

Rural Development Sub-committee

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Welsh index of multiple deprivation

Background

1. The Welsh Index of Multiple Deprivation 2005 (WIMD) is the official measure of multiple deprivation for small areas in Wales. It was developed for the Welsh Assembly Government by the Assembly's Statistical Directorate and the Local Government Data Unit ~ Wales. It replaced the index which was produced in 2000.
2. Similar indexes are produced separately by Northern Ireland, Scotland and England. Variation in availability of data leads to differences in contents of each index, but the underlying concepts and methodologies are the same.
3. An updated index for Wales will be published in the summer of 2008, using more up-to-date data and improved indicators based on lessons learnt from the 2005 exercise.
4. Deprivation is a wider concept than poverty. Poverty means not having enough money (or other essentials) to get by. Deprivation refers to problems caused by a general lack of resources and opportunities (not just money).
5. Multiple deprivation, in the sense that it is used for the WIMD, cannot be measured directly—it is not some special sort of deprivation. It is a mixture of separate kinds of deprivation, each of which can be measured to some extent. But they cannot just be added together to make an overall index because they may interact to different extents.

Construction of the WIMD

6. The WIMD 2005 is made up of seven separate domains (or kinds) of deprivation:

income	employment	health	education
housing	access to services	environment	

Each of them was based on a range of different indicators, which meant that they were measured in different ways using different units. So, before they could be combined the measurements had to be transformed to make them compatible. For example, if the height of something had been measured in metres and the weight in kilograms it would not make sense simply to add them together.

7. Income and employment were classed as the most important factors, and they were given the biggest weighting in the overall index. Although there is more to deprivation than poverty, not having enough money or a job is a big part of it.
8. England and Wales have been divided into geographical units known as Super Output Areas, each having roughly the same population. There are 1,896

Lower Layer Super Output Areas (LSOA) in Wales, each having about 1,500 people. Deprivation scores have been worked out for each of these areas: higher scores mean more deprivation. An area has a higher deprivation score than another one if the proportion of people living there who are classed as deprived is higher. An area itself is not deprived: it is the circumstances and lifestyles of the people living there that affect its deprivation score. And it is important to remember that not everyone living in a deprived area is deprived—and that not all deprived people live in deprived areas.

What is the WIMD for?

9. It is important to be aware that the WIMD is not the only way to measure deprivation. WIMD has been developed for a particular purpose, which is to measure concentrations of deprivation at a small area level. In trying to use the index there are two important questions to ask yourself:

“am I interested in localised concentrations of deprivation or all deprived people?”;

“ is deprivation actually concentrated in my area of interest?”.

An analysis of the WIMD 2005 income and employment domains can illustrate these two issues.

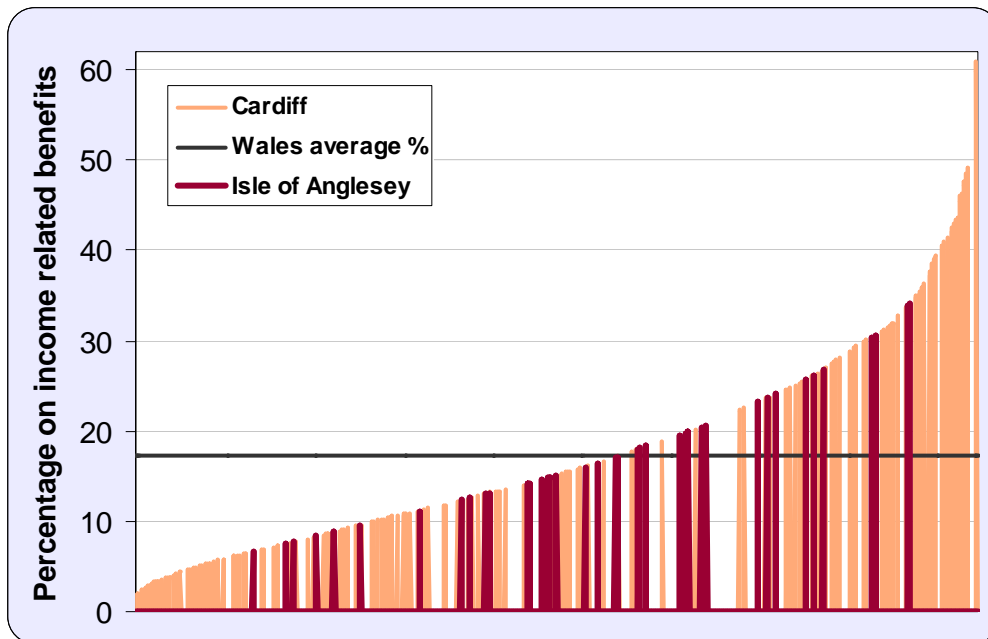
Percentage of the deprived population living within different groupings of LSOAs, WIMD 2005

	Income domain	Employment domain
Most deprived 10% LSOAs	23%	19%
Most deprived 20% LSOAs	39%	35%
Most deprived 30% LSOAs	53%	48%
Least deprived 10% LSOAs	2%	4%

10. While there is a definite concentration of deprivation into a relatively small number of areas, by no means all deprived people live in an area of high deprivation. Almost a quarter of the income deprived live in areas within the most deprived 10% in Wales. This illustrates how well WIMD identifies clusters from within the overall population. Over half live in the most deprived 30%, but that still means that around a half of the income deprived in Wales are more sparsely spread over the remaining 70% of Wales. And even in the least deprived 10% of LSOAs there are still deprived people

11. For WIMD 2005, the percentage on income related benefits in Wales were 17.4 per cent overall, for Cardiff the figures was 17.9 per cent and 17.6 per cent in the Isle of Anglesey. So in terms of overall levels of income deprivation, both Cardiff and the Isle of Anglesey were comparable and also similar to the overall Wales average. However, as can be seen in the chart below, the distribution of income deprivation within each local authority was quite different. While there was still a big difference between the most and least deprived LSOAs in the Isle of Anglesey, there was nothing like the range of variation seen in Cardiff. In particular, there were no LSOAs in Anglesey at the very extremes.

Percentage on income related benefits by LSOA, ranked position in Wales, WIMD 2005



12. WIMD is suited to uses where the interest is in areas with high concentrations of deprivation. If all deprived individuals are the focus of attention then a different approach is needed. However, it is still going to be based on the same or similar indicators. In other words, WIMD is a way of combining deprivation measures for a particular purpose.

Uses of the index

13. The index can be used for:

- ranking the scores for all 1,896 LSOAs or for a group of them (like those in a local authority), so that the LSOAs can be put in order from the most deprived to the least;

- comparing two or more local authorities (or other groups of aggregated LSOAs) by looking at the proportion of the LSOAs in the local authority in the most deprived (say) ten per cent in all of Wales.

- giving an overall deprivation rank or score for each of the 1,896 Lower Layer SOAs in Wales;

- giving ranks or scores for the separate deprivation domains for each of the Lower Layer SOAs;

- comparing the deprivation ranks or scores for two or more of the Lower Layer SOAs;

14. WIMD 2005 has actually been used for the following:

- The 100 most deprived electoral divisions in Wales as identified in the 2000 Index were included among the original 142 Communities First areas. The

remaining 42 areas comprised 32 pockets of deprivation and 10 communities of interest - the cases for which drew heavily on evidence from the 2000 Index. Following the publication of WIMD 2005, a consultation exercise was launched on how the results could best be used and any possible expansion of the existing programme. 46 Lower Super Output Areas (LSOAs) in the top 10% of deprivation on the new index were identified as outside the existing Communities First footprint. The Minister invited the 46 new areas to apply for inclusion in the Communities First Programme in consultation with the local community by 30 March 2007. Submissions for all the prospective new areas have been received and are currently being considered, or have requested additional time to prepare a more detailed proposal, for inclusion as Communities First areas. Additionally, 2 LSOAs ranked in the top 10% of deprivation but which contained only an existing pocket of deprivation have submitted proposals to extend their area of operation. To date 34 of the invited areas have now been formally included within the programme.

In the calculation of Standard Spending Assessments (SSAs) for the 22 unitary authorities. Just under 1 per cent of the total SSA is allocated on the basis of the overall index, but focussing on the most deprived areas. Around 25 per cent is allocated on the basis of other measures related to deprivation and 6 per cent on sparsity measures. Following a review of the formula, WIMD will not form part of the SSAs for 2009-10 onwards.

The deprivation grant uses the most deprived areas, as defined by the overall index scores from WIMD 2000, to allocate this funding to the 22 unitary authorities. A review of the formula is being considered for inclusion in the Distribution Sub-Group work programme for 2008 and 2009.

The education domain of WIMD is used to provide a deprivation uplift for funding allocations within the National Planning and Funding System. This uplift is designed to cover the additional cost of widening provision and delivering provision to those from educationally deprived backgrounds. The funding model applies the uplift to provision undertaken by learners residing in areas that are ranked in the top three deciles of the educational domain of the Welsh Index of Multiple Deprivation.

The 'Flying Start' programme used the overall index values from WIMD 2005, ranked within each local authority, as a means to assess nominations for participating school catchment areas. Other information was also taken into account in assessing the nominations.

The overall index, but with the health domain excluded, has been used to assess the progress of health gain targets across different levels of deprivation. This has been done by breaking down Wales level data into areas that fall within each of the quintiles of the WIMD distribution (that is, into five equal groups from the fifth most deprived down to the fifth least deprived).

OFWAT have used the index for looking at the relationship between deprivation and levels of debt.

The Lottery Fund have used the overall index to help allocate funds to deprived areas.

More generally, WIMD has been used as supporting evidence in bids for European funding, targeting local service delivery and in analysis of the links between localised deprivation and various problems (such as health issues).

15. The index is not the only deprivation measure used for funding allocations. A number of Welsh Assembly Government grant allocations are based on formulae that use other measures of deprivation (ones not designed to identify concentrations) as well as measures of sparsity.

16. For income and employment it is possible to get the numbers of people classed as deprived living in an area (as well as a deprivation score). For the other five deprivation domains only the scores are available (because they are worked out using a range of indicators rather than just numbers of people). The data on which the index is based can be used to check for changes over time.

Plans for WIMD 2008

17. Proposals for WIMD 2008 include a new domain covering Community Safety.

18. The document '*Welsh Index of Multiple Deprivation (WIMD) - Consultation on the proposed indicators for updating WIMD*' was published at the start of the formal consultation, on 11th June 2007. Consultation lasted for a period of 12 weeks, closing on 7th September 2007. The document was sent out to a wide variety of organisations and individuals across Wales, covering many sectors.

19. To increase the coverage of the consultation and to encourage direct feedback on the proposed indicators, two workshops were held:

4th July 2007 at Dylan Thomas Centre, Swansea

10th July 2007 at the Conwy Business Centre, Llandudno Junction

20. 43 written responses were also received, from a wide variety of organisations, including Local Authorities, public bodies, charities, voluntary organisations, political parties and individuals. All feedback given at the workshops, along with the feedback from the formal written responses was considered equally as the consultation responses.

21. The responses were analysed and the issues raised considered by the Advisory Group, Domain working groups and Project Board.

22. Responses were generally supportive of WIMD and the indicators proposed by the domain groups. Many issues raised concerned points of clarification of the indicators or greater explanation required regarding how WIMD works and how it should be used. Many of the new indicators were welcomed, although some assurances were requested in terms of robustness of the new data sources e.g. income estimates. Some indicators were suggested for inclusion; in the main these had already been considered within the domain working group deliberations. The domain generating the greatest number of comments was the Housing domain.

23. Where new indicators were suggested or concerns raised about the proposed indicators, the Advisory Group and the relevant domain working group met to discuss these further and make further recommendations in light of the responses received.

24. A summary of the outcome for each of the eight domains is given in the Annex. More details are available in the document '*Welsh Index of Multiple Deprivation*

(WIMD) 2008 - Response to the consultation on the proposed indicators for updating the WIMD' which is available on the internet:

<http://new.wales.gov.uk/docrepos/40382/40382313/statistics/compendia/1320484/wimd-consultation07/wimdresponse07e.pdf?lang=en>

Welsh index of multiple deprivation

Annex: Proposed indicators for WIMD 2008 Income Domain

Outstanding issues

The only outstanding data issues surround the income estimates and tax credits.

The second set of estimates, incorporating equivalisation, were produced in December 2007. Pending the outcome of a thorough quality assurance of these estimates, a decision will be made on their inclusion for WIMD 2008.

Data on tax credits will need to be analysed for robustness before being included in WIMD 2008.

Summary of indicators for WIMD 2008

The proportion of households in each LSOA whose income was below 60% of median household income (LSOA income estimates)

OR Income-related benefit indicators, namely:

- Adults and Children in Income Support Households

- Adults and Children in Pension Credit Households

- Adults and Children in Income-Based Job Seekers Allowance households

- Adults and Children in Tax Credit (Child Tax Credit and Working Tax Credit) households below a low income threshold

- National Asylum Support Service (NASS) supported asylum seekers in Wales in receipt of subsistence only and accommodation support

Other indicators to consider for future Indexes

Indicators of persistence in claiming benefits (using Department for Work and Pension's Longitudinal Study)

Changes made in the light of consultation responses

There are no changes to the proposals made in the consultation document, but the outstanding issues of analysing the robustness of income estimates and tax credit data remain.

Welsh index of multiple deprivation

Annex: Proposed indicators for WIMD 2008 Employment Domain

Outstanding issues

Data is to be collected and tested for the two new indicators to ensure the data is robust and provides reliable results at the LSOA level. Should the data prove not to be robust for each indicator that individual indicator will not be used in the Index.

Summary of indicators for WIMD 2008

Claimants of Unemployment-related benefits

Claimants of Incapacity Benefit/Severe Disablement Allowance

Participants on New Deal for Young People and Intensive Activity Period (for New Deal 25+) not included in unemployment-related benefit counts

Participants on New Deal for Lone Parents

Participants on New Deal for those aged 50+

Other indicators to consider for future Indexes

Quality of employment

Changes made in the light of consultation responses

Responses endorsed the proposed indicators and as such there are no changes to the proposals made in the consultation document.

Several respondents suggested we investigate indicators of the quality of employment, which has been added to our list for consideration for future Indexes.

Welsh index of multiple deprivation

Annex: Proposed indicators for WIMD 2008

Education Domain

Methodology

Respondents welcomed the removal of shrinkage from the education domain.

Summary of indicators for WIMD 2008

Key Stage 2, Average points scores

Key Stage 3 Average points scores

Key Stage 4 Average points scores

Proportion of people aged 16 – 17 not in Further Education or Work-Based Learning

Proportion of people not entering Higher Education aged 18 – 19

Primary School all absence rate

Secondary School all absence rate

Number of adults aged 25 – 59/64 with no qualifications (2001 Census)

Other indicators to consider for future Indexes

School exclusions

Early years education

Literacy and numeracy

Post 16 basic skills

Proportion of those under 21 not entering higher education

Not in education, employment or training

Pupil mobility

Changes made in the light of consultation responses

The title of the indicator “Proportion of people aged 16 – 17 not in Further Education” was changed to “Proportion of people aged 16 – 17 not in Further Education or Work-Based Learning”.

Several potential indicators not included in the 2008 Index will be reviewed for future Indexes, including a measure of early years education, and of school-leavers who are not in education, employment or training.

Welsh index of multiple deprivation

Annex: Proposed indicators for WIMD 2008

Health Domain

Methodology

The only comment received on the method of standardisation agreed with the 2005 approach of direct standardisation to a Wales population.

One respondent queried “are both shrinkage and 10 years of data needed?” Although current proposals are to retain shrinkage for the Health domain, we will be carrying out some investigative work to see whether broadening the age groups used for standardisation would remove the need for shrinkage. It is our intention to only use such techniques if absolutely necessary.

Summary of indicators for WIMD 2008

Limiting long-term illness (LLTI) (2001 Census)

Standardised all-cause death rate

Standardised cancer incidence rate

Singleton low birth weights

Other indicators to consider for future Indexes

Diabetes

Mental health

Oral health

Teenage conceptions

Coronary Heart Disease

Cirrhosis of the liver

Breastfeeding

Child obesity

Disability

Well being

Changes made in the light of consultation responses

The domain definition was changed from “The purpose of this domain is to capture the degree to which people are deprived of good health” to “The purpose of this domain is to capture the extent of poor health, where this is associated with deprivation”.

In addition to the indicators already on our list for consideration for future Indexes, we have added two topics suggested by respondents: disability and well being.

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Annex: Proposed indicators for WIMD 2008

Geographical Access to Services Domain

Outstanding issues

Further analysis is to be undertaken to determine whether the travel time thresholds used last for WIMD 2005 are still appropriate, or whether another approach (e.g. average times) should be adopted.

Quality assurance will be undertaken on the new indicators to assess changes due to the model and data changes.

Summary of indicators for WIMD 2008

Food shops

GP surgeries

Primary schools

Post Office

Public library

Leisure centres

NHS dentist

Secondary schools

Transport nodes

Other indicators to consider for future Indexes

Pharmacies

Cash dispensers

Childcare

Education services other than schools

Changes made in the light of consultation responses

Public libraries will now include mobile libraries following feedback from Local Authorities stating that stopping points are reasonably consistent and could therefore be mapped appropriately.

Pharmacies and education services other than schools will be considered for future the Indexes.

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Annex: Proposed indicators for WIMD 2008

Housing domain

Outstanding issues

In light of the consultation responses and further discussions, we are now considering two options:

1. Using the same data used for WIMD 2005 (**overcrowding** and **lack of central heating**). However **lack of central heating** is at such a low level now that it would not be particularly applicable now.
2. Not including a Housing domain for this update, due to a lack of data for suitable indicators, with the intention that it could be reinstated for future updates once data sources have been developed.

We recommend that identification and collection of suitable housing data at the small area level is a priority for Housing policy areas. A paper outlining the issues coming out of the domain group work and the consultation responses will be prepared for the Welsh Assembly Government's Housing Division. With improvements in this area future updates of WIMD should include a robust housing domain.

Summary of indicators for WIMD 2008

To be confirmed (see Outstanding issues)

Other indicators to consider for future Indexes

Council Tax Bands

Overcrowding

Lack of demand (e.g. vacant dwellings, low demand housing)

Physical Condition (e.g. SAP ratings, repair costs)

Social Housing

Changes made in the light of consultation responses

The proposed indicators have now been dropped for inclusion in this domain, confirming the concerns that the domain working group had when discussing the potential indicators. The Advisory Group will recommend on whether we should use the domain as used for WIMD2005, or leave out the domain for this update.

In light of the responses and further discussions within the domain group it is agreed that the following indicators will be considered for the future updates of the Index: Council Tax Bands, Overcrowding, Lack of demand, Physical condition, Social Housing.

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Annex: Proposed indicators for WIMD 2008

Physical Environment Domain

Outstanding issues

As outlined in the consultation document the **deposition of air pollutants** should be considered as a measurement for inclusion as an indicator. Further work will be taken forward on this between the Welsh Assembly Government and Environment Agency to consider how this could be developed.

Ground movement risk data will be further analysed and quality assured before their final inclusion in this domain is confirmed.

Summary of indicators for WIMD 2008

Flood risk

Air quality

Air emissions

Proximity to waste disposal and industrial sites

Ground movement risk

Other indicators to consider for future Indexes

Fly tipping

Derelict sites

Contaminated land

Green space

Water quality

Noise

Deposition of air pollutants

Changes made in the light of consultation responses

Responses endorsed the proposed indicators and as such there will be no changes to the proposals made in the consultation document.

Welsh index of multiple deprivation

Annex: Proposed indicators for WIMD 2008

Community Safety Domain

Outstanding issues

As this would be a new domain for WIMD, quality assurance will take place on the data received. While provisional analysis suggests data are of sufficient quality to be used, data will only be included should it prove robust enough at the LSOA level.

We plan to use 2 years of fire data, but this is subject to the data becoming available in time for our calculation process.

Summary of indicators for WIMD 2008

Police force recorded crime

Youth offenders

Adult offenders

Fire safety

Other indicators to consider for future Indexes

Road safety

Domestic abuse

Fear of crime

Anti-social behaviour

Changes made in the light of consultation responses

Following feedback from the consultation responses and with agreement from the domain group, the "fire safety" indicator is to be renamed "fire incidence".