deprivation analyses to take place within each administration, there is no corresponding IoD covering the UK as a whole. This means that areas in different administrations of the UK cannot be directly compared. In 2011, the Authority, published a Monitoring Review: *The demand for, and feasibility of producing, a UK-wide index of multiple deprivation*¹⁸. The Authority recognised in the Review that there was some user interest in a UK-wide index and that the UK Government might wish to draw on published information, to compare different areas within the UK. In response, in February 2012, the Government Statistical Service (GSS) Four Nations Group published an update to its existing guidance¹⁹ on comparing the indices across the four

¹³ <https://data.police.uk/about/>

¹⁴ <http://www.gov.scot/Topics/Statistics/SIMD>

¹⁵ http://www.nisra.gov.uk/deprivation/nimdm_2010.htm

¹⁶ <http://gov.wales/statistics-and-research/welsh-index-multiple-deprivation/?lang=en>

¹⁷ <http://www.statisticsauthority.gov.uk/assessment/assessment/assessment-reports/index.html>

¹⁸ <http://www.statisticsauthority.gov.uk/assessment/monitoring/monitoring-reviews/monitoring-brief-6-2011---indices-of-multiple-depravation.pdf>

¹⁹ http://neighbourhood.statistics.gov.uk/HTMLDocs/images/UK%20wide%20guidance%20paper%20February%202012%20revision_tcm97-116302.doc

countries. Whereas the previous version focused on the needs of policy makers and the use of the indices for allocating resources consistently across the UK, the updated version broadened the guidance for use by a wider audience and recorded a fuller range of potential uses of the indices.

- 2.11 DCLG is currently in the process of updating *IoD 2010*²⁰ and has been consulting with a wide range of users as part of the redevelopment work. The *IoD 2015* update is being carried out under contract by Oxford Consultants for Social Inclusion (OCSI)²¹, and is provisionally scheduled for publication in September 2015²². DCLG set out three main objectives for the update:
- review the 2010 indicators in each of the seven domains to determine whether they remain fit for purpose, and to identify potential changes
 - assess the current data landscape and identify potential changes to the sources used in 2010, and review possible new sources
 - review the 2010 statistical methods and to assess what alternative methods were available and the strengths and weaknesses of these alternatives.
- 2.12 In order to maintain comparability, DCLG proposed that *IoD 2015* refine the approach used for *IoD 2010*, rather than make major changes to the construction of the Indices in terms of the choice of deprivation domains or the statistical methods used. However, several changes are being made to some of the underlying indicators:
- a new indicator on Carer's Allowance claims in the Employment domain, to capture deprivation in terms of exclusion from the labour market due to caring responsibilities
 - a new indicator on English language proficiency in the Education Training and Skills domain, to capture deprivation in relation to barriers to learning and disadvantage in the labour market
 - the removal of three New Deal indicators in the Employment domain as these are no longer administered (the benefits are provided through Jobseekers Allowance and Employment and Support Allowance)
 - the removal of the Key Stage 3 attainment indicator in the Education Training and Skills domain, due to the end of statutory testing
- 2.13 Some of the other indicators will be updated due to a variety of factors. In some indicators the age range is being extended; for example, the upper age range increases from 54 to retirement age for the adult skills indicator. Multiple years' data are being pooled to increase statistical robustness, such as using three years of homelessness data, rather than data for one year only. The updating of other indicators will necessarily reflect changes to the coverage of the source data; for example, the reduced eligibility of particular societal groups for working-age benefits.
- 2.14 As part of the update, and in response to user feedback, DCLG has said that it will produce clearer guidance and supporting documentation about how to

²⁰ <https://www.gov.uk/government/consultations/updating-the-english-indices-of-deprivation>

²¹ http://www.ocsi.co.uk/who_we_are/

²² <https://www.gov.uk/government/statistics/announcements/the-english-indices-of-deprivation-2015>

interpret the Indices as well as how to aggregate the LSOA base data up to higher-level geographies such as wards and other bespoke local areas. DCLG said that it will also be developing the statistical report that accompanies the Indices, the technical report and additional guidance. DCLG requested views from users about the development of the report as part of its user consultation, though we were told that the majority of user comments focused on improvements to the guidance and technical information rather than the statistical report itself.

- 2.15 DCLG has advised users that IoD, as a relative measure of deprivation, should not be used to analyse absolute changes in deprivation over time. To help overcome this known limitation, the DCLG IoD team published a related statistical report in 2012, *Tracking Economic and Child Income Deprivation at Neighbourhood Level in England, 1999-2009*²³. This report presented a detailed time series analysis of the Economic Deprivation Index and the Children in Income Deprived Households Index. The indicators used were similar to those for the Income Deprivation Domain and the Employment Deprivation Domain of the IoD but were constructed to facilitate the time series analysis over a ten-year period. While the data sources used in the analysis were consistent over time, they were much less comprehensive than those in IoD. The report states, that IoD remains the best measure of multiple deprivation at a given point in time. This statistical report is outside the scope of this Assessment; DCLG has no current plans to repeat the analysis.
- 2.16 DCLG told us that it plans to publish the *IoD 2015* indicators (where non-disclosive) in open data formats. This will equate to a level of five stars under the Five Star Scheme that forms part of the Open Standards Principles proposed in the *Open Data White Paper: Unleashing the Potential*²⁴ and adopted as UK government policy in November 2012²⁵. Five stars represents the highest star rating within the Scheme.
- 2.17 DCLG told us that the cost of the contract to produce *IoD 2015* was £299k.

²³ <https://www.gov.uk/government/statistics/tracking-economic-and-child-income-deprivation-at-neighbourhood-level-in-england-1999-to-2009>

²⁴ http://data.gov.uk/sites/default/files/Open_data_White_Paper.pdf

²⁵ <https://www.gov.uk/government/publications/open-standards-principles/open-standards-principles>

3 Assessment findings

Meeting user needs and user engagement

- 3.1 In preparing for the update of the English Indices of Deprivation, DCLG undertook a comprehensive user engagement programme, involving:
- Gathering evidence in late 2012 on users in primarily central government, local government and public health about their uses of the Indices and needs, before commissioning the update project and appointing OCSI.
 - An engagement event in November 2013 for users across the range of DCLG statistics which involved a presentation by the IoD statistics team outlining its plan to produce IoDs in 2015 and discussion.
 - Consulting the GSS's Methodology Advisory Committee²⁶ in November 2013.
 - A presentation to the Poverty Statistics User Group supported by the Royal Statistical Society, Nuffield Trust and Joseph Rowntree Foundation in April 2014.
 - A user survey²⁷ run by the National Centre for Social Research on behalf of DCLG, beginning in July 2014 – which informed the scoping documents for the IoD update in November 2014. It achieved responses from almost 250 users.
 - Consulting the IoD project board, involving key users in DCLG and other central government departments, local government representatives, and other interest groups including the voluntary sector.
 - Three user events²⁸ about the update in London and Manchester in November 2014 in parallel with a formal consultation. These were well attended by a wide range of users in local and central government, public health, the voluntary sector and academia.
 - The formal consultation²⁹ of users about the IoD update described in the project scope and technical reports – this ran between November and December 2014, with DCLG publishing its report³⁰ about the outcomes in March 2015.
- 3.2 DCLG highlighted the main concerns of users and described the basis for its decisions in the light of the user feedback within its government response to consultation document. It told us that it is developing a communications plan for the publication of the Indices and considering further ways to raise users' awareness of the Indices. The Authority welcomes the approach taken by DCLG to better understand the nature of the use of the Indices and to consider users' views and needs in finalising its plans for the further updating of the statistics. We regard this as an example of good statistical practice.

²⁶ <http://www.ons.gov.uk/ons/guide-method/method-quality/advisory-committee/26th-meeting/index.html>

²⁷ https://natcen-surveys.co.uk/P10941_web_v01/Preview_survey.pdf,

https://natcen-surveys.co.uk/P10941_web_v01/OCSI-IndicesDeprivationUpdate-ScopingStagenote.pdf

²⁸ <http://www.oci.co.uk/news/2014/10/29/indices-of-deprivation-event/>

²⁹ <https://www.gov.uk/government/consultations/updating-the-english-indices-of-deprivation>

³⁰ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/414925/Government_Response_to_Consultation_Updating_the_English_Indices_of_Deprivation.pdf

- 3.3 DCLG has yet to prepare its statistical report about the 2015 Indices. While it drew on the feedback received in its consultation documents, it did not publish individual reports about the user surveys conducted. Users will benefit from straightforward and clear information about the nature of the uses made of the Indices alongside the statistics. One user told us they felt that DCLG did not take sufficient account of views raised in the consultation and that it was not open to alternative solutions. DCLG outlined the basis for its decisions within the government response to consultation report³¹. It would be helpful to summarise the views of users regarding the future development of the Indices; how DCLG has (and has not) been able to meet these needs within the release of *IoD 2015*, and its plans for the further development of the statistics. As part of the designation as National Statistics, DCLG should:
- a) accompany *IoD 2015* with a description of the use made of the statistics and the types of decisions that they inform
 - b) document the needs of users, how these needs have been met in *IoD 2015*, and the issues that it has not been able to meet and why³² (Requirement 1).
- 3.4 During the course of this assessment, users told the Assessment team that they would benefit from a regular and predictable publication interval in the release of the Indices. The interval has been around three years between the publications of the Indices since their first release in 2000, which users have found satisfactory. The longer interval affects the timeliness of the statistics, particularly those relying on census data. Prior to the commencement of the programme to update the Indices, users said they were uncertain about the timing of the next release, and said that they would appreciate greater clarity about DCLG's future plans. As part of the designation as National Statistics, DCLG should outline its plans for the future development and publication of the Indices, and explain how it intends to involve users in the development and evaluation of the statistics³³ (Requirement 2).
- 3.5 DCLG's user engagement strategy has focused on the development of the Indices for release in 2015 and not addressed the support of users after their release. While most users were highly satisfied with their engagement with DCLG, some users told the assessment team of difficulties they encountered after the release of *IoD 2010* in obtaining advice and explanations about possible errors in the data. DCLG told us that it will develop a process for managing users' queries following the release of the new Indices, to better support their use of the statistics and to supplement the guidance material it is developing. As part of the designation as National Statistics, DCLG should put in place a process for managing user support and make this process clear to users³⁴ (Requirement 3).

Supporting information about methods and quality

- 3.6 Users made clear in their feedback to both DCLG and the Authority that they see a strong need for straightforward guidance on the appropriate use of the Indices, not least because the Indices cannot be used for absolute

³¹ <https://www.gov.uk/government/consultations/updating-the-english-indices-of-deprivation>

³² In relation to Principle 1, Practice 4 of the *Code of Practice*

³³ In relation to Principle 1, Practice 3 of the *Code of Practice*

³⁴ In relation to Principle 1, Practice 1 and Protocol 1, Practice 2 of the *Code of Practice*

comparisons of deprivation over time. Several users said they thought that two types of guidance were needed – to meet the needs of expert and non-expert users. DCLG told us that it recognised the need for plain language advice. DCLG produced technical guidance to accompany the formal consultation which includes helpful descriptions of the statistical methods being applied, including: improving the reliability of small area estimates using shrinkage estimation³⁵, and the weighting of domains to create the overall index – the IMD.

- 3.7 In light of the de-designation of police recorded crime statistics (England) in January 2014 (in Assessment report 268), the Statistics Authority published a regulatory standard³⁶ that confirms the quality assurance arrangements that are required for statistics compiled using administrative data to comply with the *Code of Practice*. The *Administrative Data Quality Assurance Toolkit*³⁷ is the mechanism that the Authority is using to determine compliance in relation to four areas of practice:
- Operational context and administrative data collection
 - Communication with data supply partners
 - Quality assurance (QA) principles, standards and checks by data suppliers
 - Producers' QA investigations and documentation
- 3.8 The judgment by statistical producers about the suitability of the administrative data for use in producing official statistics should be pragmatic and proportionate. It should be made in the light of an evaluation of the likelihood of quality issues arising in the data that may affect the quality of the statistics. It should also reflect the nature of the public interest served by the statistics. Statistical producers should determine the types of assurance and documentation required to inform users about the quality assurance arrangements for administrative data. OCSI reviewed the Authority's guidance and provided clear instructions to its sub-contractors on the information required about the source administrative data. It then systematically reviewed the strengths and weaknesses of each data source and the impact on the respective indicators. The Authority welcomes OCSI's approach – its effective communication with partners and its systematic investigation and documentation of the quality issues across the indicators and sources.
- 3.9 OCSI and DCLG have yet to prepare the supporting quality information for the Indices and underlying data to accompany *IoD 2015*. The Assessment team has advised DCLG that this guidance needs to clearly explain the methods, the nature of the source data and their respective strengths and weaknesses. It should further outline the ways in which the quality of the data has been assured in their supply and processing, describe how the statistical methods overcome the identified weaknesses, and highlight any implications for the robustness of the indicators and Indices. DCLG highlighted data quality

³⁵ 'Shrinkage' estimation is a technique to deal with statistically unreliable scores. It involves moving 'unreliable' small area scores (that is those with high standard errors) towards another more robust score, for example, the mean score of a larger administrative area or for a group of LSOAs with similar characteristics

³⁶ <http://www.statisticsauthority.gov.uk/assessment/monitoring/administrative-data-and-official-statistics/index.html>

³⁷ <http://www.statisticsauthority.gov.uk/assessment/monitoring/administrative-data-and-official-statistics/quality-assurance-toolkit.pdf>

concerns regarding police recorded crime within its Report for Consultation³⁸ – further guidance material supporting the crime domain will be required to explain how users can have confidence in the use of these data, given the known under-recording of offences by the police³⁹. This explanation would need to make clear how any bias in recording, for example, in the most deprived areas or among particular offence groups, may, or may not, impact upon the individual crime indicators and the combined index, as well as for the IMD.

3.10 As part of the designation as National Statistics, DCLG should:

- a) provide straightforward explanations of the quality assurance arrangements in place for each of the data sources
- b) explain the statistical methods adopted
- c) make clear how the statistics are produced to a level of quality that meets users' needs⁴⁰ (Requirement 4).

In meeting this requirement, DCLG should take into consideration the Authority's *Administrative Data Quality Assurance Toolkit*⁴¹. We suggest that DCLG develop a process map to illustrate the supply of data for the Indices and the assurance measures and safeguards taken by data suppliers and the statistical producer teams.

UK coherence in Indices of deprivation and future changes to the Indices

3.11 User interest in a UK-wide IMD was highlighted in the Authority's Monitoring Review, *The demand for, and feasibility of producing, a UK-wide index of multiple deprivation*⁴² in 2011. Some users also expressed interest in a UK-wide IMD in response to this Assessment. DCLG has held discussions with the devolved administrations about their plans for updating the Indices and IMD. DCLG told us that the statistics producers are looking to achieve closer consistency where possible but that differences remain in the timetables, domains and measures, as well as differently sized geographical areas. However, the statistical producers agree that there will be an opportunity to seek greater coherence in each of the sets of Indices, to accommodate the introduction and roll out of Universal Credit. We suggest that in meeting Requirement 1, DCLG should regularly update users about its plans for the further development of the Indices, including how it will achieve greater consistency among each of the UK countries' IoDs, and how it will incorporate changes to the benefit system with the introduction of Universal Credit.

Presentation of the statistics

3.12 DCLG is currently preparing its statistical outputs for *IoD 2015*. It told us that it is planning a similar summary bulletin to the release in 2010. It intends to

³⁸ Page 26: <https://www.gov.uk/government/consultations/updating-the-english-indices-of-deprivation>

³⁹ <http://www.justiceinspectors.gov.uk/hmic/wp-content/uploads/crime-recording-making-the-victim-count.pdf>

⁴⁰ In relation to Principle 4, Practice 2 and Principle 8, Practice 1 of the *Code of Practice*

⁴¹ <http://www.statisticsauthority.gov.uk/assessment/monitoring/administrative-data-and-official-statistics/quality-assurance-toolkit.pdf>

⁴² <http://www.statisticsauthority.gov.uk/assessment/monitoring/monitoring-reviews/monitoring-brief-6-2011---indices-of-multiple-deprivation.pdf>

provide high-level messages about the overall IMD, and each of the domains. It will provide examples of local analysis to aid users' interpretation and support the further use of the Indices.

- 3.13 Users told us that they find statistical commentary helpful in gaining a fuller understanding of the Indices, and any limitations, as well as in supporting their own analysis of the data. Plain language guidance will be particularly helpful. Users asked for guidance about aggregating the LSOA data, and producing summary statistics for their bespoke geographic areas. They also sought support about making appropriate inferences from the Indices. They supported the use of a range of presentational approaches – including one-page summaries, infographics, and detailed technical reports. As part of the designation as National Statistics, DCLG should provide plain language commentary in *IoD 2015* so that it aids user interpretation of the Indices and supports the use of the local and small area data⁴³ (Requirement 5). As part of meeting this requirement, DCLG should consider the points detailed in annex 1 and annex 2.

Accessibility

- 3.14 Users said in their feedback to the Authority that they find websites such as NOMIS⁴⁴ helpful in accessing data and would welcome access through interactive tools. DCLG told us that it will be releasing the Indices and underlying data (where non-disclosive) through its Open Data Communities website⁴⁵ and through the Office for National Statistics' (ONS) Neighbourhood Statistics website⁴⁶. It is considering other ways of releasing the Indices, such as through NOMIS, which was used by ONS for the release of the 2011 Census data. It is also looking to work with other partners, to make the Indices available through their applications and websites. It told us that it is seeking to support bespoke analysis by providing a more straightforward means to link deprivation scores using postcodes, in response to feedback from users. We welcome the proactive approach taken by DCLG to considering ways of increasing the accessibility to the Indices and better meeting user needs and to achieving the top level of accessibility under the Cabinet Office's 'five star' scheme.

Guidance to support appropriate further use

- 3.15 The *IoD 2010* statistical report for 2010 (*IoD 2010*) provided comparisons between the Indices in 2007 and 2010 about the position of LSOAs in the deprivation deciles, and the technical report described the Index as 'a consistent measure to allow changes over time to be measured'⁴⁷. DCLG emphasised in its supporting information⁴⁸ that the deprivation scores for areas cannot be

⁴³ In relation to Principle 8, Practice 2 of the *Code of Practice*

⁴⁴ <http://www.nomisweb.co.uk/>

⁴⁵ <http://opendatacommunities.org/>

⁴⁶ <http://neighbourhood.statistics.gov.uk/dissemination/LeadHome.do>

⁴⁷ Page 5,

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6320/1870718.pdf

⁴⁸ <https://www.gov.uk/government/publications/english-indices-of-deprivation-2010-guidance>

compared over time⁴⁹. This guidance may have contributed to the confusion among users about the evaluation of change in deprivation. *IoD 2010* statistical report also does not adequately describe the nature of relative versus absolute change in deprivation. There is strong interest in determining changes over time; users would benefit from clear guidance about which deprivation data and statistical methods can be used, and how. Guidance is also needed about the appropriate interpretation of the observed changes. The selective nature and impact of the weights chosen for each domain in producing the IMD should be prominently and clearly explained. As part of the designation as National Statistics, DCLG should provide users with clear guidance to support the appropriate use of *IoD 2015*, including comparing and interpreting changes over time and prominently explaining the selection and impact of the weights chosen for each domain in the IMD⁵⁰ (Requirement 6).

⁴⁹ An area's score is affected by the scores of every other areas, so it is impossible to tell whether a change in score is a real change in the deprivation of the area, or whether it is due to the scores of other areas going up or down.

⁵⁰ In relation to Principle 8, Practice 6 of the *Code of Practice*

Annex 1: Compliance with Standards for Statistical Reports

- A1.1 In November 2012, the Statistics Authority issued a statement on *Standards for Statistical Reports*⁵¹. While this is not part of the *Code of Practice for Official Statistics*, the Authority regards it as advice that will promote both understanding and compliance with the *Code*. In relation to the statistical reports associated with the Indices of Deprivation, this annex comments on compliance with the statement on standards. The comments included in this annex are based on a review of *IoD 2010* statistical report (*IoD 2010*) and technical report⁵².
- A1.2 In implementing any Requirements of this report (at paragraph 1.5) which relate to the content of statistical reports, we encourage the producer body to apply the standards as fully as possible.

Include an impartial narrative in plain English that draws out the main messages from the statistics

- A1.3 The first page of the statistical report has a list of key messages but it is limited in drawing out the richness of the deprivation material. The beginning of the statistical report is a brief description of what it contains but is not written in plain English. It has a contents list on the first page. It provides a list of five main points at the start which have scope to be written in a more straightforward way – they refer to income deprived and LSOAs. The headline figure of five million people living in the most-deprived areas could more clearly reflect that it simply represents the 10 per cent of the population in the bottom decile (ie tenth of the distribution). The narrative is rather technical in places; for example, '56 per cent of local authorities contain at least one LSOA amongst the 10 per cent most deprived in England' (bullet 4 on page 1).
- A1.4 The statistical report has an introduction explaining the nature of the deprivation measurement – this uses more straightforward language. The text refers to a 'full report' – it is not clear that this report is the technical report available through the IMD page of the gov.uk website. The description given makes it sound as though a fuller presentation of the results will be given. OCSI's explanation⁵³ of the Indices was more straightforward than DCLG's.
- A1.5 The main body of the commentary does not describe uncertainty in the results, or whether (or how) the methods adopted overcome concerns about the reliability of the underlying data.

Include information about the context and likely uses of the statistics

- A1.6 The results described are focussed on the Indices themselves without being related to the wider social or economic context. Table 2 shows where LSOAs have remained in the same decile or changed deciles between 2007 and 2010. It highlights that some areas experienced considerable change (moving by three deciles) – if possible, it would have been helpful to understand which domains had most contributed to these changes.

⁵¹ <http://www.statisticsauthority.gov.uk/news/standards-for-statistical-reports.html>

⁵² <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2010>

⁵³ <http://www.ocsi.co.uk/news/2011/03/24/why-the-imd-is-still-important-in-the-open-data-age/>

- A1.7 The statistical report compares the changes in the distribution pattern of deprivation by LSOAs between 2007 and 2010. However the guidance document accompanying it says that the deprivation scores cannot be used to measure absolute change over time. It is not sufficiently clear what time comparisons can be made and how to interpret the data.
- A1.8 The statistical report explains what is measured with a more general explanation at the start and then a fuller description of each domain in an annex. It refers to the full report which includes the detailed technical explanations.
- A1.9 The uses section gives an indication of the importance of the Indices in local government and voluntary sector bodies for funding and resource allocation, as well as for central government departments and academic research. It does not relate the findings directly to the use but provides a few examples of how the Indices have been used. No links are given to illustrate the uses; it would be helpful to have specific examples of local and central government, voluntary sector and commercial activities and policies using the Indices. Given the difficulties of making comparisons over time, examples would be helpful to assist the appropriate use.

Include information about the strengths and limitations of the statistics in relation to their potential use

- A1.10 There is little information in the statistical report about the strengths and weaknesses of the data and the statistics for non-expert users – it is mainly given through the additional guidance (FAQ) document.
- A1.11 The statistical report does not include a glossary but it does include an annex explaining the main definitions. It includes a description of the main approach taken to compiling the IMD and individual domains. It includes the weights given to each domain in preparing the IMD, but does not prominently describe the arbitrary nature of the weights, and what impact this may have on the use of the Indices. DCLG does not explain the shrinkage method in the statistical report but refers to ‘shrunk and unshrunk estimates’ in the data quality section. ‘Shrinkage’ is an important technique used to overcome the impact of small numbers in some LSOAs by borrowing strength from larger areas. It is part of the way that the methods cope with less reliable data and is explained in the technical report – this report is more suited to expert users.
- A1.12 There is no mention of uncertainty, with the implication that the data are exact and free from error. It is not clear what impact variability in the underlying data may have on the scores and ranks for areas and overall Indices.
- A1.13 The statistical report is more straightforward and high level than the technical report. In contrast, the technical report provides a fuller description of the methods and choices made about the definition of indicators (such as the sources of data) and regarding estimation techniques. It includes an annex about quality assurance checks, which describes the approach taken during the production of the Indices. The technical report also refers to much of the source data being administrative data with 100 per cent coverage and so not subject to sampling error. It says that they are based on the same data used to produce National Statistics and that they have already been independently verified – so

is borrowing reassurance of the reliability and accuracy of the administrative data from that status.

A1.14 The statistical report refers to DCLG's revisions policy, and says that no revisions were made to the previous release in 2007.

Be professionally sound

A1.15 Only a brief description of the statistics is given in the statistical report. The report gives the overall number of people living in most deprived areas; it outlines the regional variation in deprivation, as well as the local pattern (for example, metropolitan centres are more likely to be deprived than rural). It says that Birmingham is the local authority (LA) with the largest number of LSOAs in the most deprived decile – but that is fairly meaningless without giving a sense of the variation in the number of LSOAs – it might just reflect a very large number of LSOAs compared with other LAs. In fact Liverpool is the LA with the highest proportion of LSOAs in the most deprived decile.

A1.16 The tables, charts and map are clear. The colour shading for the deciles are somewhat difficult to distinguish when the report is printed.

Include, or link to, appropriate metadata

A1.17 The title is in plain English and shows the coverage of the statistics and the publication year. The report also states the year to which the data come from in the introduction. No statement is given about the frequency of the release of the statistics (they are generally released around every three years, although that there has been a longer gap for the 2015 release – after the 2001 Census the IoD was published in 2004).

A1.18 The name of the Department and the responsible statistician are given prominently on the front page with contact phone number and email address.

A1.19 No reference is given to European Union or other UK administrations' measures of deprivation in the summary bulletin; however, the technical report says that the *IoD 2010* cannot be compared with the Indices for the other UK administrations.

A1.20 The summary report does not refer to the changes in methods since the 2007 release, although the technical report does. The technical report emphasises that it is seeking to make the methods as similar as possible (allowing though for changes in the underlying sources). The summary report does describe the changes in relative deprivation for LSOAs between 2007 and 2010.

A1.21 The summary report includes a list of the accompanying data tables which are available through the gov.uk website.

A1.22 The accompanying spreadsheets could be clearer – they only present the LSOA code which some users told us makes it difficult for them to know which areas are of interest to them. Little supporting information is provided in the spreadsheets; for example, explaining (or providing links to information about) the composition of the domain measures, and defining the measures presented, such as 'rank of average score' and a 'rank of average rank' (two separate summary measures in which LAs are ranked based on the averages for the underpinning LSOAs), and when to use the respective measures.

Annex 2: Summary of assessment process and users' views

- A2.1 This assessment was conducted from June 2014 to April 2015.
- A2.2 The Assessment team – Penny Babb and Oliver Tatum – agreed the scope of and timetable for this assessment with representatives of DCLG in June 2014. The Written Evidence for Assessment was provided on December 2014. The Assessment team subsequently met DCLG during March 2015 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 42 responses from the user consultation. The respondents were grouped as follows:
- | | |
|--------------------|----|
| Local Government | 28 |
| Central Government | 5 |
| Academia | 6 |
| Voluntary sector | 3 |
- A2.5 Users responding to the consultation reported using the Indices for multiple purposes and at various levels of geography. Local authority users primarily used the Indices to target local authority services, support and interventions, particularly in relation to education, employment, welfare, health, housing and environmental factors, and social exclusion. Local authorities also reported using the Indices to support applications for additional investment and funding at the regional, national and European level. These users saw the Indices as an increasingly important way of targeting funding at specific areas as resources became more pressured. Charities also used the Indices for prioritising funding, and in local campaign work, to compare deprivation between local areas and in relation to the overall national picture.
- A2.6 Users saw a key strength of the Indices as being the ability to combine them with other datasets that used common geographic referencing. This meant that the Indices could be used extensively by users in the public health field, to help understand associations and risks in health conditions, diseases and behaviours by deprivation domain, and to shape and target interventions effectively. A similar type of analysis was reported by users in the education sector. These users also combined the Indices with other national data sources. This allowed them to analyse variations in attainment at key stages 2 and 4 in relation to the deprivation of school location or pupil residence, or use the Indices alongside pupil address data to assess the take up of free school meals.

- A2.7 The users responding to the consultation also raised a number of issues and concerns. The most common issue was the need for DCLG to produce accessible plain English guidance about the construction and appropriate use of the Indices. Users wanted this guidance to include detailed comparisons with the previously published Indices, and full and frank information about the quality of the Indices, including details of main strengths and limitations of the Indices in relation to their potential uses. Users expressed a strong interest in a more regular and predictable publication interval, with several explicitly identifying that the current 2010 Indices were now very out of date, as much of the source data relates to 2008 or earlier. These users said that a return to the previous three-yearly publication interval would be an improvement, though some also had ongoing concerns about the longer term statistical planning process, and the high degree of uncertainty every few years around whether funding for subsequent updates of the Indices would be found.
- A2.8 Many users expressed a need for access to the Indices at different levels of geography to those that were either currently available, or were planned for the 2015 update. While many of these users said that they derived their own higher level geographies from the detailed LSOA-level data, they suggested that DCLG could make it easier for them to do this. Some users requested improved plain English guidance to enable them to consistently aggregate LSOA data to the main additional geographies of interest, such as wards, districts and Middle Layer Super Output Areas. Others said that they would prefer online tools and mapping facilities to facilitate analysis at different geographic levels. A third group expressed a preference for DCLG to produce additional analyses and outputs to meet this need, though several others recognised that this may be impractical given regular changes to the boundaries of some areas. Users also expressed an interest in the possibility of additional variables and metadata being added to the existing domain spreadsheets. Several users said that they felt that the existing workbooks could be improved, both in terms of their utility and presentation.
- A2.9 Overall users were very positive about DCLG's engagement with them, particularly throughout the development consultation process; although one user was less satisfied with the process, saying that DCLG did not seem open to alternative solutions. A small number of users expressed concerns that previous queries raised with DCLG after the 2010 release of the Indices regarding the health and crime domains had not been satisfactorily addressed, despite repeated attempts being made to follow up these queries. A small number of users highlighted individual concerns with source data quality or the proposed method changes for a few of the domains. These related to the crime, health and income domains (in relation to current welfare reforms in particular). A small number of mainly academic users expressed an interest in the development of broader UK, GB, or England and Wales Indices.

Key documents/links provided

Written Evidence for Assessment document

