

Northern Ireland Multiple Deprivation Measure 2009: Consultation Document

July 2009





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Introduction

The Northern Ireland Multiple Deprivation Measure (NIMDM) 2005 is the current measure of the spatial distribution of deprivation in Northern Ireland.

Government and others use spatial deprivation measures to target resources on the most deprived areas in Northern Ireland and to monitor the spatial impact of policy interventions.

The 2005 measures of deprivation provide information on seven types or 'domains' of deprivation (income; employment; health deprivation and disability; education, skills and training; proximity to services; crime and disorder; and living environment) and an overall measure of multiple deprivation comprising a weighted combination of the seven domains.

Government Departments have been consulted and recommended via the Statistics Co-ordinating Group¹ that the NIMDM 2005, based mostly on data relating to 2003, is now *updated*. A fuller methodological *review* of the measures will follow after publication of the small area results from the 2011 Census.

The scope of the update is broadly limited to temporal updating of the indicators and domains used in the NIMDM 2005 research. The intention is to revise statistical indicators only where explicitly recommended in the NIMDM 2005 report, where indicators are no longer available or where administrative data have been significantly enhanced. Any revisions outside this framework, specifically any fundamental revisions, are not considered as part of this update.

¹ Statistics Co-ordinating Group is an inter-departmental group of senior officials across Northern Ireland Government that provides Ministers with advice on statistical and social research needs and manages the co-ordination of these requirements across government.



Consultation

This document sets out the proposals for the updated Multiple Deprivation Measure. Consultees are invited to comment on the indicators and domains as detailed in green in the following sections and as listed in Annex B. The consultation period will run from 27 July 2009 to 6 November 2009.

Responses to the consultation questions will be in writing and can be directed to:

Email: deprivation.nisra@dfpni.gov.uk

Mail: Neighbourhood Statistics
NISRA
2-14 Castle Street
Belfast
BT1 1SA

Two public consultation events will be held as follows:

22 September 2009	30 September 2009
Omagh	Lisburn

Attendees must register their intention to attend using the addresses above.

Following the consultation period, consultation responses will be published on the deprivation website www.nisra.gov.uk/deprivation.htm. After consideration of responses, the updated deprivation measures will be calculated with a final report produced in 2010.

The deprivation report will be published on the Deprivation website www.nisra.gov.uk/deprivation.htm, the Neighbourhood Statistics website www.ninis.nisra.gov.uk, and available in hard copy format.

Background to Deprivation Measures in Northern Ireland

Measures that describe the spatial distribution of deprivation or disadvantage have been developed and used in Northern Ireland since the 1970s. Early deprivation measures were based on the results of the 1971 and 1981 Censuses.

In the early 1990s a team from the Centre for Urban Policy Studies in the University of Manchester, led by Professor Brian Robson, was commissioned to create deprivation measures for Northern Ireland. The resulting report, the 'Robson Report', was published in 1994 with measures based primarily on the results of the 1991 Census.

The Northern Ireland Statistics and Research Agency (NISRA) commissioned the Social Disadvantage Research Centre at the University of Oxford to produce updated deprivation measures in 2000. The Northern Ireland Measures of Deprivation 2001 (often referred to as the 'Noble' measures after Professor Mike Noble), were published in 2001 and based on data relating to 1999. Unlike previous measures the Oxford methodology primarily uses information from administrative sources.

The current measures of spatial deprivation in Northern Ireland, the NIMDM 2005, were also a result of work commissioned by NISRA from the Social Disadvantage Research Centre and led by Professor Mike Noble. The measures of deprivation were constructed from a series of surveys and administrative datasets relating mostly to 2003.

It is intended that the current update of the deprivation measures will closely follow the methodology employed to produce the NIMDM 2005. The analysis will be carried out 'in-house' by NISRA statisticians and overseen by an inter-departmental steering group. Membership of the steering group is detailed in Annex C.



Geography

The core reporting geography for the NIMDM 2005 is the Super Output Area (SOA), representing populations of approximately 2,000 people. This output geography readily allows small area concentrations of deprivation to be identified. Summary deprivation measures have also been produced at ward level, Local Government District level and Parliamentary Constituency level.

SOAs were created as the output geography for the NIMDM 2005, a departure from the Multiple Deprivation Measure 2001 which was produced at ward level. SOAs were constructed from Census Output Areas (the smallest geographical unit with an average population of around 340 people or 125 households), and amalgamated on a ward by ward basis taking population, housing characteristics and ward boundaries into account. The result was 890 SOAs, each with an average population of approximately 2,000 people. The uniform population size of SOAs compared to the large variation in ward populations in Northern Ireland (ranging from approximately 800 to 10,000 people in 2001) allowed more meaningful small area comparisons of deprivation.

The primary output geography for the updated measures will be the SOA with summary measures available for higher geographies. Following the outcome of the review of the Boundary Commission, it will be *possible* to recreate summary statistics for the new Local Government Districts and wards.

Methodology

The NIMDM 2005 was constructed from data relating mostly to 2003.

The updated deprivation measure will be constructed from the most up to date data available, mostly 2008/09. For a number of indicators, where cases/occurrences are low, more than one year of data will be used to ensure the robustness of data at the small area level.

SOA level population estimates will be created. These estimates will be used to derive indicator rates (for example, emergency admissions rate), making them comparable across SOAs. Details of the methodology and results of the SOA level population estimates will be published separately.

Domains

In line with the NIMDM 2005 the updated measures will comprise seven domains of deprivation and an overall multiple deprivation measure. The multiple deprivation measure will comprise a combination of the seven domains of deprivation weighted as follows:

■ Income Deprivation Domain	25%
■ Employment Deprivation Domain	25%
■ Health Deprivation and Disability Domain	15%
■ Education, Skills and Training Deprivation Domain	15%
■ Proximity to Services Deprivation Domain	10%
■ Living Environment Domain	5%
■ Crime and Disorder Domain	5%



Income Deprivation Domain

Purpose of the Domain

The purpose of the income deprivation domain is to identify the proportion of the population experiencing income deprivation at the small area level. This proportion is calculated by obtaining a non-overlapping count of individuals living in households in receipt of income related benefits.

Income Deprivation Domain

Adults and children in Income Support households
(2008/09 Source: DSD)

Adults and children in State Pension Credit households
(2008/09 Source: DSD)

Adults and children in income based Jobseeker's Allowance households
(2008/09 Source: DSD)

Adults and children in income based Employment and Support Allowance households
(2008/09 Source: DSD)

Adults and children in Housing Benefit households
(2008/09 Source: DSD)

Income Deprivation affecting Children measure

A stand-alone measure combining the percentage of an SOA's children aged under 16 living in families in receipt of Income Support, State Pension Credit, income based Jobseeker's Allowance, income based Employment and Support Allowance or Housing Benefit.

Income Deprivation affecting Older People measure

A stand-alone measure combining the percentage of an SOAs population aged 60 or over and their partners (if 60 and over), living in households in receipt of Income Support, State Pension Credit, income based Jobseeker's Allowance, income based Employment and Support Allowance or Housing Benefit.

Comparison with NIMDM 2005

The previous income deprivation domain comprised the following indicators:

Adults and children in Income Support households
(2003 Source: DSD)

Adults and children in income based Jobseeker's Allowance Households
(2003 Source: DSD)

Adults and children in Working Families' Tax Credit households whose equivalised income (excluding housing benefits) is below 60% of median before housing costs.
(2003 Source: Inland Revenue and DSD)

Adults and children in Disabled Person's Tax Credit households whose equivalised income (excluding housing benefits) is below 60% of median before housing costs.
(2003 Source: Inland Revenue and DSD)

Income Deprivation affecting Children measure

A stand-alone measure combining the percentage of children under 16 living in families in receipt of Income Support, income based Jobseeker's allowance, or in receipt of Working Family Tax Credit/Disabled Person's Tax Credit whose equivalised income was below 60% of the median UK income before housing costs.

Income Deprivation affecting Older People measure

A stand-alone measure combining the percentage of persons aged 60 or over and their partners (if 60 and over) who are Income Support or income based Jobseeker's Allowance claimants.

Consideration of Recommendations and Changes from NIMDM 2005

The NIMDM 2005 report sets out a number of recommendations in relation to the future calculation of Income Deprivation. Specifically, to develop a benefit uptake model at the small area level; to research the potential for production of small area income deprivation estimates; and to consider developing a child specific multiple deprivation measure.

The Northern Ireland Family Resource Survey collects information on incomes and living standards of private households and is currently the only comprehensive data source which can be used to accurately model entitlement to benefits in Northern Ireland. Despite the survey having a boosted sample in comparison to the population, the number of respondents who are assessed as being entitled to a given benefit but who are not claiming it (Entitled Non-Recipients) is very low.² The numbers of such individuals however provides the basis for benefit take-up estimates. Due to the small size of this subset of respondents, the ranges surrounding the estimates are broad and so the point estimates are not robust. As a result the Family Resource Survey cannot be used to estimate the uptake of benefits at the small area level. *The income domain therefore will continue to be based on unadjusted benefits data.*

Following the above recommendations OFMdfM and NISRA commissioned the Institute for Social and Technical Research, University of Essex, to create small area income deprivation estimates for Northern Ireland.³ Using data from the Census 2001 and Family Resource Survey 2003/04 and 2004/05 the percentage of households in an SOA whose income was less than 60% of the UK median income (i.e. below the poverty threshold)⁴ was estimated. The results were published as a NISRA occasional paper in 2008. However, as the inclusion of the modelled income deprivation would constitute a large departure from the 2005 Income Deprivation Domain, *modelled income data will not be included in the updated measures.*

The Equality Directorate OFMdfM has considered the final proposal, to create a child specific multiple deprivation measure, and also consider it outside the remit of the current update. They advise, however, that the issue will require full consideration when the review of the measures takes place post 2011 Census, with full consultation around the use and utility of the current income deprivation affecting children measure. Following this it will be possible to consider the feasibility and merits of the range of possible options including: dropping the income deprivation affecting children measure; maintaining the status quo; updating the current benefits-based income deprivation measure with more refined income data; or developing a bespoke Multiple Deprivation Measure for children.

It is therefore proposed that the stand-alone measure, income deprivation affecting children, remains the only deprivation measure specific to children in the updated measures.

Further to the above recommendations a number of changes to the domain are necessary to take account of the current benefit system and data availability.

Since the creation of the NIMDM 2005 the criteria for claiming Income Support has changed and two additional income related benefits have been created: State Pension Credits, and Employment and Support Allowance. State Pension Credits were introduced in 2003, replacing the Minimum Income Guarantee element of Income Support for those over 60 whose income was below a minimum standard, while in 2008 Employment and Support Allowance was launched for new Income Support customers claiming due to an illness or disability. To capture those previously covered by a single Income Support indicator *it is necessary to include in the updated domain indicators relating to Income Support, State Pension Credit and the income component of Employment and Support Allowance.*

² *Income Related Benefits; Estimates of Take-Up in 2004/06*, Northern Ireland, Department for Social Development. Chapter 5.

³ Anderson, B (2008) *Creating small area income deprivation estimates for Northern Ireland: spatial microsimulation modelling*. NISRA Occasional Paper No.27 http://www.nisra.gov.uk/archive/demography/publications/IncEst_Model.pdf

⁴ Eurostat Methodologies & Working papers, *Statistical Requirements Compendium 2008 edition*, Luxembourg: Office for Official Publications of the European Communities. Module 1.06.02 Income, social inclusion and living conditions.



It is proposed to include Adults and Children living in Housing Benefit households to capture those renting whose income is below a minimum level and who are not already claiming State Pension Credit, Income Support, the income component of Employment and Support Allowance, or income based Jobseeker's Allowance. In previous measures the addition of this indicator had been proposed but due to lack of available data had not been included.

The NIMDM 2005 Income Deprivation Domain included those living in households in receipt of Working Families Tax Credit and Disabled Person's Tax Credit whose income was below 60% of the UK median income. These Tax Credits have since been replaced by Working Tax Credit and Child Tax Credit.

Although responsibility for administering the Tax Credits lies with HM Revenue and Customs, the data for the 2005 measures were supplied by DSD who had access to Tax Credit data for statistics and research purposes. However, since October 2007 DSD has no longer had access to Tax Credit data and as a result cannot supply Tax Credit data for inclusion in the updated Northern Ireland Multiple Deprivation Measure. *An indicator relating to Tax Credits will therefore not be included in the Income Deprivation Domain.*

Combination of Indicators

The indicators will be summed and expressed as a rate of the total population. Persons in receipt of more than one benefit will be counted only once in this domain resulting in a score that can be interpreted as the percentage of income deprived people for a given area.

Consultees are invited to comment on:
Whether the proposed changes from the 2005 domain are acceptable?
Specifically,

- 1 Whether Adults and Children in Households in receipt of Housing Benefit should be included in the domain?

Employment Deprivation Domain

Purpose of the Domain

This domain measures employment deprivation defined as involuntary exclusion of the working age population from work.

Employment Deprivation Domain

Unemployment claimant count of women aged 18-59 and men aged 18-64.
(2008/09 Source: DSD)

Incapacity Benefit claimants women aged 18-59 and men aged 18-64.
(2008/09 Source: DSD)

Severe Disablement Allowance claimants women aged 18-59 and men aged 18-64.
(2008/09 Source: DSD)

Carer's Allowance claimants women aged 18-59 and men aged 18-64.
(2008/09 Source: DSD)

Employment and Support Allowance claimants women aged 18-59 and men aged 18-64.
(2008/09 Source: DSD)

Comparison with NIMDM 2005

The previous Employment Domain comprised the following indicators:

Unemployment claimant count (JUVOS) of women aged 18-59 and men aged 18-64 averaged over 4 quarters.
(2003 Source: DETI)

Incapacity Benefit claimants women aged 18-59 and men aged 18-64.
(2003 Source: DSD)

Severe Disablement Allowance claimants women aged 18-59 and men aged 18-64.
(2003 Source: DSD)

Participants in New Deal for Young People (18-24 years) who are not included in the claimant count.
(2003 Source: DEL)

Participants in New Deal for 25+ who are not included in the claimant count.
(2003 Source: DEL)

Carer's Allowance claimants women aged 18-59 and men aged 18-64.
(2003 Source: DSD).



Consideration of Recommendations and Changes from NIMDM 2005

The NIMDM 2005 report contained one recommendation relating to future Employment domains; to investigate the Labour Force Survey and the Family Resources Survey as possible sources of information on 'hidden unemployment'.

The Labour Force Survey and the Family Resources Survey are quarterly surveys and have achieved sample sizes of 2,500 and 1,900 respectively. Due to the relatively small sample sizes of both surveys, and subsequently the relatively small number of respondents who would be identified as out of work while not receiving benefits, it is thought that these surveys would not produce robust results at the small area level. *A specific indicator relating to hidden unemployment will therefore not be included.*

In September 2008 Steps to Work, DEL's new flexible approach to helping people to find work, was introduced in Northern Ireland. The Steps to Work programme subsumes the main New Deal programmes which was included in previous measures to capture those not claiming Jobseeker's Allowance but who were actively seeking employment. As the Steps to Work programme has not yet been operating province wide, and quality assurance of the initial data is underway, *a Steps to Work indicator will not be included in this domain.*

2008 also saw the introduction of Employment and Support Allowance for new Incapacity Benefit claimants: a benefit specific to those that cannot work due to illness or disability. Those who were already claiming Incapacity Benefit will continue to claim this benefit while new eligible claimants will receive Employment and Support Allowance. *Therefore those claiming Incapacity Benefit and those claiming Employment and Support Allowance will be included in this domain.*

Combination of Indicators

The indicators will be summed and expressed as a rate of the total working age population (women aged 18-59 and men aged 18-64). Persons in receipt of more than one of the benefits listed will be counted only once, resulting in a non-overlapping count and a score that can be interpreted as the percentage of employment deprived people for a given area.

Consultees are invited to comment on:

- 1 Whether, given the recommendations and changes to data availability, the proposed updated domain is acceptable?

Health Deprivation and Disability Domain

Purpose of the Domain

The Health Deprivation and Disability Domain identifies areas with relatively high rates of premature deaths and areas where relatively high proportions of the population's quality of life is impaired by poor health or who are disabled.

Health Deprivation and Disability Domain

Years of Potential Life Lost
(2004 to 2008 Source: GRO)

Comparative Illness and Disability Ratio
(Income Support claimants in receipt of disability premium, State Pension Credit claimants in receipt of severe disability premium, Attendance Allowance, Severe Disablement Allowance, Disability Living Allowance, Incapacity Benefit and Employment and Support Allowance.
2008/09 Source: DSD)

A combined measure of three indicators

- i) Individuals suffering from mood and anxiety disorders, based on prescribing data (2008/09 Source: BSO)
- ii) Suicides (1999 to 2008 Source: GRO)
- iii) Mental health inpatient stays (2003 to 2008 Source: DHSSPS)

People registered as having cancer (excluding non-melanoma skin cancers)
(2003 to 2007 Source: Northern Ireland Cancer Registry)

Emergency Admission Rate
(2007/08 Source: DHSSPS)

Low Birth Weight
(2003 to 2007 Source: Child Health System)

Children's Dental Extractions
(2006/07 to 2008/09 Source: BSO and DHSSPS)

Comparison with NIMDM 2005

The previous Health Deprivation and Disability Domain comprised the following indicators:

Years of Potential Life Lost
(1999 to 2003 Source: NISRA)

Comparative Illness and Disability Ratio
(2003 Source: Income Support, Attendance Allowance, Disability Living Allowance, Severe Disablement Allowance, Incapacity Benefit from DSD)

A combined measure of two indicators

- i) Individuals suffering from mood and anxiety disorders, based on prescribing (2003 Source: BSO) and
- ii) Suicides (1999 to 2003 Source: NISRA)

People registered as having cancer (excluding non-melanoma skin cancers)
(1999 to 2002 Source: Northern Ireland Cancer Registry)

Consideration of Recommendations and Changes from NIMDM 2005

Following the four recommendations described in the NIMDM 2005 report the proposed Health Deprivation and Disability Domain includes three additional indicators; Emergency Admission Rate, Mental Health Inpatient Stays and Children's Dental extractions, as well as including improved prescription data to measure those suffering from mood and anxiety disorders. A Low Birth Weight indicator has also been added.

Emergency admission rates had not been included previously due to a perceived rural bias. The perceived bias was such that for the same level of health need, fewer emergency hospital admissions would occur in rural areas compared to urban areas. This is hypothesised to result from greater ease of access to hospitals in urban areas.



Recent research carried out by DHSSPS indicates that there is a small, negative correlation between rural-related variables and emergency admission rates, in line with the above argument. Modelling standardised emergency admission rates whilst controlling for health need showed that although there was no discriminatory rural effect⁵ there was a small but significant distance to Accident and Emergency hospital effect. This effect disappeared completely when admissions with a length of stay of three nights or fewer were removed. *It is therefore proposed that an age and gender standardised emergency admission rate (for emergency admissions with length of stay of four nights or more) is included.*

The NIMDM 2005 recommendations also include supplementing the Health Deprivation and Disability Domain with information on admissions to hospitals for mental health conditions. Since the publication of the NIMDM 2005 it has become possible to obtain small area data on mental health admissions to hospital and mental health units. *It is proposed that this measure will be used alongside mood and anxiety prescription information and suicide data to form a mental health indicator.*

Prescribing data on Mood and Anxiety Disorders will be obtained from the Electronic Prescribing and Eligibility System (EPES) rather than the General Pharmaceutical Payments System (GPPS) which was used to calculate the indicator in the 2005 measures. This will improve the quality of the indicator as EPES contains patient location information for each prescription whereas the GPPS showed only the GP practice from which prescriptions were written. Subsequently SOA rates can be calculated for those suffering from mood or anxiety disorders based on prescribing information.

A dental health indicator was included in the NIMDM 2001, but not in the NIMDM 2005 as it was not possible to obtain data on hospital extractions, only those occurring in general dental practices, and so neglected to capture the most severe cases of tooth decay. A complete measure of children's dental health would be an important addition to this domain as oral diseases share many risk factors with general chronic diseases like heart disease and cancer.⁶

It is now possible to obtain the number of children admitted to hospital for extractions under anaesthetic, as well as the number of extractions taking place in general dental practices. Although the number of teeth extracted for individual cases in hospital is not available, research and advice from dental colleagues in DHSSPS has estimated this at an average of 4.9 teeth per admission for both adults and children.

Dental extractions also take place in Community Clinics/Health Centres. A consultant in Dental Public Health in the Health and Social Care Board has indicated that approximately 1,000 cases a year take place in this setting (3% of all cases). The availability, quality and geographical coverage of the data are currently being investigated for potential inclusion in this indicator.

In the absence of data from Community Clinics and a children specific estimate for the number of extractions taking place in hospitals, *it is proposed that the average value is used for the hospital extractions alongside actual number of extractions taking place in general dental practices, to form a dental health indicator for those under 16.*

Low Birth Weight data could not be included in the NIMDM 2001 or the NIMDM 2005 due to reported inconsistency in measurement practices across Northern Ireland. Low birth weight, defined as less than 2.5 kg⁷, would make an important addition to the domain as it is thought to impact on health through increasing the risk of long-term health problems, such as deficits in growth, cognitive development, diabetes and heart disease.⁸ It has been advised that there is no longer concern over the quality of the low birth weight data and it is proposed that *a low birth weight indicator is now included in the Health Deprivation and Disability Domain.*

⁵ As measured by population density or urban-rural definition as per Report of the Inter-Departmental Urban-Rural Definition Group (2005), Statistical Classification and Delineation of settlements, NISRA, Annex C, p.23

⁶ Oral Health Strategy for Northern Ireland (2007), Department of Health, Social Services and Public Safety.

⁷ WHO (2004) International Classification of Diseases. 10th Revision. Geneva, World Health Organization. P07.1 <http://www.who.int/whosis/indicators/2007LBW/en/index.html>

⁸ DJP Barker et al., (2002) Fetal origins of adult disease: strength of effects and biological basis, International Journal of Epidemiology 2002; 31:1235-1239

The final change to the domain is to the composition of the 'Comparative Illness and Disability Ratio', reflecting changes in the benefit system by including those receiving the Severe Disability premium of State Pension Credit, and Employment and Support Allowance. State Pension Credits were introduced in 2003 as an income supplement for those over 60 while Employment and Support Allowance was introduced in 2008 for new eligible Incapacity Benefit Claimants. As in the NIMDM 2005 indicator the intention is to create a non-overlapping count of those in receipt of disability related benefits.

Combination of Indicators

All of the above indicators will be converted to age and gender standardised rates (to control for differences in age and gender of the population between SOAs) apart from the prescription data for mood and anxiety disorders, and low birth weight indicators, which will be converted to SOA rates only. This follows advice that mood and anxiety disorders, unlike other mental health conditions such as dementia, are not an inevitable occurrence due to advanced age or gender and that a common birth weight threshold is used for both genders in determining a low birth weight.

The three components in the mental health indicator will be ranked and transformed individually and then combined with equal weights. Rates for the remaining indicators will be ranked and transformed. Factor analysis will be used to determine the weights for combining the indicators into the overall domain.

Consultees are invited to comment on:
Whether the proposed changes from the 2005 domain are acceptable?
Specifically,

- 1 Whether an Emergency Hospital Admission Rate indicator should be included in the domain?
- 2 Whether Mental Health Hospital Admissions should be included in the Mental Health Indicator?
- 3 Whether a Children's Dental Health indicator should be included in the domain?
- 4 Whether a Low Birth Weight Indicator should be included in the domain?



Education, Skills and Training Deprivation Domain

Purpose of the domain

The purpose of the domain is to measure the extent of deprivation in education, skills and training at the small area level for both children and working age adults.

Education, Skills and Training Deprivation Domain

Sub-Domain: Primary School

Key Stage 2 Teacher Assessments for English and Maths (and Irish in Irish medium schools)
(2006/07 to 2007/08 Source: DE)

Proportions of pupils attending Special Education Needs Schools or who are attending primary school with Special Education Needs
(2006/07 to 2007/08 Source: School Census, DE)

Absenteeism at Primary Schools (all absences)
(2006/07 to 2007/08 Source: DE)

Sub-Domain: Post Primary

Key Stage 3 Teacher Assessments for English and Maths (and Irish in Irish medium schools/units)
(2006/07 to 2007/08 Source: DE)

GCSE or equivalent qualifications points score
(2005/06 to 2007/08 Source: School Leavers Survey, DE)

Proportions of those leaving school aged 16, 17 and 18 and not entering Further Education or Training
(2003/04 to 2007/08 Source: School Leavers Survey, DE)

Proportions of 18-21 year olds who have enrolled in Higher Education Courses at Higher Education or Further Education establishments
(2004/05 to 2007/08 Source: HESA and FESR, DEL)

Proportions of pupils attending Special Education Needs Schools or who are attending post primary school with Special Education Needs
(2006/07 to 2007/08 Source: School Census, DE)

Absenteeism at Secondary Schools (all absences)
(2006/07 to 2007/08 Source: DE)

Sub-Domain: Working Age Adults

Proportion of working age adults (25-59) with no or low levels of qualification
(2001 Census Source: NISRA)

Comparison with NIMDM 2005

The previous measures comprised the following indicators:

Sub-Domain: Children/Young People

Proportions of Years 11 and 12 pupils not in grammar school
(2003 Source: School Census, DE)

Key Stage 3 data
(2002/03 Source: DE)

Note: Key Stage 3 assessment is based on formal tests taken by pupils at the end of KS3 in English (and Irish – in Irish medium schools/units), Mathematics and Science.

GCSE/GNVQ points score
(1999/2000 to 2001/02 Source: School Leavers Survey, DE)

Proportion of those leaving school not entering Further Education (1999/2000 to 2001/02 Source: School Leavers Survey, DE)

Proportions of 17-20 year olds who have not successfully applied for Higher Education
(1999/2000 to 2002/03 Source: UCAS and DEL)

Absenteeism at secondary school level (all absences)
(2001/02 and 2002/03 Source: SAER, DE)

Proportions of post primary pupils with Special Education Needs in mainstream schools (2002/03 School Census, Source DE)

Sub-Domain: Working Age Adults

Proportions of working age adults (aged 25-59) in the area with no or low levels of qualification
(2001 Source: Census, NISRA)

Consideration of Recommendations and Changes from NIMDM 2005

The NIMDM 2005 recommendations concerned extending performance data to primary schools; developing a database that would provide data on year groups cohorts, rather than school leaver cohorts from the School Leavers Survey; and considering alternatives to Census 2001 data for calculating Education, Skills and Training Deprivation in working age adults.

The proposed Education, Skills and Training sub-domains for primary and post primary school age focus on educational attainment, comprising assessment measures at primary school (Key Stage 2), and post primary school (Key Stage 3, GCSE or equivalent, and Higher Education enrolments). In addition measures of those children with identified special educational needs; and those children/young people who are not receiving education, skills or training through either absenteeism at school or not continuing with education or training, are also included.

The proposed Education, Skills and Training domain sees the addition of Key Stage 2 Teacher Assessment data and the removal of the indicator relating to the proportion of Year 11 and 12 pupils not attending a grammar school.

This change is proposed as Key Stage 2 data are a more accurate measure of primary school performance than attendance at grammar schools, due to the spatial variation in Transfer Test grades needed for grammar school admission.⁹ Key Stage 2 performance data were not included in previous measures as accurate residential information for primary school pupils was not available. Since 2006/07 pupil level information has been collected for primary schools from the School Census. Although this is not linked to the Key Stage 2 assessment scores, school level aggregates are available making it possible to apportion school level results to areas using School Census address information. In line with the NIMDM 2005 recommendations to extend performance data to primary schools *it is proposed that Key Stage 2 data are included.*

In addition to the above improvements to the collection of primary level assessment data, improved pupil level information has also allowed the extension of the Absenteeism and Special Education Needs indicators to primary school level. It is therefore proposed that indicators on absenteeism and proportion of pupils with Special Education Needs are extended to primary school level.

Key Stage 3 assessment data based on formal tests in English (Irish in Irish medium schools), Mathematics and Science were included in the 2005 measures. This indicator has been modified and will be based on English (Irish in Irish medium schools) and Mathematics teacher assessments only, as from 2006/07 the formal tests and teachers assessments for Science are no longer compulsory.

As in the Education, Skills and Training Deprivation domain 2005, the School Leavers Survey will be used to provide information on GCSE attainment. The indicator has been updated from GCSE/ GNVQ points score to GCSE and equivalent qualifications to reflect the additional programmes of study now available. As yet a database, as recommended by the NIMDM 2005 research team, providing information on year groups cohorts has not been developed and so three years of School Leavers Survey data will continue to be used.

Previously the destination of School Leavers indicator focused on those school leavers not entering into Further Education. *It is proposed that this indicator is adapted to consider those who are not entering Further Education or Training, which is more in keeping with the aim of the domain.*

The final recommendation concerned considering alternatives to using data from the Census 2001 data for calculating Education, Skills and Training deprivation in working age adults. The Labour Force Survey was investigated as an alternative as it collects information on the working age adults with no qualifications. However, due to the sample size of the survey it would not be possible to model the results robustly to the small area level.

⁹ DE admissions data for 2007/08 showed grammar school intake per school ranging from 22% of pupils with A grades to 100% of pupils with A grades. For more information see www.ninis.nisra.gov.uk/mapextreme/DataCatalogue.asp?button=Education



Combination of Indicators

It is proposed that the above indicators are combined to form three sub-domains, reflecting Education, Skills and Training deprivation amongst three age groups; Primary School Age Pupils, Post Primary School Age Pupils and Working Age Adults.

In the 2005 Domain, two sub-domains were introduced (children/young people and working age adults) to strengthen the measurement of adult skills, with equal weights assigned to each sub-domain in the overall domain. However, due to the heavy reliance on the 2001 Census results to measure deprivation affecting the working age population, alongside the improvements in the availability of primary school level pupil data, three equally weighted sub-domains have been proposed. This change would decrease the importance of data collected in the 2001 Census in the Education, Skills and Training Domain from 50% to 33% and correspondingly school level data would account for two-thirds of the domain.

The Primary School and Post Primary sub-domain indicators will be converted to SOA rates and ranked so that higher rates correspond to greater educational need. After transforming to a normal distribution, the indicators will be entered into a factor analysis to determine their sub-domain weights.

The SOA proportion of working age adults with no or low levels of qualifications will be ranked and transformed to standardised scores to form the Education, Skills and Training Working age adults sub-domain.

The sub-domain scores will be transformed to an exponential distribution, giving weight to the most deprived areas in each. The resulting scores will be combined with equal weights forming the overall Education, Skills and Training Domain score.

Consultees are invited to comment on:
Whether the proposed changes from the 2005 domain are acceptable?
Specifically

- 1 Whether Key Stage 2 performance data should replace the 'proportions of children aged 11 and 12 not attending a grammar school'?
- 2 Whether primary level absenteeism rates should be included in the domain?
- 3 Whether the proportion of primary school age pupils with Special Education Needs should be included in the domain?
- 4 Whether the destination of school leavers indicator should include those not entering Further Education or training?
- 5 Whether three sub-domains should be introduced, decreasing the importance of 2001 Census data in the overall domain?

Proximity to Services Domain

Purpose of the Domain

The purpose of this domain is to measure the extent to which people have poor geographical access to key services, including statutory and general services.

Proximity to Services Deprivation

- GP premises (2009 Source: BSO)
- Accident and Emergency hospital (2009 Source: DHSSPS)
- Other Primary Health Care Services (2009 Source: BSO)
- Job Centre or Jobs and Benefits Office (2008 Source: DEL)
- Post Office (2008 Source: Post Office Ltd)
- Supermarket / Food Store (2007 Source: Experian)
- Large Service Centre (Source: DSD)
- Council Leisure Centre (2009 Source: DCAL)
- Financial Services (2007 Source: Experian, Credit Union Register)
- Other general services (2007 Source: Experian)

Comparison with NIMDM 2005

The previous measures comprised the following indicators:

- GP premises (2004 Source: BSO)
- Accident and Emergency hospital (2004 Source: DHSSPS)
- Dentist (2004 Source: BSO)
- Optician (2004 Source: BSO)
- Pharmacist (2004 Source: BSO)
- Jobs Centre or Jobs and Benefits Office (2004 Source: DEL)
- Post Office (2004 Source: Post Office Ltd)
- Food shop (2003 Source: Census of Employment)
- Settlement of 10,000 or more people (2004 Source: NISRA)

Consideration of Recommendations and Changes from NIMDM 2005

There were four recommendations made in relation to the Proximity to Services domain in the NIMDM 2005 report; relating to the inclusion of information on Translink services, car ownership, cross border services and other suggested services.

The inclusion of Translink data would allow for the consideration of bus and train services, constituting an improvement to the domain as not every journey is made by car but often by public transport. Translink, however, does not have an integrated system containing the frequency, timing, destination and location of stops, for buses and trains. Without this information on frequency and timing, it is not possible to assess the comparative ease of travel by car and by public transport to a given destination. *A measure of travel by public transport will therefore not be included.*

In the 2005 report it was recommended that household level data on car ownership be collected annually. However due to the lack of suitable public transport data to complement this dataset, information on car ownership would serve only to calculate the proportion of the population for whom there can be no estimate of travel distance or time. *Therefore a car ownership indicator will not be added to this domain.*



A further recommendation in the 2005 report was to explore the possibility of including cross border data. Although there is clearly the potential for the residents of border areas to use services in the Republic of Ireland, it is unclear to what extent use is actually made of such services. This depends not only on the comparative conditions of use (e.g. presence/absence of fees, ability to use debit cards or change money, exchange rate, taxation regime and prices) but also on the availability of the services. The presence of large service centres and A&E hospitals can be established but detailed information on the presence and location of other services is not readily available. In particular, the absence of a postcode system in the Republic Of Ireland severely hampers the analysis of locations. Accordingly *it is proposed that determination of the travel time to service centres and A&E hospitals in the Republic of Ireland will be included.*

Opticians, dentists and pharmacies are less universally required health services. In order to retain coverage of these services without indicators becoming too numerous, *it is proposed that they be combined into a single health indicator.*

The final recommendation in the 2005 report was to gather data on the locations of other services suggested but not included, e.g. sports facilities, social facilities, cultural facilities, parks/open spaces and particularly ATMs.

Leisure activity services are difficult to analyse since many of them are only attractive to a restricted set of users. Accordingly, *it is proposed that council leisure centres and facilities offering either a sports hall or a variety of activities are included.*

The locations of ATMs, banks, building societies and credit unions are now available to provide a measure of access to basic financial services so *it is proposed that a financial services indicator be introduced.* Furthermore, data are now available on a range of general services whose wide distribution of service points gives some indication of their importance to the population of Northern Ireland. *It is proposed that a general services indicator be included, consisting of filling stations, health and beauty establishments, food and social establishments.*

Further to the explicit recommendations detailed in the NIMDM 2005 report, improved data availability has allowed the refinement of two of the indicators used in the 2005 Proximity to Services domain as well as more accurate calculation of proximity to services.

Specifically, the food shop indicator can be improved as data are now available on a fuller range of shops selling food. Rather than focussing on larger supermarkets *it is proposed that access to supermarkets or food stores is used.*

The service centre indicator (previously settlement of 10,000 or more people) can be improved by considering that the quality of service centres is not determined by their population, but by the number and range of services provided.^{10, 11} Population size is not an adequate proxy for service provision.¹² Analysis of newly available data shows that not only do a number of smaller settlements have comparable services to larger settlements, but so do some shopping areas outside the central business district of large settlements (particularly Belfast). In total 34 centres have been identified in Northern Ireland and six cross border service centres that provide a wide range of services. This compares to 24 settlements in Northern Ireland with a population in excess of 10,000. *It is therefore proposed that the list of service centres be extended to reflect the level of service provision rather than population.*

It is also felt that, despite the inclusion of a new General Services indicator along with the other proposed additions to the indicator base, there is still strong justification in retaining a separate service centre provision indicator. This is because the General Services indicator addresses some specific frequently used services, whilst the service centre indicator deals more with the wide range of comparison goods and other services which, whilst fewer in numbers and less frequently used, are nonetheless an important part of life.

¹⁰ Morris, C, Redmond R, Scullion P (2006), Report on *settlement service classification: Settlement Information, Classification and Analysis Group NISRA Occasional Paper 24*, Department for Social Development Belfast.

¹¹ DSD Statistics and Research Bulletin No 6 (2008), *Settlement Classification: Division of major urban areas and service availability analysis.*

¹² Report of the Inter-Departmental Urban-Rural Definition Group (2005), *Statistical Classification and Delineation of settlements*, NISRA, Annex C, p23

In the 2005 Proximity to Services deprivation domain, the routes identified between Output Areas were the fastest routes, rather than shortest road distances, given assumptions about achievable speeds along various classes of road, i.e. the most quickly reached Output Area containing a particular service is not necessarily the closest. Accordingly, to ensure consistency with the method of route identification, *it is proposed that travel times, rather than distances, are used for comparison of proximity to services.*

An indicator relating to access to broadband was considered within the steering group. Although the OFCOM report 2008 on the communications market in Northern Ireland states that 'broadband is available to 100% of the population of Northern Ireland'¹³, it is likely that the quality of the service varies geographically as the OFCOM report notes evidence suggesting that satisfaction with the speed is lower in rural areas. Detailed information on the variation of broadband speed, however, is not readily available at the small area level and so a meaningful indicator relating to broadband access cannot be included.

Combination of Indicators

It is proposed that the indicators will be combined with equal weights with the exception of the Accident and Emergency indicator which will be assigned a double weight.

Consultees are invited to comment on:
Whether the proposed changes from the 2005 domain are acceptable?

Specifically,

- 1 Whether cross border service centres and accident and emergency hospitals should be included?
- 2 Whether a general service indicator should be included?
- 3 Whether the food shop indicator should be broadened to include convenience stores?
- 4 Whether dentists, opticians and pharmacists should be combined into a single indicator?
- 5 Whether council leisure centres should be included?
- 6 Whether the service centres should be based on service provision rather than having a population of at least 10,000?
- 7 Whether the calculation of proximity be based on time rather than distance?

¹³ Ofcom (2008) *The Communications Market: Nations and Regions 2008, Northern Ireland* Pg 21
<http://www.ofcom.org.uk/research/cm/cmmr08/>



Living Environment Domain

Purpose of the Domain

The aim of the Living Environment Domain is to identify small areas experiencing deprivation in terms of the quality of housing, access to suitable housing, and the outdoor physical environment. As such the Living Environment Domain comprises three sub-domains.

Living Environment Domain

Sub-Domain: Housing quality

SOA level Decent Homes Standard
(2006 Source: NIHE, modelled NI House Conditions Survey)

SOA level Housing Health and Safety Rating System
(2006 Source: NIHE, modelled NI House Conditions Survey)

Sub-Domain: Housing Access

Homelessness Acceptances under the homelessness provisions of the Housing (Northern Ireland) Order 1988 and the Housing (Northern Ireland) Order 2003
(2005/06 to 2007/08 Source: NIHE)

Sub-Domain: Outdoor physical environment

SOA Local Area Problem Score
(2006 Source: NIHE, modelled NIHCS)

Comparison with NIMDM 2005

The previous measures comprised the following indicators:

Sub-Domain: Housing quality

SOA level housing stress
(2001 Source: SDRC and NIHE, modelled NIHCS)

Houses without central heating
(2001 Source: Census, NISRA)

Sub-Domain: Housing Access

Household overcrowding
(2001 Source: Census, NISRA)

LGD level rate of acceptances under the homelessness provisions of the Housing (Northern Ireland) Order 1988 and the Housing (Northern Ireland) Order 2003, assigned to the constituent SOAs (2003 Source: NIHE)

Sub-Domain: Outdoor physical environment

SOA level local area problem score
(2001 Source: SDRC and NIHE, modelled NIHCS)

Consideration of Recommendations and Changes from NIMDM 2005

The NIMDM 2005 research team recommended improving the quality of the geographical data used in the creation of the homelessness indicator as well as an investigation into the discrepancies between a person's last place of residence and the address from which they present as homeless. In addition the research team recommended exploring the possibility of broadening the scope of the living environment to include access to mains water supply; sewerage services; road quality; and accidents in the home.

It is proposed that the Housing Quality Sub-Domain will comprise SOA level Decent Home Standard and SOA level Housing Health and Rating Standard, with the removal of an indicator from the Census 2001 relating to lack of central heating.

The Decent Home Standard is increasingly seen as the government standard for measuring quality of housing¹⁴. Houses that meet the standard satisfy the following criteria: meets the minimum Fitness Standard; is in a reasonable state of repair; has reasonably modern facilities and services and provides a reasonable degree of thermal comfort. As thermal comfort is captured by the Decent Home Standard and the only administrative information source of central heating is the Census, *it is proposed that lack of central heating indicator is dropped from the Housing Quality sub-domain.*

¹⁴ Northern Ireland House conditions Survey 2006 – Chapter 2.6
http://www.nihe.gov.uk/housing_conditions_survey_2006.pdf

Following the NIMDM 2005 recommendations the potential for a home accidents indicator was also investigated. Accidents in the home resulting in admissions to hospital are recorded by DHSSPS and such data could potentially be included in the domain. However the vast majority of accidents occurring in the home are treated at other health establishments such as A&E, minor injuries unit or GP with only the most serious accidents resulting in inpatient treatment. For these reasons DHSSPS has advised that a home accidents indicator is not included. Future work by the department aims to develop an individual level A&E dataset which, when combined with the inpatient data would allow the identification of the majority of accidents occurring in the home. Until this point *it is recommended that the incomplete home accidents dataset is not used as a measure of housing quality.*

The Housing Health and Safety Rating Standard is a risk based system that identifies defects in dwellings and evaluates the subsequent risk to the health and safety of occupants, neighbours and passers-by. Five possible hazards are assessed during the House Conditions Survey (falls on stairs, falls on the level, falls between levels, fire, hot surfaces) while a further ten hazards are modelled¹⁵. *It is proposed that the Housing Health and Safety Rating Standard identified in the House Conditions Survey is included in the Housing Quality sub-domain.*

Investigating the merits of including access to mains water supply and sewerage services were recommended in the NIMDM 2005 report as a potential measure of housing quality. The most recent data from the Land and Property Services shows that 98% of households in Northern Ireland have access to the mains water supply. As lack of access to mains water supply affects a small percentage of the population occurring in a small number of SOAs it would not be an appropriate indicator. Similarly a high proportion of households are connected to the sewerage network (82%) with the remainder using septic tanks. *It is therefore thought that such an indicator would not be an accurate reflection of poor housing quality.*

A specific indicator relating to Fuel Poverty in the Living Environment was considered by the Deprivation Steering Group. A household is said to be in fuel poverty if it needs to spend more than 10% of its income on fuel to maintain a satisfactory heating regime¹⁶. Fuel Poverty is recorded by the House Conditions Survey although can be difficult to measure precisely as it is reliant on an accurate estimation of a household's income as well as being dependent on changing fuel prices.

Furthermore as fuel poverty relates to both level of income and housing conditions (as well as household composition) it is not fitted to one single domain but could sit partially in the Living Environment Domain and the Income Domain. However the degree of thermal comfort is included in the Decent Home Standard in the Housing Quality sub-domain and low income is covered in the income domain. While it is not the case that all low income households experience fuel poverty, nor that all poorly insulated households live in fuel poverty, it is likely that a large proportion of those experiencing fuel poverty would be covered in either domain. Therefore a separate indicator relating to fuel poverty will not be included.

*It is proposed that the **Housing Access Sub-Domain** consists solely of a measure of homelessness and a measure of household overcrowding is excluded.* It is felt that such a change is warranted not only due to the improvement in the quality of the homelessness data, but also due to the time that has passed since the Census 2001, which provides the most recent small area overcrowding measure in Northern Ireland.

¹⁵ Northern Ireland House conditions Survey 2006 – Appendix G
http://www.nihe.gov.uk/housing_conditions_survey_2006.pdf

¹⁶ Department of Energy and Climate Change
http://www.decc.gov.uk/en/content/cms/what_we_do/consumers/fuel_poverty/fuel_poverty.aspx



Household overcrowding remains an important issue, with migrants likely to be one of the most affected population groups. However as recent years have seen an increase in the numbers of migrants, in particular since the accession of eight central and eastern European countries to the European Union in 2004, household overcrowding information from the Census 2001 is unlikely to be an accurate reflection of the current spatial distribution of overcrowding in Northern Ireland. Other sources of information on overcrowding were examined, such as the House Conditions Survey 2006 which reports that three per cent of households in Northern Ireland are overcrowded in terms of the 'bedroom standard'¹⁷. Following advice from the Housing Executive it was decided not to use this information source due to the small number of migrant houses that are likely to be covered by the survey. Rather than paint an inaccurate picture using data from the Census 2001 or the House Condition Survey 2006, *it is proposed that the household overcrowding measure is excluded from the Housing Access Domain.*

In line with the NIMDM 2005 recommendations the quality of the geographical coding of homeless data has been improved allowing the creation of an SOA level rate of homelessness acceptance. To further improve the robustness of the data at the small area level, three years of data will be used in the calculation of this indicator.

As yet research has not been carried out by NIHE on the discrepancy between last place of residence and place at which a person presents as homeless. However it is possible to isolate communal establishments for the homeless, such as shelters and hostels, and attribute these to the relevant surrounding area. In so doing the bias from attributing a disproportionate number of homeless persons to areas containing such an establishment is avoided.

The **Outdoor Environment Sub-Domain** will again be modelled from the House Conditions Survey 2006, based on the Local Area Problem Score and the visual quality of the area. Problems to be included are presence of litter and rubbish; graffiti (including sectarian graffiti) and painted kerbs; vandalism; dog fouling; scruffy or neglected gardens; scruffy or neglected buildings; and vacant or boarded-up buildings.

Road quality was considered for inclusion in this sub-domain as detailed in the NIMDM 2005 recommendations. Although information on surface type is held by DRD Road Service it is not thought to be an accurate reflection of road quality. *Therefore a measure of road quality will not be added to the Living Environment Domain.*

Combination of Indicators

The indicators in each domain will be ranked and transformed to a normal distribution. In the Housing Quality sub-domain indicators will be combined with equal weights to produce the sub-domain score.

The resulting sub-domain scores will be ranked and transformed to an exponential distribution and combined with equal weights.

Consultees are invited to comment on:
Whether the proposed changes from the 2005 domain are acceptable?
Specifically,

- 1 Whether Central Heating information from the 2001 Census and SOA level housing stress should be replaced by the Decent Home Standard?
- 2 Whether the Housing Health and Safety Rating System should be included?
- 3 Whether Household Overcrowding information from the 2001 Census should be excluded?

¹⁷ Northern Ireland House conditions Survey 2006 – Chapter 2.4
http://www.nihe.gov.uk/housing_conditions_survey_2006.pdf

Crime and Disorder Domain

Purpose of the domain

The Crime and Disorder Domain measures the rate of crime and disorder at the small area level. This includes recorded crime, deliberate fires and incidents of anti-social behaviour.

The Crime and Disorder Domain will consist of two sub-domains – the Crime sub-domain and the Disorder sub-domain.

Sub-Domain: Crime

Violence, robbery and public order
(2004/05 to 2008/09 Source PSNI)

Burglary
(2004/05 to 2008/09 Source PSNI)

Vehicle Theft
(2004/05 to 2008/09 Source PSNI)

Criminal Damage
(2004/05 to 2008/09 Source PSNI)

Sub-Domain: Disorder

Deliberate Primary Fires
(2004/05 to 2008/09 Source: NIFRS)

Anti-Social Behaviour Incidents
(2006/07 to 2008/09 Source: PSNI)

Comparison with NIMDM 2005

The previous measures comprised the following indicators:

Sub-Domain: Crime

Violence, robbery and public order
(2002 to 2004 Source PSNI)

Burglary
(2002 to 2004 Source PSNI)

Vehicle Theft
(2002 to 2004 Source PSNI)

Criminal Damage
(2002 to 2004 Source PSNI)

Sub-Domain: Disorder

Malicious and deliberate Primary Fires
(2002 to 2004 Source: NIFRS)

Disturbances
(2002 to 2004 Source: PSNI)

Consideration of Recommendations and Changes from NIMDM 2005

The NIMDM 2005 research team recommended examining the different reporting rates of population groups; expanding the Northern Ireland Crime Survey (NICS) and District Policing Partnership (DPP) surveys to enable modelling of results to small area level; developing a robust measure of domestic violence using data from voluntary organisations; and refining the community safety indicators.

The Northern Ireland Crime Survey has a target achieved sample size of 4,000 while the District Policing Partnership Survey is sent to one in ten households in Northern Ireland. Although this allows the calculation of robust results at Policing District level¹⁸ and District Policing Partnership level¹⁹ respectively, the sample sizes are not large enough to create robust indicators at the small area level, and so will not be used in the updated Crime and Disorder domain.

¹⁸ There are 29 District Command Units in Northern Ireland. These mirror the Local Government Districts, with Belfast LGD split into four areas, East Belfast, North Belfast, South Belfast and West Belfast; and are grouped into 8 Policing Districts.
<http://www.psnipolice.uk/>

¹⁹ There are 26 District Policing Partnerships in Northern Ireland, which mirror the Local Government Districts. Belfast has one principal DPP that splits into four sub-groups in the same way as the PSNI District Command Units.
<http://www.districtpolicing.com/>



The research team recommended researching the reporting rates of different population groups, as it is hypothesised that more deprived areas are less likely to report crime. Initial analysis carried out by NIO using the Northern Ireland Crime Survey 2007/08 gave inconclusive results on the relationship between deprivation and reporting rates. NIO plan to further investigate this relationship when data from the 2008/09 survey become available. Until this point the reported crime rates as provided by PSNI will continue to be used without adjustment.

Due to the under reporting of domestic violence the NIMDM 2005 research team recommended creating a robust measure of domestic violence at the small area level that was not based on PSNI recorded crimes. Evidence from the Northern Ireland Crime Survey 2007/08 on the experience of domestic violence shows that just over half of victims told their friends, relatives or neighbours and approximately one quarter notified the police of the domestic violence. Although this suggests a severe under reporting of domestic violence to the police it was greater than that to any other voluntary or statutory organisation. (Women's Aid or women's group/centre and Victim Support were the next most notified organisations with 4% and 3% of respondents respectively.)²⁰ PSNI recorded crime data are therefore the most robust source of small area information on domestic violence and will continue to be included in the violence indicator in the crime sub-domain.

A number of modifications will be made due to availability of improved data and changes to recording processes. Five years of data will be used for each of the indicators in the Crime sub-domain rather than two years as was used in the calculation for the NIMDM 2005. The inclusion of an extra three years of data will decrease the impact of 'one-off' or uncharacteristic events in the results.

The 'malicious and deliberate fires' indicator has been replaced by the 'deliberate primary fires' indicator. This is a change in name only, as advised by the Communities and Local Government (formerly Office for the Deputy Prime Minister)²¹ as it is not always possible to determine the intent with which a fire is started. Primary fires are broadly defined as involving buildings and structures, and other property such as vehicles, storage, plant and machinery; fires involving casualties, rescues or escapes; and fires where significant fire and rescue service resources are employed.

Finally the 'disturbances' indicator has been replaced by 'anti-social behaviour incidents'. This follows the introduction of the National Standard for Incident Recording in April 2006, which sought to improve the consistency by which incidents are recorded and classified. It is not possible to determine whether the change from the disturbances indicator to the anti-social behaviour indicator constitutes a refinement of the community safety indicators as per the final recommendation, or is limited to a refinement in the coding system.

For consistency in the measurement of this indicator three years of data (from introduction of the recording standard) will be used. The anti-social behaviour incidents indicators include rowdy or inconsiderate behaviour, vehicle abandonment and nuisance caused by noise.

Combination of Indicators

Within the Crime sub-domain each of the indicators will be converted to rates before ranking and transforming. The transformed values will be added with equal weights, resulting in the Crime sub-domain score.

Similarly the two indicators in the Disorder sub-domain will be converted to rates, ranked and transformed to a normal distribution. The two indicators will be combined with a 60% weight for Anti-Social Behaviour Incidents and a 40% weight for Deliberate Primary Fires as in the NIMDM 2005. The resulting value is the Disorder sub-domain score.

The Crime and Disorder sub-domain scores will be ranked and transformed to an exponential distribution to give additional weight to the most deprived areas in each sub-domain. The values for each sub-domain will be combined in a 60:40 ratio for Crime and Disorder respectively resulting in the Crime and Disorder Domain Score.

Consultees are invited to comment on:

- 1 Whether, given the recommendations and changes to data available, the proposed updated domain is acceptable?

²⁰ Experience of Domestic Violence in Northern Ireland: Findings from the 2007/08 Northern Ireland Crime Survey, Research and Statistical Bulletin 16/2008

²¹ Fire & Rescue Service Circular 1-2006, Appendix 1.
<http://www.communities.gov.uk/documents/fire/pdf/143648.pdf>

Annex A: Indicator Summary

NI Multiple Deprivation Measure 2005	Proposed updated indicators
Income Deprivation Domain	
Adults and children in Income Support households	Adults and children in Income Support households
	Adults and children in State Pension Credit households
	Adults and children in income based Employment and Support Allowance households
Adults and children in income based Jobseeker's Allowance Households	Adults and children in income based Jobseeker's Allowance Households
Adults and children in Working Families' Tax Credit households ²²	
Adults and children in Disabled Person's Tax Credit households ²²	
	Adults and children in Housing Benefit households
Employment Deprivation Domain	
Unemployment claimant count of women aged 18-59 and men aged 18-64	Unemployment claimant count of women aged 18-59 and men aged 18-64
Incapacity Benefit claimants women aged 18-59 and men aged 18-64	Incapacity Benefit claimants women aged 18-59 and men aged 18-64
Severe Disablement Allowance claimants women aged 18-59 and men aged 18-64	Severe Disablement Allowance claimants women aged 18-59 and men aged 18-64
Invalid Care Allowance claimants women aged 18-59 and men aged 18-64	Carer's Allowance claimants women aged 18-59 and men aged 18-64
Participants in New Deal for Young People (18-24 years) who are not included in the claimant count	
Participants in New Deal for 25+ who are not included in the claimant count	
	Employment and Support Allowance claimants women aged 18-59 and men 18-64
Health Deprivation & Disability Domain	
Years of Potential Life Lost	Years of Potential Life Lost
Comparative Illness and Disability Ratio	Comparative Illness and Disability Ratio
A combined measure of two indicators: i) individuals suffering from mood and anxiety disorders, based on prescribing ii) suicides	A combined measure of three indicators: i) individuals suffering from mood and anxiety disorders, based on prescribing data ii) suicides iii) mental health inpatient stays
People registered as having cancer	People registered as having cancer (excluding non-melanoma skin cancers)
	Emergency Admission Rate
	Low Birth Weight
	Children's Dental Extractions

²² whose equivalised income (excluding housing benefits) is below 60% of median before housing costs.



Education, Skills and Training Deprivation Domain	
Sub-Domain: Children/Young People	Sub-Domain: Primary School
Proportions of Years 11 and 12 pupils not in grammar school	Key Stage 2 Teacher Assessments for English and Maths (and Irish in Irish medium schools)
	Proportions of pupils attending Special Education Needs Schools or who are attending primary school with Special Education Needs
	Absenteeism at Primary Schools (all absences)
	Sub-Domain: Post Primary
Key Stage 3 data	Key Stage 3 Teacher Assessments for English and Maths (and Irish in Irish medium schools/units)
GCSE/GNVQ points score	GCSE or equivalent qualifications points score
Proportion of those leaving school not entering Further Education	Proportions of those leaving school not entering Further Education or Training
Proportions of 17-20 year olds who have not successfully applied for Higher Education	Proportions of 18-21 year olds who have enrolled in Higher Education Courses at Higher Education or Further Education establishments
Absenteeism at secondary school level (all absences)	Absenteeism at Secondary Schools (all absences)
Proportions of post primary pupils with Special Education Needs in mainstream schools	Proportions of pupils attending Special Education Needs Schools or who are attending post primary school with Special Education Needs
Sub-Domain: Working Age Adults	Sub-Domain: Working Age Adults
Proportions of working age adults (aged 25-59) in the area with no or low levels of qualification	Proportion of working age adults (25-59) with no or low levels of qualification
Proximity to Services Domain	
GP premises	GP premises
Accident and Emergency hospital	Accident and Emergency hospital
Dentist	Other Primary Health Care Services
Optician	
Pharmacist	
Jobs Centre or Jobs and Benefits Office	Jobs Centre or Jobs and Benefits Office
Post Office	Post Office
Food shop	Supermarket / Food Store
Settlement of 10,000 or more people	Large Service Centre
	Council Leisure Centre
	Financial Services
	Other general services

Living Environment Domain	
Sub-Domain: Housing quality	Sub-Domain: Housing quality
SOA level housing stress	SOA level Decent Homes Standard
Houses without central heating	
	SOA level Housing Health and Safety Rating System
Sub-Domain: Housing Access	Sub-Domain: Housing Access
Household overcrowding	
LGD level homelessness acceptances	SOA level homelessness acceptances
Sub-Domain: Outdoor physical environment	Sub-Domain: Outdoor physical environment
SOA level local area problem score	SOA level local area problem score
Crime and Disorder Domain	
Crime Sub-Domain	Crime Sub-Domain
Violence, robbery and public order	Violence, robbery and public order
Burglary	Burglary
Vehicle Theft	Vehicle Theft
Criminal Damage	Criminal Damage
Disorder Sub-Domain	Disorder Sub-Domain
Malicious and deliberate Primary Fires	Deliberate Primary Fires
Disturbances	Anti Social Behaviour Incidents



Annex B: Consultation Questions

Consultees are invited to comment on the following:

Income Deprivation Domain

Whether the proposed changes from the 2005 domain are acceptable?

Specifically

- 1 Whether Adults and Children in Households in receipt of Housing Benefit should be included in the domain?

Employment Deprivation Domain

- 1 Whether, given the recommendations and changes to data availability, the proposed updated domain is acceptable?

Health Deprivation and Disability Domain

Whether the proposed changes from the 2005 domain are acceptable?

Specifically

- 1 Whether an Emergency Hospital Admission indicator should be included in the domain?
- 2 Whether Mental Health Hospital Admissions should be included in the Mental Health Indicator?
- 3 Whether a Children's Dental Health indicator should be included in the domain?
- 4 Whether a Low Birth Weight Indicator should be included in the domain?

Education, Skills and Training Domain

Whether the proposed changes from the 2005 domain are acceptable?

Specifically

- 1 Whether Key Stage 2 performance data should replace the 'proportions of children aged 11 and 12 not attending a grammar school'?
- 2 Whether primary level absenteeism rates should be included in the domain?
- 3 Whether the proportion of primary school age pupils with Special Education Needs should be included in the domain?
- 4 Whether the destination of school leavers indicator should include those not entering Further Education or training?
- 5 Whether three sub-domains should be introduced, decreasing the importance of 2001 Census data in the overall domain?

Proximity to Services Domain

Whether the proposed changes from the 2005 domain are acceptable?

Specifically

- 1 Whether cross border service centres and accident and emergency hospitals should be included?
- 2 Whether a general service indicator should be included?
- 3 Whether the food shop indicator should be broadened to include convenience stores?
- 4 Whether dentists, opticians and pharmacists should be combined into a single indicator?
- 5 Whether council leisure centres should be included?
- 6 Whether the service centres should be based on service provision rather than having a population of at least 10,000?
- 7 Whether the calculation of proximity be based on time rather than distance?

Living Environment Domain

Whether the proposed changes from the 2005 domain are acceptable?

Specifically

- 1 Whether Central Heating information from the 2001 Census and SOA level housing stress should be replaced by the Decent Home Standard?
- 2 Whether the Housing Health and Safety Rating System should be included?
- 3 Whether Household Overcrowding information from the Census should be excluded?

Crime and Disorder Domain

- 1 Whether, given the recommendations and changes to data availability, the proposed updated domain is acceptable?



Annex C: Steering Group Members

Name	Department / Organisation
Robert Beatty (Chair)	NISRA
Alex Boyle	DOE
Gary Ewing (Secretary)	NISRA
Joe Frey	NIHE
Stephanie Harcourt	DRD
Margaret Langhammer	DRD
David Marshall	NISRA
Martin Mayock	DHSSPS
Ruth McAreavey	RDC
Cathryn McBurney	NISRA
Frances McCandless	NICVA
Alan McClelland	OFMDFM
Karen McCullough	DE
Tony McKibben	DSD
Darren McKinstry	Equality Commission
Daniel McSorley	SOLACE
Martin Monaghan	DETI
Keith Morrison	DARD
Dave Rogers	DEL
Philip Spotswood	DCAL

Glossary

A&E	Accident and Emergency
ATM	Automated Teller Machine
BSO	Business Services Organisation
CIDR	Comparative Illness and Disability Ratio
CSA	Central Services Agency
DARD	Department of Agriculture and Rural Development
DCAL	Department of Culture, Arts and Leisure
DE	Department of Education
DEL	Department for Employment and Learning
DETI	Department of Enterprise, Trade and Investment
DFP	Department of Finance and Personnel
DHSSPS	Department of Health, Social Services and Public Safety
DOE	Department of the Environment
DPP	District Policing Partnership
DRD	Department for Regional Development
DSD	Department for Social Development
DWP	Department for Work and Pensions
ED	Enumeration District
EPES	Electronic Prescribing and Eligibility System
FE	Further Education
FESR	Further Education Statistical Record
GCSE	General Certificate of Secondary Education
GNVQ	General National Vocational Qualification
GP	General Practitioner
GPPS	General Pharmaceutical Payment System
GRO	General Register Office
HE	Higher Education
HESA	Higher Education Statistics Agency
IDAC	Income Deprivation Affecting Children
IDAOP	Income Deprivation Affecting Older People
JUVOS	Computerised individual level unemployment data held by ONS
KS2	Key Stage 2
KS3	Key Stage 3



KS4	Key Stage 4
LFS	Labour Force Survey
LGD	Local Government District
LPS	Land and Property Services
MDM	Multiple Deprivation Measure
NICS	Northern Ireland Crime Survey
NICVA	Northern Ireland Council for Voluntary Action
NIFRS	Northern Ireland Fire and Rescue Service
NIHCS	Northern Ireland House Condition Survey
NIHE	Northern Ireland Housing Executive
NIMDM 2001	Northern Ireland Multiple Deprivation Measure 2001
NIMDM 2005	Northern Ireland Multiple Deprivation Measure 2005
NINIS	Northern Ireland Neighbourhood Information Service
NIO	Northern Ireland Office
NISRA	Northern Ireland Statistics and Research Agency
NUTS III	Nomenclature Units of Territorial Statistics
OA	Output Area
OFCOM	Office of Communications
OFMdFM	Office of the First Minister and Deputy First Minister
ONS	Office for National Statistics
PC	Parliamentary Constituency
PSNI	Police Service of Northern Ireland
RDC	Rural Development Council
SAER	Summary of Annual Examination Results
SAPE	Small Area Population Estimates
SDRC	Social Disadvantage Research Centre
SEN	Special Educational Needs
SOA	Super Output Area
SOLACE	Society of Local Authority Chief Executives
UCAS	Universities and Colleges Admissions Service
UK	United Kingdom of Great Britain and Northern Ireland
YPLL	Years of Potential Life Lost

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The Northern Ireland Statistics and Research Agency

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The Northern Ireland Statistics and Research Agency (NISRA) was established as an Executive Agency within the Northern Ireland Department of Finance and Personnel on 1 April 1996. NISRA is the principal source of official information of socio-economic conditions in Northern Ireland. The Agency provides statistics and social research services, undertakes the Northern Ireland census of population and administers the civil registration of births, deaths, marriages and adoptions.

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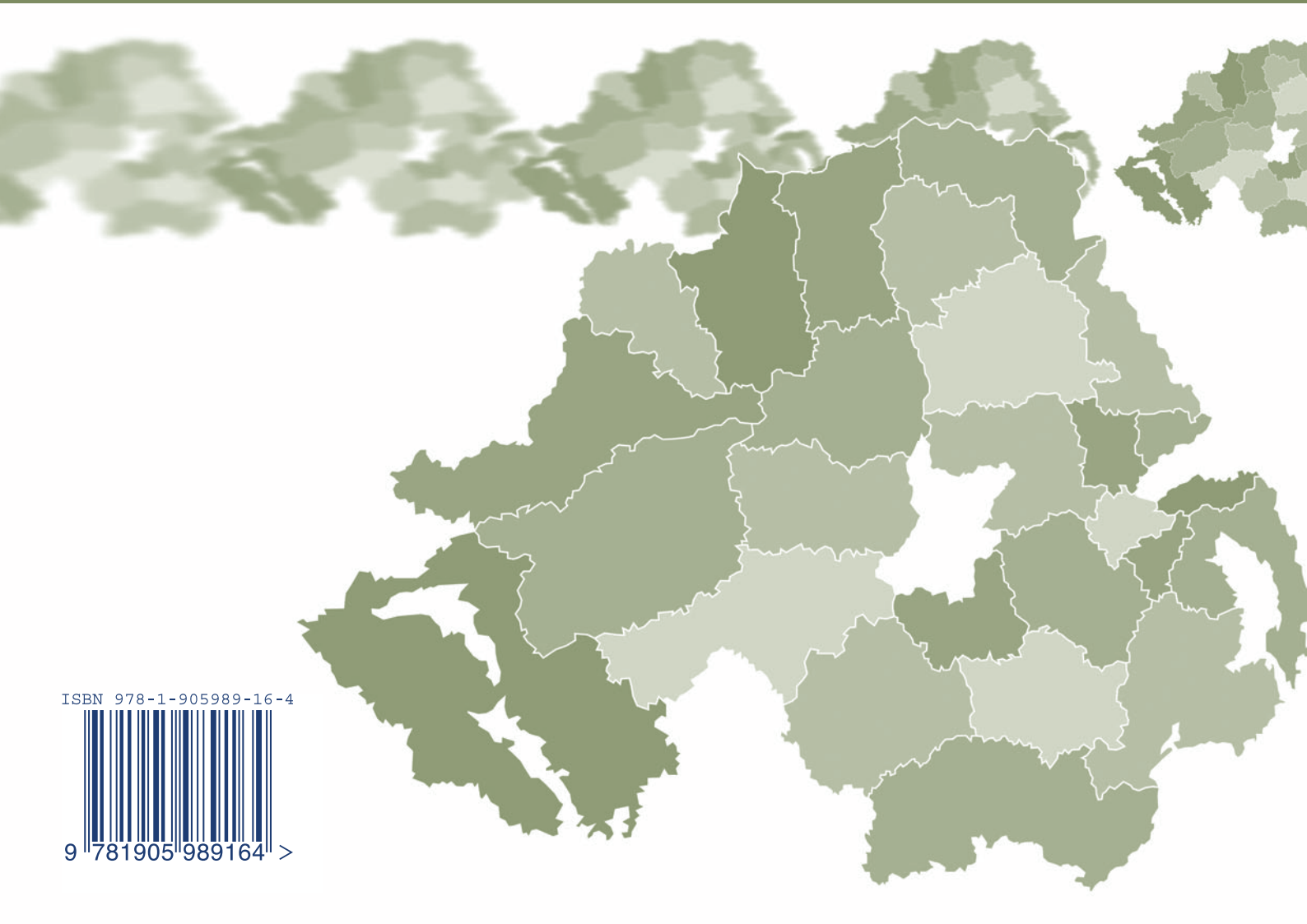
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