

CONSULTATION FORM

How to measure a nation?

Proposals for National Well-being Indicators to measure the seven well-being goals in the Well-being of Future Generations (Wales) Act 2015

Please submit your comments by 11 January 2015

If you have any queries on this consultation, please email: FGActWales@wales.gsi.gov.uk or telephone: 029 2082 5259 or 3388.

Data Protection
<p>Any response you send us will be seen in full by Welsh Government staff dealing with the issues which this consultation is about. It may also be seen by other Welsh Government staff to help them plan future consultations.</p> <p>The Welsh Government intends to publish a summary of the responses to this document. We may also publish responses in full. Normally, the name and address (or part of the address) of the person or organisation who sent the response are published with the response. This helps to show that the consultation was carried out properly. If you do not want your name or address published, please tick the box below. We will then blank them out.</p> <p>Names or addresses we blank out might still get published later, though we do not think this would happen very often. The Freedom of Information Act 2000 and the Environmental Information Regulations 2004 allow the public to ask to see information held by many public bodies, including the Welsh Government. This includes information which has not been published. However, the law also allows us to withhold information in some circumstances. If anyone asks to see information we have withheld, we will have to decide whether to release it or not. If someone has asked for their name and address not to be published, that is an important fact we would take into account. However, there might sometimes be important reasons why we would have to reveal someone's name and address, even though they have asked for them not to be published. We would get in touch with the person and ask their views before we finally decided to reveal the information.</p>

Confidentiality
Responses to consultations may be made public on the internet or in a report.
If you do not want your name and address to be shown on any documents we produce please indicate here <input type="checkbox"/>

Response Form

How to measure a nation?		
Name	Ruth Tipping (Team Leader Future Generations, Climate Change and Landscape).	
Organisation	Natural Resources Wales	
Address	TY Cambria, 29 Newport Rd Cardiff CF24 0TP	
E-mail address	ruth.tipping@cyfoethnaturiolcymru.gov.uk	
Telephone	03000 654489	
Type <i>(please select one from the following)</i>	Individuals	<input type="checkbox"/>
	Public Body (Local Authority, Local Health Board, Fire and Rescue Authority etc)	X <input type="checkbox"/>
	Businesses	<input type="checkbox"/>
	Professional Bodies/Interest Groups	<input type="checkbox"/>
	Third sector (community groups, volunteers, self help groups, co-operatives, enterprises, religious, not for profit organisations)	<input type="checkbox"/>
	Other (other groups not listed above)	<input type="checkbox"/>

General Questions (1-5)

Question 1

Do you agree or disagree that the proposed set of indicators, as a whole, fully assess whether progress is being made in achieving all the well-being goals?
Please select:

Strongly Agree | Agree | Disagree | Strongly Disagree

Please provide an explanation for your response.

We have ticked 'disagree' because we have raised concern that a few of the indicators, in the way that they are currently described, would not necessarily be demonstrating sustainable progress in Wales and therefore delivering improved well-being. For example, 09 Productive workforce - If the productivity is based on unsustainable practice then by improvement of this one, we potentially decrease the well-being of Wales. This is also the case for 10 - Innovative business. If this productivity or innovation is not low carbon or uses natural resources inefficiently, or reduces the benefits to people and the economy from natural resources and the environment, such as reducing opportunities for tourism, or doesn't treat its staff fairly or contribute to cohesive communities, it could be reducing the overall improvement in well-being for Wales set out in the Act.

This argument may also apply to some of the other indicators, such as 11 – levels of household income per head. Whilst understanding income per head may help us understand how equal a nation we are, unless its sustainably derived income, spent sustainably, i.e. from, or on, low carbon, resource efficient products and industries in which people have had the opportunities to get the jobs that utilise their skills and educational needs, it may not contribute to the Goal 'A Prosperous Wales' and the overall sustainable development of Wales.

We note that in the consultation on p7, it refers to principles for measuring the right thing and advises that "they should be a limited no: no more than seven headline indicators and 30 at a second tier". We could not see that this was considered at any other point in the consultation and there is no indication of what the seven headline ones could be.

We believe that the number of indicators should be determined by their purpose. If the purpose is to communicate high level messages about the state of and progress on the well-being and sustainability of Wales then this would suggest a smaller number than currently proposed. However a smaller number would not fully reflect the breadth of issues covered in the Goals.

If the indicators are to measure high level progress across the breadth of the Goals, which the consultation suggests and will inform and be reported on in WG's annual well-being report, then we feel that the proposed set are probably about right in number. We do however make specific comments in relation to some and have proposed some amendments, including comments above.

If from the broad suite proposed, communication messages that are shorter and pithier, can be drawn to communicate general direction of travel or highlight key messages or issues to the media and population generally, this would seem the best option. We suggest that the Annual Well-being report could be used to ensure that this can happen.

Because indicators drive process and delivery action, restricting the indicators to a small number could skew delivery action to only those issues. By the very nature of the WoFG Act and its Goals, it is broad and integrated, so a small number of indicators may not be easy to identify, or be so relevant at describing the progress or not at the Wales level.

We do believe that citizens will not want to hear about all 40, rather they will want to know what are the issues we are facing that need tackling and what are the significances of those? Are things getting better or worse in respect of the direction of travel? The indicators do feel quite traditional and for an outcomes based Act we think this may just reinforce the message that others are making changes (government) and that citizens and businesses don't need to do anything themselves. Again the WG's Annual Well-being report and the Future Generations Commissioner's 'Future Generations Report' seem to be the vehicles where the discussion around this could occur.

Based on the comments made above, we would have expected there to be indicators around green jobs and the green economy and about personal responsibilities and knowing whether individual choices are increasingly sustainable or not. Could the global footprint indicator include assessment of personal consumption practice?

There does appear to be a balance between qualitative and quantitative indicators.

There are also a number of areas that we feel are not reflected in the indicators.

- Marine environment (clarification is needed on where Marine is being captured)
- Air quality with respect to ecosystem health (we are re-presenting our suggestion made at the working group)
- Landscape (see comments re Indicator 28 below and Annex A Template No.)
- Geodiversity
- Participation in Outdoor Recreation

In respect of the natural resources indicators our conclusion is that, whilst we do in theory support a reduction in the overall number of indicators, we have been unable to come up with a single indicator for ecosystem health and therefore would wish to retain the air, water and soils indicators as part of a suite, which with biodiversity and indicator 32 (which despite being called 'ecosystem health' is more a measure of ecosystem function), give an indication of ecosystem health.

If we are needing to retain these, as well as those relating to flood risk, waste and greenhouse gas emissions to indicate sustainability for Wales, we cannot suggest a significant reduction in the overall numbers. The social, economic and cultural aspects also need to be captured and the identification of those indicators has we believe, faced similar problems to the natural resource ones.

We have also made comment where we feel the indicator's contribution to a Goal has not been appropriately identified, for example the water quality indicator.

Question 2

Are there any indicators proposed that you think can be improved?
We would suggest that you consider the criteria identified in Section 2 of the Consultation Document when proposing an improvement.
Please select:

Yes No

If yes, please list those you think can be improved.

Our detailed response:

- **Indicators 29 - Properties at risk from flood**

We have input to and are happy with the proposed indicators.

- **Indicator 31 - Greenhouse gas emissions:**

Three options are presented: A. Emissions for what we produce in Wales; B. Emissions for what we consume in Wales and C. a carbon footprint indicator which considers what's produced in Wales (A.) along with embedded emissions associated with consumption in Wales of goods and services imported internationally.

We would recommend **Option C:**

This statistic is calculated and published annually by Defra on a UK basis, most recently in "UK's Carbon Footprint 1997-2012".

DECC has recently examined the whole issue of alternative approaches to reporting UK Greenhouse Gas Emissions. We recognise from this report that there is no internationally agreed basis for reporting consumption emissions. We also understand that the Welsh Government does not have a model of the Welsh Economy that it could use to split out the Welsh component of the UK data sets. We suggest, however, that Option C represents the most appropriate measure for measuring the impact of the

Welsh population on global greenhouse gas emissions, and that the current barriers are surmountable.

If Option C is rejected, then we would support **Option A**, since emissions based on the UK greenhouse gas inventory are published annually by the Department of Energy and Climate Change (DECC). These are used as the basis for the UK's reporting to the European Commission (EC) and United Nations Framework Convention on Climate Change (UNFCCC), and form the basis for reporting on progress towards the UK's domestic and international emissions reduction targets. DECC already publishes annually emissions for the devolved administrations, including Wales.

We reject **Option B**, since the proposal here would be to measure it on a UK basis only; this is not appropriate as a measure for Wales.

- **Indicators 32 and 33 - Healthy Ecosystems and a Biodiverse natural environment.**

Our response has been informed by the work that has been undertaken to date with WG on resilience. These indicators are complementary and may also affect the content of several others and how they are presented (especially **Indicator 35**).

No single indicator seems adequate to cover 'ecosystem health'. However, the suite of indicators covering biodiversity, air, soil and water quality considered together, could give a more rounded picture. There's strong support for Indicator 32 'Healthy ecosystems' itself being a measure of the extent of semi-natural habitats, as this is fundamental to many aspects of ecosystem function; condition of protected sites is an alternative but with caveats.

Indicator 32 – Healthy ecosystems:

The consultation narrative identifies no suitable indicator that encompasses ecosystem health and functioning ecosystems and it seems unlikely that any single measure will adequately address this complex area. However, several other indicators relate to complementary components of ecosystems, and together these may give a more rounded indication of ecosystem health. These are 33 (a biodiverse natural environment), 34 (water quality), 35 (air quality) and 36 (soil quality). We suggest that these indicators are presented as a complementary suite addressing ecosystem health.

A missing aspect in this suite is the *extent* of ecosystems across Wales (basically "how much have we got?"). This is a fundamental metric, reflecting several aspects of ecosystem health:

- it is a recognised attribute of ecosystem resilience;
- it relates to ecosystem function and capacity to deliver services;

- the extent of habitat strongly influences biodiversity (e.g. it is linked to species population sizes and niche diversity);
- habitat types reflect geodiversity, thus reinforcing the fundamental links within ecosystems;
- it is correlated to habitat fragmentation and hence connectivity at a national scale;
- the relative proportion of more natural habitats will reflect ecosystem condition at a national scale.

We recommend that Indicator 32 focusses on this important component. For the land, the measure could be the extent of semi-natural habitat. This could be expressed as a simple proportion of semi-natural habitat, or if the format allows could be presented as a simple graphic, showing losses and gains of broad habitat groups, e.g. “10% increase in native woodland; 5% decrease in hay meadows, etc.”. (There is no direct equivalent for marine however, but this may be part of a broader discussion on the representation of marine within the WoFGA).

This indicator could, for example, be based on mapping of land cover from remote sensing, which builds upon existing maps derived from field-survey (Phase 1 Habitat Survey). This work is not however currently routinely undertaken. We are reviewing our monitoring programmes and will consider the potential contribution that remote sensing might make in future. Our overall objective in our monitoring review is to ensure we have the evidence base we need to fulfil all our duties through an affordable monitoring programme delivered by ourselves and in partnership with others. The scope and degree of resource for remote sensing is therefore still to be determined and this needs to be considered with respect to any commitments for use as a National Indicator. The review and redesign of GEMP might offer a good starting point for land, providing a broad base ecological status measure.

As well as being meaningful in terms of national ecosystem health this extent indicator would be relatively easy to understand, and have relevance to most of the well-being goals. Its title may need revision to make the indicator more transparent and accessible, e.g. “extent of wildlife habitat”.

An alternative for Indicator 32, is to consider the condition of protected sites as a measure of ecosystem health. The SSSI series includes representatives of the range of habitats present in Wales and so provides a thorough sample of ecosystem types. The downsides are that SSSIs don't cover the marine environment, monitoring of the series is currently incomplete, and SSSI condition may not adequately reflect that of the wider environment. The SAC series does cover both marine and terrestrial environments and monitoring is carried out as requirement for Article 17 reporting. However, it is less representative of ecosystem types than SSSIs and may be even less relevant to the condition of the wider environment, so we have doubts as to how effective it would be in indicating ecosystem health. As a result we are recommending the use of the extent of semi-natural habitat.

Indicator 33 - A biodiverse natural environment:

We support WG's proposal for basing it on the UK priority species indicator currently being developed, but we are still considering if and what our role would be in data collection and assessment and the implications for NRW resources and work load.

In considering these indicators we have been mindful to the development of the National Natural Resource Policy (NNRP) and State of Natural Resources Report (SoNaRR) under the Environment Bill. It is helpful to understand where there is scope for including or elaborating on indicators elsewhere. We may use SoNaRR to identify Indicators that need development.

- **Indicator 34 – Water quality:**

We proposed this indicator and therefore support. However it needs to read as “..good or better overall status”. We also suggest that the Water quality indicator links to Goal for A Prosperous Wales, this is not currently identified. Poor water quality is generally a result of unsustainable practices, either current or historic, and results in dis-benefits to Wales' society and economy (e.g. loss of amenity and recreational value, increased treatment costs for water companies and business). Having good water quality supports a prosperous Wales. It also includes assessment of water resource.

- **Indicator 35 - Air quality:**

The proposed indicator is a purely human health indicator and doesn't relate to ecosystem function, which it should. The indicators identify which goals they link to and for this air quality indicator, whilst we can support that it links to 1, 3 and 7, we do not agree that it links to 2 (A resilient Wales - “biodiverse natural environment”) as it is currently described.

During the development of the indicators we had proposed a well-established indicator on air quality and ecosystem health, but this was not included in the consultation. We are recommending that it is utilised for the following reasons:

Air quality is an important element of ecosystem health, reflecting the underlying ecosystem components of biodiversity, air, water and land. However, as described, Indicator 35 addresses impacts on human health rather than the wider environment. The reason for exclusion was given as “*the impact of this could be measured in the proposed biodiversity and ecosystems health indicators*”. We argue that this is not the case – a recent JNCC project found it hard to integrate N impacts into Common Standards Monitoring for many habitats, and it is not yet agreed what the indicators for

biodiversity and ecosystem health will be and our proposals below for those indicators would not pick it up.

We therefore recommend that the proposed indicator (“Area of sensitive habitats in Wales where critical loads for nutrient nitrogen and acidity are exceeded”) is reinstated. This indicator is well-established and used across Europe. See Question 4 below for further details and the full proposal previously submitted is provided in Template A. – No. 1.

- **Indicator 36 – Soil quality:**

We welcome that this indicator covers soil carbon and organic matter. Soil carbon has been an SD indicator in UK and Wales for over 10 years, but it is welcomed that the indicator includes the more holistic Organic Matter alongside soil carbon content.

- **Indicator 37 – Non-recycled waste:**

We support this indicator.

- **Indicator 38 - Global footprint:**

We recognise that ideally, a global footprint indicator would be a very desirable measure of the impact that Welsh people have on the Earth’s environment. We also note that previous exercises have shown it to be a very effective communications tool. We conclude, however, that the lack of a transparent methodology, and therefore of consistency between different estimates, renders the measure unreliable.

In 2005, the global footprint of each Welsh citizen for 2001 was estimated as **5.25** global hectares per capita (gha/cap). In 2008 it was estimated for 2005 at **5.16** gha/cap. In July 2015, however, it was estimated for 2011 at **3.28** gha/cap. This latest report states “These figures are not directly comparable to previous estimates due to changes in the methodology by which the footprints were calculated”. Neither did the report attempt to recalculate previous years’ footprints using the new methodology. On this basis we suggest that a global footprint indicator should not be pursued currently.

We suggest that a Carbon footprint would make a reasonable proxy for an overall ecological footprint, with the following provisos:

- It would require the development of a model of the Welsh Economy, allowing Wales figures to be disaggregated from overall UK figures (as we have already stated in relation to the indicator for greenhouse gas emissions).

- As the proportion of renewable energy in both the UK and abroad rises, the carbon footprint might be expected to fall more quickly than the overall ecological footprint.

Carbon footprint covers all our consumption and provides transparent and consistent measurability.

- **Indicator 28: Looking after our cultural heritage:**

We suggest that this indicator could usefully incorporate reference to Landscape. For example “Looking after our cultural heritage and Landscapes”.

One of the aims of the European Landscape Convention is to ‘recognise landscapes in law as an **essential component of people’s surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity**’ (ELC).

Indicator 28 as it stands delivers against goals 4,5,6,7 but by adding landscape it could also deliver on the following Goals:

Goal 1 - A Prosperous Wales:

Evidence: To enjoy the scenery, landscape and countryside was the top reason both UK and overseas visitors gave for choosing to come to Wales (Visit Wales 2009 & 2011) Tourism worth £4.2 billion to Welsh economy (WG)

Goal 2 - A Resilient Wales:

Evidence: Proposals for enhancing the resilience of our environment are mostly at a ‘landscape’ scale or are national, including key landscape features such as wildlife corridors. The proposals in the Environment Bill are for an integrated management approach, Sustainable Management of Natural resources (SMNR), which is aligned to management of Wales’ protected landscapes.

and

Goal 3 - A Healthier Wales

Evidence: There is a correlation between landscape quality and health in Wales. There are 2.6 times more community areas reporting poor health in lower quality landscapes as there are in the highest quality landscapes (NRW, 2015).

NRW have LANDMAP, which already provides information on landscape into decision making including land use planning; Planning Policy Wales recognises LANDMAP as an important information resource for local planning authorities in making landscape assessments to inform local policy, guidance and decision making.

The Visual and Sensory information is updated every 5-10 years, and already used extensively in policy formulation. We would also be able to provide information on the quality and diversity of Wales's landscapes (from April 2016).

Question 3

Are there any indicators proposed that you think should be excluded?
We would suggest that you consider the criteria identified in Section 2 when proposing the deletion of an indicator.
Please select:

Yes

No

If yes, please list those you think should be excluded.

Whilst we haven't specifically referenced any to be excluded, we would draw your attention to our comments in question 1. We would suggest that some are checked to ensure they will evidence the direction of travel of the Act to a more sustainable Wales and not generate perverse outcomes, i.e. that they appear positive, but are actually of an unsustainable nature.

We would support a narrative approach to Indicator 40, but as such therefore question the need for this in the suite, particularly if those responsibilities are reported on elsewhere.

Question 4

Are there any indicators proposed that you think should be included?
We would suggest that you consider the criteria identified in Section 2 of the Consultation Document when proposing an improvement.
Please select:

Yes

No

We have responded to this question as if it read 'have any been missed?', since excluded and amended are already covered.

1. Clarification is needed on where marine indicators will sit.
2. We are proposing an Indicator for 'Area of sensitive habitats in Wales where critical loads for nutrient nitrogen and acidity are exceeded' (original NRW proposal Annex A Template 1).

Instead of recommending two indicators, the FG process has opted for just the human health indicator, but has made reference to the importance of the critical load indicator. We are recommending that this is also used. It will not be picked up in our proposals under ecosystem health, which was the reason given for its exclusion.

3. An indicator for Outdoor recreation in addition to that for sport. 'Participation in outdoor recreation'. NRW collects data on this indicator as part of the new National Survey for Wales.

The current indicators (25 and 27) only measure arts and sport, but not participation in informal outdoor recreation. To contribute to the Goal 'A Wales of vibrant culture', which aims to 'encourage people to participate in the arts, and sports and recreation' there is a need to measure participation in recreation. Hence our proposed indicator. This could be stand alone, or if possible, joined with the one on sport to reflect more broadly participation in physical activity?

This Proposed Indicator contributes to several Goals: A Wales of Vibrant Culture; a Healthier Wales; a More Equal Wales. See Annex A Template 3.

4. We have proposed an *amendment* to Indicator 28 to include Landscape. See Annex A Template 4.

Question 5

How do you think we should communicate the national well-being indicators with the people of Wales?

Please add your comments

Clearly and concisely, giving the 'so what'. What does it mean for Wales and for them as individuals? What action is needed?

The Wales We Want

A Prosperous Wales
(1)

A Resilient Wales
(2)

A Healthier Wales
(3)

A More Equal Wales
(4)

A Wales of Cohesive Communities
(5)

A Wales of Vibrant Culture and Thriving Welsh Language
(6)

Globally Responsible Wales
(7)

Specific questions related to a proposed indicator



03 People making healthy lifestyle choices



Question 6

Do you agree with the proposed approach for measuring the people making healthy lifestyle choices indicator?
 Please select:

Yes <input type="checkbox"/>	No <input type="checkbox"/>	Don't Know <input type="checkbox"/>
------------------------------	-----------------------------	-------------------------------------

If no, how do you think this indicator should be measured?

People need to know enough to make healthy and sustainable choices. Not one or other, as the healthy choice alone may not be sustainable if it involves perverse outcomes for our natural resources. See general comments in Q1 re traditional versus outcome indicators and in 'any other comments'.

Question 7

Do you think that a similar indicator for children making healthy lifestyle choices should be included?
 Please select:

Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Don't Know <input type="checkbox"/>
---	-----------------------------	-------------------------------------

If yes, which behaviours/choices do you think should be included for children?

As per our comments in Q1, with respect to ensuring we are measuring sustainable outcomes and therefore improved well-being of Wales, it is important that we have children who know and understand enough to make healthy and sustainable choices, then we have a better chance of them doing that their whole life.

23 Quality of housing



Question 8

Do you agree with the proposal to measure homes free from hazards as an indicator of housing quality?
 Please select:

Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Don't Know <input type="checkbox"/>
------------------------------	--	-------------------------------------

If no, please provide an alternative indicator by completing the template provided.

We would expect that for homes that are sustainable into the future the quality should include for example, building in adaptations to make homes in flood plains more resilient. Also better insulation, more efficient boilers, lower water demand etc. We are not sure that homes free from hazards fully reflects sustainable housing quality.

24 Levels of homelessness

Question 9


Do you think that the indicator should measure households deemed to be homeless rather than those prevented from being made homeless?
 Please select:

Yes <input type="checkbox"/>	No <input type="checkbox"/>	Don't Know <input type="checkbox"/>
------------------------------	-----------------------------	-------------------------------------

If no, please provide the reasons for your response.

No comment

25 People engaged in arts, culture and heritage



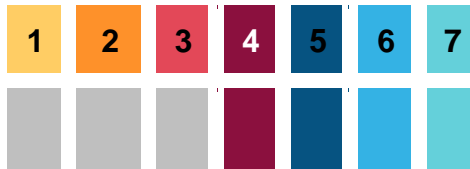
Question 10

What type of art, culture and heritage activities do you think should be measured in relation to this indicator?

Please list below.

It is unclear why the indicator is based on the measure of attending or participating in activities 3 times a year. Why is this frequency important? What is the rationale?

26 People using Welsh Language in everyday life



Question 11

Do you agree that we should focus on those that actually use Welsh on a regular basis rather than on those that can speak the language?

Please select:

Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Don't Know <input type="checkbox"/>
------------------------------	--	-------------------------------------

If no, please provide the reasons for your response.

The indicator proposed for measuring progress towards the Welsh language appears quite basic. It does not appear to be able to give a true reflection of it's use in different circumstances, as people use the language in different ways.

To get a clear picture of how and where the language is used there needs to be measures set for measuring progress for a lot more than what is stated.



27 People participate in sports

We suggest that this indicator is complemented with an indicator on outdoor recreation (**See Annex A Template No 3. And discussion in Q2.**), or combined to be about people participating in 'physical activity', formal and informal. If the The Sports data could be supplemented with data from the National Survey on Outdoor Recreation activity, this would give a broader overall physical activity indicator and better reflect the requirements in the Goal.

31 Greenhouse gas emissions

Question 12

Which approach should be used to measure greenhouse gas emissions?

- A. Emissions from what we produce in Wales.
Measured by : Production based inventory, measured in MtCO₂.
- B. Emissions from what we consume in Wales.
Measured by: Consumption end user based inventory, on a UK only basis, measured in MtCO₂.
- C. A carbon footprint indicator where emissions that are produced in Wales (A) are considered along with the embedded emissions associated with the consumption (by residents in Wales) of goods and services imported internationally.

Please explain why you chose the approach you selected.

We support Option C, as per text in Q2: Three options are presented: A. Emissions for what we produce in Wales; B. Emissions for what we consume in Wales and C. a carbon footprint indicator which considers what's produced in Wales (A.) along with embedded emissions associated with consumption in Wales of goods and services imported internationally.

We would recommend **Option C**:

This statistic is calculated and published annually by Defra on a UK basis, most recently in "UK's Carbon Footprint 1997-2012".

DECC has recently examined the whole issue of alternative approaches to reporting UK Greenhouse Gas Emissions. We recognise from this report that there is no internationally agreed basis for reporting consumption

emissions. We also understand that the Welsh Government does not have a model of the Welsh Economy that it could use to split out the Welsh component of the UK data sets. We suggest, however, that Option C represents the most appropriate measure for measuring the impact of the Welsh population on global greenhouse gas emissions, and that the current barriers are surmountable.

If Option C is rejected, then we would support **Option A**, since emissions based on the UK greenhouse gas inventory are published annually by the Department of Energy and Climate Change (DECC). These are used as the basis for the UK's reporting to the European Commission (EC) and United Nations Framework Convention on Climate Change (UNFCCC), and form the basis for reporting on progress towards the UK's domestic and international emissions reduction targets. DECC already publishes annually emissions for the devolved administrations, including Wales.

We reject **Option B**, since the proposal here would be to measure it on a UK basis only; this is not appropriate as a measure for Wales.

32 Healthy ecosystems 1 2 3 4 5 6 7

Question 13

13. Do you have a suggestion for how we measure the health of our ecosystems?	
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
If yes, please complete the template provided.	
<p>Annex A Template has been completed (No 2.) . Please also see comments in Question 2 above about the relationship of this indicator to others with respect to 'ecosystem health'.</p>	

33 A biodiverse natural environment 1 2 3 4 5 6 7

Question 14

14. Do you have a suggestion for how we measure the variety and abundance of the biodiversity of our natural environment?

Yes No

If yes, please complete the template provided.

See Question 2 above. We support the proposals at a recent WG workshop to base this on the new UK biodiversity indicator, status of priority species.

34 Water quality

1 2 3 4 5 6 7

Question 15

Do you think the proposed water quality indicator sufficiently measures the benefits of the water environment?

Please comment.

Yes, but need to ensure it is a measure of “water bodies at good or better overall status”. This then accords with statutory requirements.

See also see comments in Question 2 above on the need to consider this indicator as a component of ecosystem health.

The water quality indicator makes use of the best available data, which is reported for compliance purposes to Europe. The indicator combines a wide range of assessments that have been developed for surface and ground waters across the UK, including rivers, lakes, canals, estuaries, coastal and ground waters, including water quality (physical and chemical) and biology (and quantity for ground waters). This indicator will reflect water resource issues as part of in the Water quality assessment.

As discussed under soils and in response to air and healthy ecosystems indicators, they are all closely linked, and though not always direct, there is a relationship between them. Poor soils and poor air can/will result in poor water quality. The water is at the receiving end. This is why we are recommending the suite of indicators to demonstrate ecosystem health.

39 Active global citizens

1 2 3 4 5 6 7

Question 16

What types of international activities or forms of engagement should be included within this indicator?

Please explain why you chose the approach you selected.

We question whether working abroad on development projects is the only way for an individual to demonstrate that they are an active global citizen, not least because the ability to travel and volunteer abroad is not equitable across society (it may preclude those with dependents and can require significant financial means). Perhaps this measure should also encompass such things as membership and/or Wales-based volunteering for certain third sector organisations, actively taking part in online and/or direct campaigning on international issues, knowledge of international issues, etc.

Local community action is just as important and fulfilling and more accessible to more people and can act as an exemplar to other nations.

40 International responsibilities



Question 17

Please provide your answer here.

We support the narrative approach, if this indicator is needed.

Any Other Comments

If you have any other comments or issues to raise, please record them in the space provided.

Section 1.1 of the document states that the national indicators 'must be referred to by Public Service Boards'. It is unclear what this means. Does it mean that these indicators must be used, referenced, acknowledged, etc? How does this national suite of indicators relate to local suites of indicators for each Public Service Board? Greater clarity may be needed in the statutory Guidance.

Section 1.2 - Principles for measuring the right thing

One of the principles reads as follows – 'A significant proportion of the outcomes should help us predict the well-being of future generations, not just

how the past was – so they are not just outcomes’. This is unclear and would merit clarification.

In seeking indicators that will be ‘immediately grasped by the public’, choice of language is very important. Indicators should avoid jargon and that is not always the case at present – Indicator Number 10, for example, measures the proportion of businesses which are ‘innovation-active’. The meaning of this is unclear to a wider audience.

Innovation could be unsustainable, so we need to be clear that we want innovation that is contributing to the sustainable outcomes for Wales, for example from the Goals: low carbon, resource efficient innovation. If we don’t make and measure this distinction, “Innovation-active” may not necessarily support a more sustainable Wales, or improve well-being. As discussed in Q1, all the ‘growth’ type indicators need to be sustainable in the widest sense of the word, so that they don’t drive perverse outcomes.

We are supportive of the consultative approach to develop these national indicators and recognise that it’s not easy to come up with indicators for this outcome focused approach. We therefore welcome that the Act provides for review of the Indicators. This will help Wales reflect on whether the indicators are the right ones, with experience.

How to respond

Please submit your comments by 11 January 2015, in any of the following ways

Email	Post
FGActWales@wales.gsi.gov.uk	Climate Change and Natural Resources Policy Division Welsh Government Crown Buildings Cathays Park Cardiff CF10 3NQ

Additional information
If you have any queries on this consultation please Email: FGActWales@wales.gsi.gov.uk Tel: 029 2082 5259 or 3388

1. Template for *new* indicator: Air Quality

1.: Air Quality (previously provided but rejected. (See q2 above)).

Proposed Indicator:	
Area of sensitive habitats in Wales where critical loads for nutrient nitrogen and acidity are exceeded (1996 to current year)	
Detailed description of indicator:	
Type: Pressure Indicator-trends in pressure on biodiversity-Air Pollution.	
<p>Critical Loads have been produced separately for acidification and nutrient nitrogen (eutrophication). The pollutants causing eutrophication and acidification arise mainly from burning fossil fuels, industry, transport and from livestock wastes.</p> <p>Critical Loads of nutrient nitrogen are applied to UK habitats sensitive to eutrophication. For managed (productive) woodland habitats a “mass balance” method is used which balances inputs of nitrogen to the habitat system with outputs of nitrogen from the habitat. For other semi-natural and natural habitats “empirical” critical loads are used; these are based on experimental and field evidence and are published as ranges of values agreed at international workshops under the UN Convention on Long-Range Transboundary Air Pollution. The UK sets the critical load “mapping value” for each habitat mapped nationally using one or more values from within the range, based in most cases on UK evidence on the impacts of nitrogen deposition on the habitat (http://cldm.defra.gov.uk/Status_Reports.htm).</p> <p>The ranges of critical loads were reviewed and updated at a workshop in the Netherlands in June 2010. Based on the results of this workshop the UK critical load mapping values have also been reviewed. Critical loads of nutrient nitrogen and acidity are now mapped nationally for 13 habitats. Additionally Critical Loads for freshwaters have been produced (acidification only).</p>	
Data source:	<input checked="" type="checkbox"/> National
Defra (Biodiversity and Ecosystem Advice)/ Centre for Ecology and Hydrology (CEH)/ Joint Nature Conservation Committee (JNCC- UK Overview)/Natural Resources Wales	
Data issues and limitations: (include info on long term availability of data and dependencies)	
No data issues or limitations as data is already collected and collated at a UK level. Proposed long-term availability to support UK reporting.	
Possible disaggregation of data: (i.e. geographical, gender, age etc.)	
<p>Currently the data is collected and provided to Defra and the Devolved Administrations by CEH at a UK level. The data can be segregated into country specific outputs. This is already carried out in England https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/383902/England_full_2014_finalv2.pdf (pages 153-158)</p> <p>A similar approach could be adopted in Wales to provide Wales’s specific outputs. This could be reported on an annual or 5 year basis.</p>	
Indicator measures progress against: (tick all applicable)	
<input checked="" type="checkbox"/> A prosperous Wales	<input type="checkbox"/> A Wales of cohesive communities
<input checked="" type="checkbox"/> A resilient Wales	<input type="checkbox"/> A Wales of vibrant culture and thriving Welsh Language

<input checked="" type="checkbox"/> A healthier Wales <input checked="" type="checkbox"/> A globally responsible Wales
<input type="checkbox"/> A more equal Wales Additional comments:
<p>The Critical Loads for nutrient nitrogen link to human health. For example there is increasing understanding of the chemistry and impacts of air pollution episodes in the UK, especially in the spring. These episodes are dominated by ultra-fine particles (PM 2.5) with nitrate playing a particularly important role. This nitrate is largely associated with ammonium, derived from ammonia emissions. (Air Quality Expert Group- Fine Particulate Matter (PM 2.5) in the United Kingdom. Defra, 2012).</p>
Recommended for inclusion in consultation:
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Text for consultation document - include: <ul style="list-style-type: none"> • Narrative on choice made and how it measures progress towards the various goals • Outlining what the story is for future generations • What other indicators were excluded and why? • Any specific questions you think should be covered in the consultation
<p>Atmospheric nitrogen (N) deposition represents a significant threat to habitats and species in the UK, resulting in declines in many of the key species of high conservation value at the expense of a smaller number of fast growing species that can exploit conditions of improved nitrogen supply (e.g., Dise <i>et al.</i> 2011, RoTAP 2012). These threats are mainly due to emissions of ammonia (NH₃, mainly originating from agricultural sources) and nitrogen oxides (NO_x, mainly from combustion sources such as transport, industry and power generation).</p> <p>Many protected sites in the UK remain under substantial threat, with thresholds for atmospheric N pollution effects (Critical Loads for N deposition, Critical Levels for NH₃) exceeded across a large proportion the UK Natura 2000 network, designated under the EU Habitats Directive. The third UK Habitats Directive report¹ published in 2013 reported that, out of a total of 77 annex 1 habitats, 34 had air pollution attributed as a high pressure and a high threat. In addition, data used to produce the UK Biodiversity Indicator on air pollution² demonstrates that, at present, 65% of the area of sensitive habitat in the UK exceeds critical loads for N deposition (eutrophication). This is predicted to reduce only slightly by 2020 (RoTAP, 2012) in response to existing measures.</p> <p>The Critical Load exceedance for nutrient nitrogen was selected as part of the Streamlining Biodiversity Indicators (SEBI 2010) exercise. To support the key policy question-“What are the trends in nitrogen emissions and where in Europe does atmospheric nitrogen deposition threaten biodiversity.</p> <p>During the SEBI exercise a wide range of indicators were considered to address air pollution and biodiversity. However, they were rejected in favour of critical loads for nutrient nitrogen. This is the most appropriate indicator to address air pollution under A resilient Wales “goal. Adopting the metric that is already used elsewhere supports the “Globally Responsible Wales” goal. The indicator would also link to the “Healthier Wales” goal (particulate pollution). The data to support the indicator date back to 1996 and are used for future pollution/biodiversity assessments-up to 2030. Therefore adoption of the indicator will support the understanding of current and future generations in Wales.</p>

2. Template for new/amended indicators – Healthy Ecosystems

<p>Is the proposed indicator a replacement indicator or an improvement to an existing indicator? Please tick one box</p>
<p><input type="checkbox"/> Replacement X Improvement</p>
<p>Which indicator does this proposed indicator improve upon or replace?</p>
<p>IND 32 Healthy Ecosystems</p>
<p>What is the name of replacement indicator?</p>
<p>Extent of terrestrial semi-natural habitat (aka 'extent of wildlife habitat') (See discussion in Q 2.)</p>
<p>What is the data source for this indicator?</p>
<p>NRW Phase 1 habitat survey/remote sensing for current data (note that at the first reporting round it may not be possible to show trends).</p> <p>Future rounds would be based on developing remote sensing methods, coupled with targeted sample surveys and informed by other relevant datasets where appropriate (e.g. WG woodland planting records, EIA, LA development records.) (This is being considered within NRW's monitoring review as part of Budget reduction reviews and is not therefore confirmed).</p> <p>The measure could be presented as a simple graphic, showing losses and gains of broad habitat groups, e.g. "10% increase in native woodland; 5% decrease in hay meadows, etc."</p> <p>A similar indicator called 'Ecosystem Coverage' is used by the European Environment Agency http://www.eea.europa.eu/data-and-maps/indicators/ecosystem-coverage-1/assessment-1</p>
<p>Please provide an explanation for why this indicator best measures the well-being of people in Wales</p>
<p>No single measure can be identified that adequately measures 'ecosystem health'. Different aspects of it are addressed by a number of Indicators in terms of biodiversity, soil, water and air quality. An aspect missing from this suite is the extent of ecosystems across Wales (basically "how much have</p>

we got?”). This is a fundamental metric, reflecting several aspects of ecosystem health:

- It is a recognised attribute of ecosystem resilience;
- it relates to ecosystem function and capacity to deliver services;
- the extent of habitat strongly influences biodiversity (e.g. it is linked to species population sizes and niche diversity);
- habitat types reflect geodiversity, thus reinforcing the fundamental links within ecosystems;
- it is correlated to habitat fragmentation and hence connectivity at a national scale;
- the relative proportion of more natural habitats will reflect ecosystem condition at a national scale.

The idea of ‘wildlife habitats’ is easily understood by the Welsh population, and as well as biodiversity importance relates to ecosystem services and benefits including recreation, landscape, and a range of cultural aspects.

Please indicate which goals the proposed indicator directly impacts on
 (tick all applicable)

- | | |
|--|--|
| <input checked="" type="checkbox"/> A prosperous Wales | <input type="checkbox"/> A Wales of cohesive communities |
| <input checked="" type="checkbox"/> A resilient Wales | <input checked="" type="checkbox"/> A Wales of vibrant culture and thriving Welsh Language |
| <input checked="" type="checkbox"/> A healthier Wales | <input checked="" type="checkbox"/> A globally responsible Wales |
| <input type="checkbox"/> A more equal Wales | |

3. Template for new or amended: Outdoor recreation

This proposed indicator complements Indicators 25 (participation in Arts) and 27 (participation in Sport). (Or could it be an improvement to 27 Sports, if merged in and called something like public participation in physical activity?)

What is the name of replacement indicator?

Additional Indicator: Participation in Outdoor Recreation (or incorporated into one with sports).

What is the data source for this indicator?

National Survey for Wales

Please provide an explanation for why this indicator best measures the well-being of people in Wales

The Goal: A Wales of Vibrant Culture and Thriving Welsh Language
Includes in it's Description: A society that promotes and protects culture, heritage and the Welsh language, and which encourages people to participate in the arts, and sports **and recreation**.

The above Goal focuses on participation in arts, sports, and recreation. The current indicators (25 and 27) only measure arts and sport. There is a need for the proposed additional Indicator to measure participation in outdoor recreation, in order to effectively monitor our progress towards this goal. Recreation is substantially different from Arts and Sport, and will therefore needed to be measured as a distinct entity. (Unless 2, or all 3 can be merged into one indicator?).

This Proposed Indicator contributes to several Goals. Participation in outdoor recreation also contributes significantly to measuring our progress towards the following Goals: a Healthier Wales, a More Equal Wales.

Please indicate which goals the proposed indicator directly impacts on
 (tick all applicable)

- | | |
|--|--|
| <input type="checkbox"/> A prosperous Wales | <input type="checkbox"/> A Wales of cohesive communities |
| <input type="checkbox"/> A resilient Wales | <input checked="" type="checkbox"/> A Wales of vibrant culture and thriving Welsh Language |
| <input checked="" type="checkbox"/> A healthier Wales | <input type="checkbox"/> A globally responsible Wales |
| <input checked="" type="checkbox"/> A more equal Wales | |

4. Annex A Indicator Template: Landscape

Is the proposed indicator a replacement indicator or an improvement to an existing indicator?

Please tick one box

- Replacement Improvement

Which indicator does this proposed indicator improve upon or replace?

Indicator 28 Looking after our cultural heritage

What is the name of new (replacement) indicator?

Looking after our cultural heritage and Landscapes

What is the data source for this indicator?

LANDMAP

Please provide an explanation for why this indicator best measures the well-being of people in Wales

Provides information on the visual and sensory benefits socially and economically to Wales from our landscapes. And quality and diversity of our landscapes (from April 2016). (See detail in q 2.).

Please indicate which goals the proposed indicator directly impacts on
(tick all applicable)

- | | |
|--|--|
| <input checked="" type="checkbox"/> A prosperous Wales | <input checked="" type="checkbox"/> A Wales of cohesive communities |
| <input checked="" type="checkbox"/> A resilient Wales | <input checked="" type="checkbox"/> A Wales of vibrant culture and thriving Welsh Language |
| <input checked="" type="checkbox"/> A healthier Wales | <input type="checkbox"/> A globally responsible Wales |
| <input type="checkbox"/> A more equal Wales | |

Please copy the above template if you need to use it more than once.