Consultation of the Northern Ireland Environmental Statistics Report

The Northern Ireland environmental statistics report is an annual compendium publication which covers a range of environmental indicators under eight key themes: demography and public opinion, air and climate, water, marine, land, biodiversity, built heritage and waste. Previous reports can be viewed on the DAERA website at: https://www.daera-ni.gov.uk/articles/northern-ireland-environmental-statistics-report

It is a National Statistics report and is intended to be the first reference point for a range of environmental indicators and will provide, where available, annual updates on the indicators contained within it. It is of both public and academic interest and provides a valuable resource across government for the development and evaluation of government strategies.

Its role in government strategies is part of the reason why we are consulting on this report. There are 5 environmental indicators contained within the draft Programme for Government (PfG) 2016-2021: **greenhouse gas emissions, household waste recycling, air quality, water quality and biodiversity.**

Data for **greenhouse gas emissions** and **household waste recycling** are sourced from separate statistical publications available on the DAERA website (https://www.daera-ni.gov.uk/topics/statistics/environment-statistics).

Data for **air quality, water quality** and **biodiversity** will be sourced from the NI environmental statistics report. Through the PfG work it was found that some of the existing indicators in the NI environmental statistics report were outdated and/or not making the best use of the data available. More detail on the findings of this work is included below for each measure.

As well as adding in the PfG measures in the correct form, we are taking this as an opportunity to review all indicators in the report and welcome any suggestions for improvements using our online survey: https://consultations.nidirect.gov.uk/daera-statistics-and-analytical-services/northern-ireland-environmental-statistics-survey

Detail of changes required for PfG measures:

1. **Air Quality**

   The proposed PfG measure is annual mean nitrogen dioxide concentration at monitored urban roadside locations.

   Current methodology in the NI environmental statistics report: For the air quality indicators in the 2017 Northern Ireland Environmental Statistics report and all previous publications of the report, sites have only been included in the calculation of the mean when they have met minimum data capture of 75% over the year. The number of sites included can vary from year-to-year and this can have an impact on the mean. The mean is calculated for each site and then the mean of all included sites has been calculated to produce the Northern Ireland figure. When looking at this measure for Programme for

Government, this methodology was reviewed and the new methodology is below.

Proposed new methodology: The method used for the PfG annual indicator is to calculate a mean across all sites for each hour in the year and then taking the mean of these hourly means. This eliminates the need to apply a data capture rate to the sites and therefore the sites will remain more stable over time. It also makes the data less sensitive to seasonal changes and missing values. This new methodology will apply to air quality indicators. The commentary will also be enhanced to cover any key changes in the most recent year.

Furthermore, 10 sites have been chosen for the PfG measure. These sites will be given priority and will remain consistent throughout the lifetime of the PfG. As well as presenting data for all sites in Northern Ireland each year we will be including a section in the report for nitrogen dioxide for these 10 sites to allow the PfG updates to be provided.

A measurement annex for this measure is available on the NISRA website: https://www.nisra.gov.uk/publications/pfg-2016-21-measurement-annex-annual-mean-nitrogen-dioxide-concentration-monitored

2. Water Quality

Current indicators in the NI environmental statistics report: The water and marine indicators in the NI environmental statistics report are mainly based on the Water Framework Directive Classifications which are required to report to Europe on a 6-yearly basis. The next update required is 2021, an interim updated will be carried out and included in this report in 2018 (including updates to end of 2017). As PfG requires annual updates two alternative indicators have been proposed and are under development.

Proposed new indicators:

- River water quality – soluble reactive phosphorus (SRP)
- Marine water quality – winter dissolved inorganic nitrogen (DiN)

The above indicators will be added to the NI environmental statistics report as new indicators and will supplement existing indicators in the water and marine chapters of the report. The methodology, quality and data links for these indicators will be included in the data description and assessment section of the report.

3. Biodiversity

Current indicators in the NI environmental statistics report: There is a range of indicators in the biodiversity chapter in the NI environmental statistics report, nature conservation designation, birds and green flag awards. Whilst nature conservation designations is a good measure, it is similar to water quality in that EU requirements are that regular annual updates are not required. As PfG requires annual updates two alternative indicators have been proposed and are under development.

Proposed new indicators:

- Protected terrestrial under favourable management
- Protected marine area under favourable management

The above indicators will be added to the NI environmental statistics report as new indicators and will supplement already existing biodiversity indicators. The methodology, quality and data links for these indicators will be included in the data description and assessment section of the report.

A measurement annex for this measure is available on the NISRA website: https://www.nisra.gov.uk/publications/pfg-2016-21-measurement-annex-biodiversity