

**A NIEL report
on changes to
indicators used
for Outcome 2
in NI's 2016-21
PfG**

March 2021

The Northern Ireland Executive's draft Programme for Government (PfG) 2016-21 initially had [14 outcomes](#) but by 2018 these had been reduced to [12 outcomes](#). There are 49 indicators for the 12 Outcomes in the PfG 2016-21¹.

This document reviews how things have changed in relation to the six indicators for Outcome 2 of the PfG 2016-21. The number for each indicator (of the 49 in total) is given below after the indicator. There are no specific targets (or levels of improvement which had to be achieved) for the indicators listed below. As such NIEL is not able to say that the change in the parameter on which the indicators are based represents a failure or a success in relation to that indicator or to Outcome 2. This review merely aims to report the extent of change since 2020 in the indicators which apply to Outcome 2 in the draft PfG 2016-21 as outlined below. The main source of much of the data used for this review is the Executive Office data on the 49 indicators for the PfG 2016-21².

Outcome 2: We Live and Work Sustainably – protecting the environment

- % all journeys which are made by walking/cycling/public transport (indicator 25)
- Greenhouse gas emissions (indicator 29)
- % household waste that is reused, recycled or composted (indicator 36)
- Annual mean nitrogen dioxide concentration at monitored urban roadside locations (indicator 37)
- Levels of soluble reactive phosphorus in our rivers and levels of Dissolved Inorganic Nitrogen in our marine waters (indicator 44)
- Biodiversity (% of protected area under favourable management) (indicator 45)

Indicator 45 in the PfG 2016-21 is the % of protected areas under positive management. However, NIEL notes that on the Executive Office webpage which reviews the progress with each of the 49 indicators for the 12 Outcomes on the draft PfG 2016-21 it says

“Indicator 45 Biodiversity (protected areas under favourable management (km squared))”

NIEL is unclear as to why there is this inconsistency between the wording of indicator 45 for biodiversity attributed to Outcome 2 in the draft PfG 2016-21 (which refers to the % of protected areas under favourable management) and the wording of Indicator 45 on the Executive Offices webpage that reviews each of the PfG's indicators (which refers to area in km² of protected area under favourable management). NIEL would recommend that in future The Executive Office provide information as to how much of Northern Ireland's terrestrial and marine protected areas are under favourable management in both absolute terms (km²) and in % terms for ease of reference and consistency.

The % of all journeys which are made by walking/cycling/public transport is also an indicator for Outcome 11³ “We Connect People and Opportunities Through our Infrastructure”

¹ <https://www.executiveoffice-ni.gov.uk/indicators>

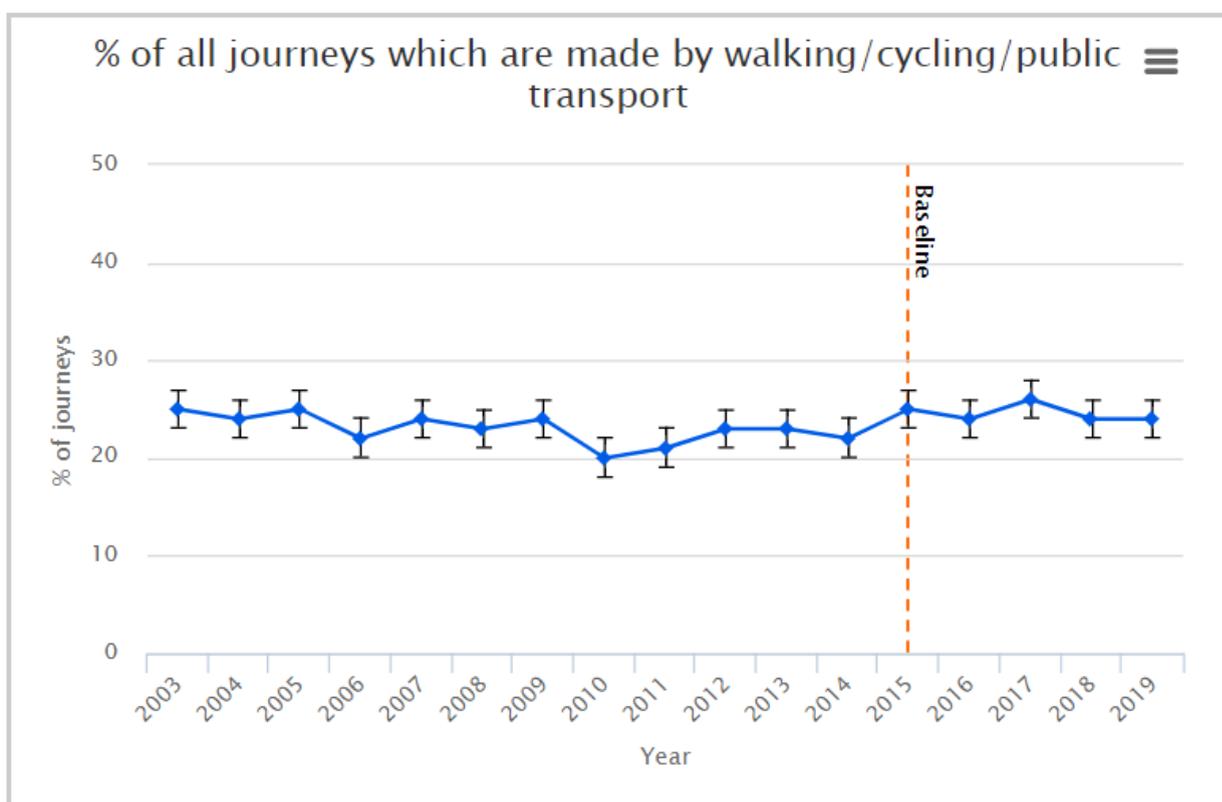
² <https://www.executiveoffice-ni.gov.uk/indicators>

³ This was an indicator for Outcome 12 (of the 14) in the first draft PfG 2016-2021 and was retained as an indicator in what became Outcome 11 (of the 12) in the amended version of the PfG more recent. The original Outcome 12 became Outcome 11 in the amended PfG.

Indicator 25 - % all journeys which are made by walking/cycling/public transport

According to the PfG, the baseline year for this indicator is 2015 when 25% of all journeys made were by walking, cycling or public transport in 2015. According to the Department of Infrastructure Travel Survey for Northern Ireland⁴ 2017-19, in 2019, 24% of all journeys were made by walking, cycling or public transport. This the same as in 2018 and as in 2004, as outlined in figure 1. The Executive Office⁵ describe this indicator as having not changed and overall, it seems clear that there has been little change in the percentage of journeys in NI which are made by walking, cycling and public transport since 2003. This would suggest that a different approach will be needed if the percentage of journeys made by walking, cycling and public transport is to significantly increase.

Figure 1 Proportion of all journeys where the main mode of travel⁶ is walking, cycling or public transport⁷ 2009 to 2019



Source: The Executive Office Indicator 25⁸

⁴ <https://www.infrastructure-ni.gov.uk/system/files/publications/infrastructure/tsni-headline-report-2017-2019.pdf>

⁵ <http://www.executiveoffice-ni.gov.uk/indicators/all-journeys-which-are-made-by-walkingcyclingpublic-transport>

⁶ Main mode is the form of transport used for the greatest length of the journey. For example, if the journey had 2 stages, walking 1 mile to the train station and then taking a 10 mile train journey, the train would be the main mode and therefore the journey is assigned to the "public transport" category

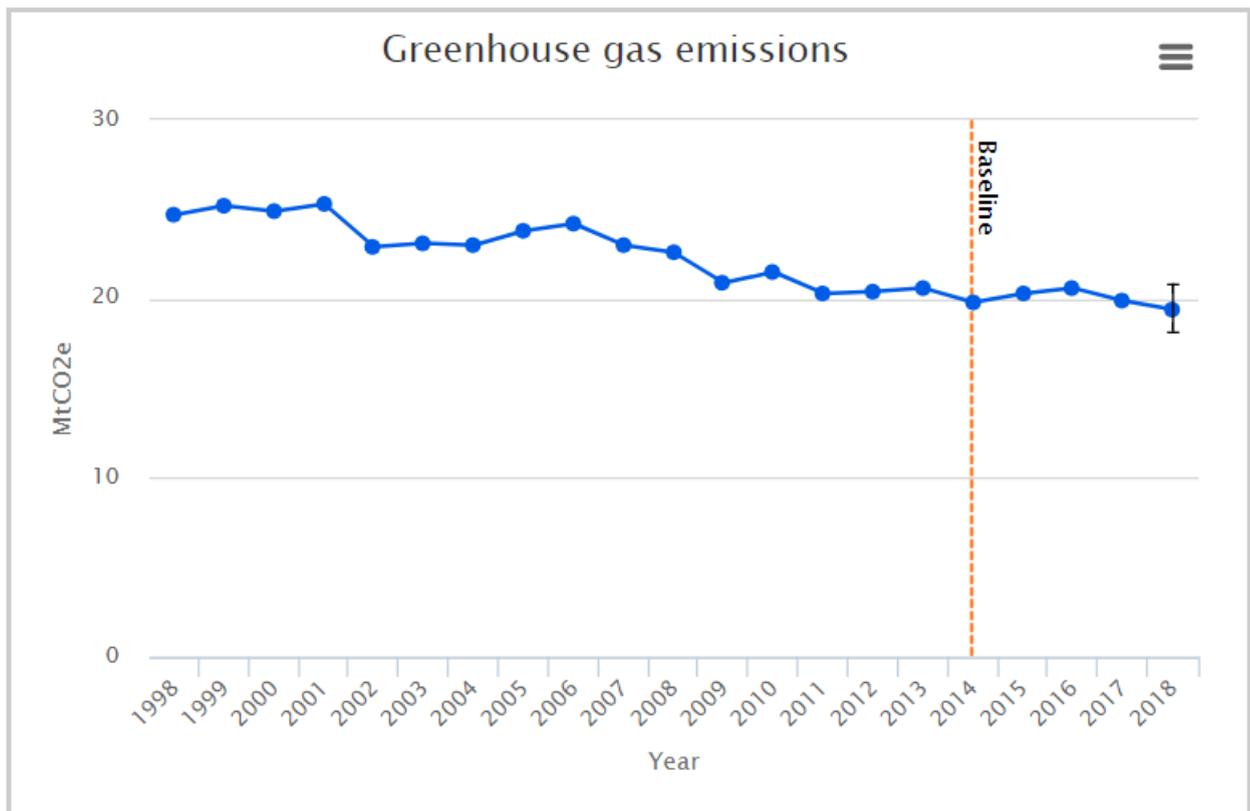
⁷ Public Transport includes 'Metro and Ulsterbus', 'Other bus', 'NI Railways' and 'Black taxi'

⁸ <https://www.executiveoffice-ni.gov.uk/indicators/all-journeys-which-are-made-by-walkingcyclingpublic-transport>

Indicator 29 - Greenhouse Gas (GHG) emissions

According to the Programme for Government 2016-21, 2014 is taken as the baseline year for GHG emissions. In 2014 Northern Ireland's GHG emissions were estimated to be 19.8 MtCO₂e (million tonnes of Carbon Dioxide equivalent). In 2018, NI's GHG emissions were estimated to be 19.4 MtCO₂e which represents a decrease of approximately 2% since the baseline year (2014) and considered as no change from the baseline for PfG reporting⁹. Northern Ireland's GHG emissions in 2018 (19.4 MtCO₂e) are 20.17% lower than in 1990 when the emissions were 24.3MtCO₂e in 1990. The 1990 levels are important because the UK Climate Change Act of 2008¹⁰ and the 2019 amendment to that act¹¹ which established the UK target of achieving net zero carbon by 2050 use 1990 as the baseline year. GHG emissions have fallen much more slowly in NI than in Great Britain since the UK Climate Change Act (2008) - GHG emissions in NI fell by 9% from 2008-2016 in NI, compared to a 27% fall for the whole of the UK.

Figure 2 Greenhouse Gas emissions in NI 1998-2019



Source: The Executive Office Indicator 29¹²

⁹ The Executive Office <https://www.executiveoffice-ni.gov.uk/indicators/greenhouse-gas-emissions>

¹⁰ UK Climate Change Act 2008 <https://www.legislation.gov.uk/ukpga/2008/27/contents>

¹¹ [The Climate Change Act 2008 \(2050 Target Amendment\) Order 2019 \(legislation.gov.uk\)](https://www.legislation.gov.uk/ukpga/2019/1/contents)

¹² The Executive Office <https://www.executiveoffice-ni.gov.uk/indicators/greenhouse-gas-emissions>

Indicator 36 - % of household waste that is reused, recycled or composted

According to the PfG, the baseline year for the % of household waste that is sent for preparing for reuse, dry recycling and composting is 2014/15. In the baseline year, 42% of household waste was sent for recycling and composting. In 2019/20, this figure was 51.9%. This represents a positive change from the baseline year.

Figure 3 Percentage of household waste that is reused, recycled or composted



Source: The Executive Office Indicator 36¹³

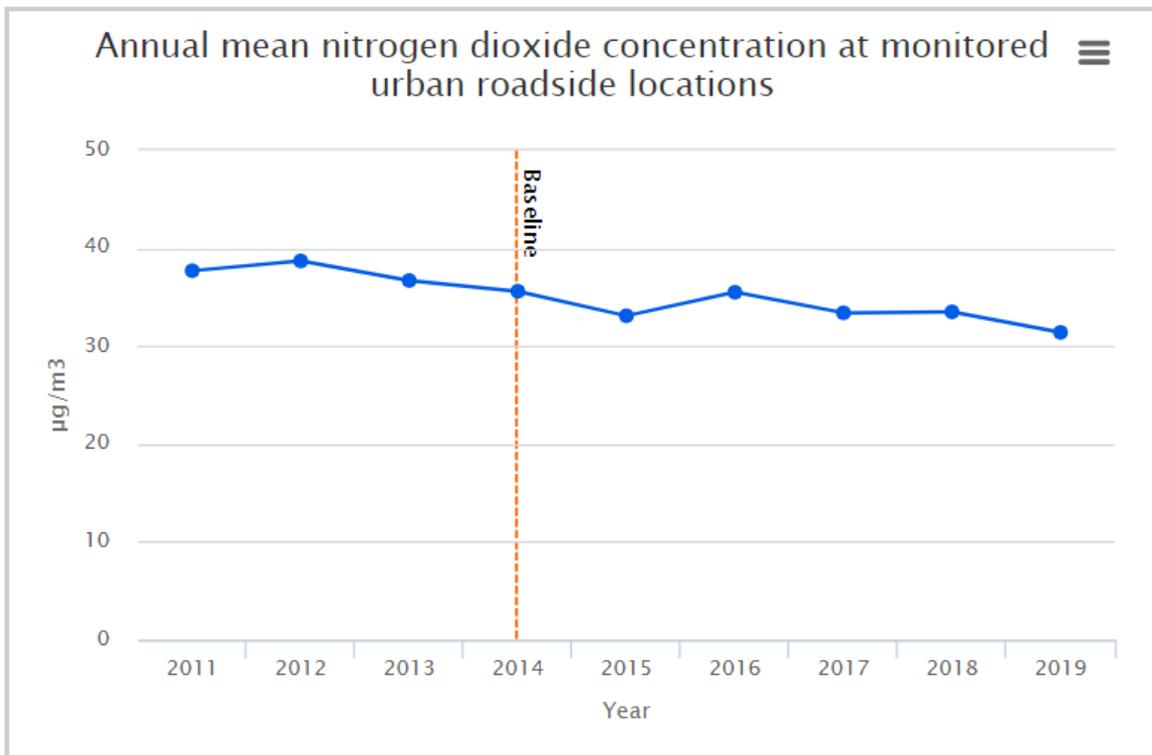
¹³ <https://www.executiveoffice-ni.gov.uk/indicators/percentage-household-waste-reused-recycled-or-composted>

Indicator 37 - Annual mean nitrogen dioxide concentration at monitored urban roadside locations

Nitrogen dioxide is part of a group of gaseous air pollutants produced as a result of road traffic and other fossil fuel combustion processes which can irritate the lungs and lower resistance to respiratory infections. The concentration of nitrogen dioxide in the air is monitored at sites across Northern Ireland.

According to the PfG 2016-21 the base year for Nitrogen Dioxide is 2014 when the mean nitrogen dioxide level for the ten sites used for PfG reporting was 35.6µg/m³ (micrograms per cubic metre of air). In 2019 this figure was 31.4µg/m³. This represents a reduction of approximately 12% and a positive change from the baseline year (2014).

Figure 4 Annual mean nitrogen dioxide concentration at monitored urban roadside locations



Source: The Executive Office Indicator 37¹⁴

¹⁴ <https://www.executiveoffice-ni.gov.uk/indicators/annual-mean-nitrogen-dioxide-concentration-monitored-urban-roadside-locations>

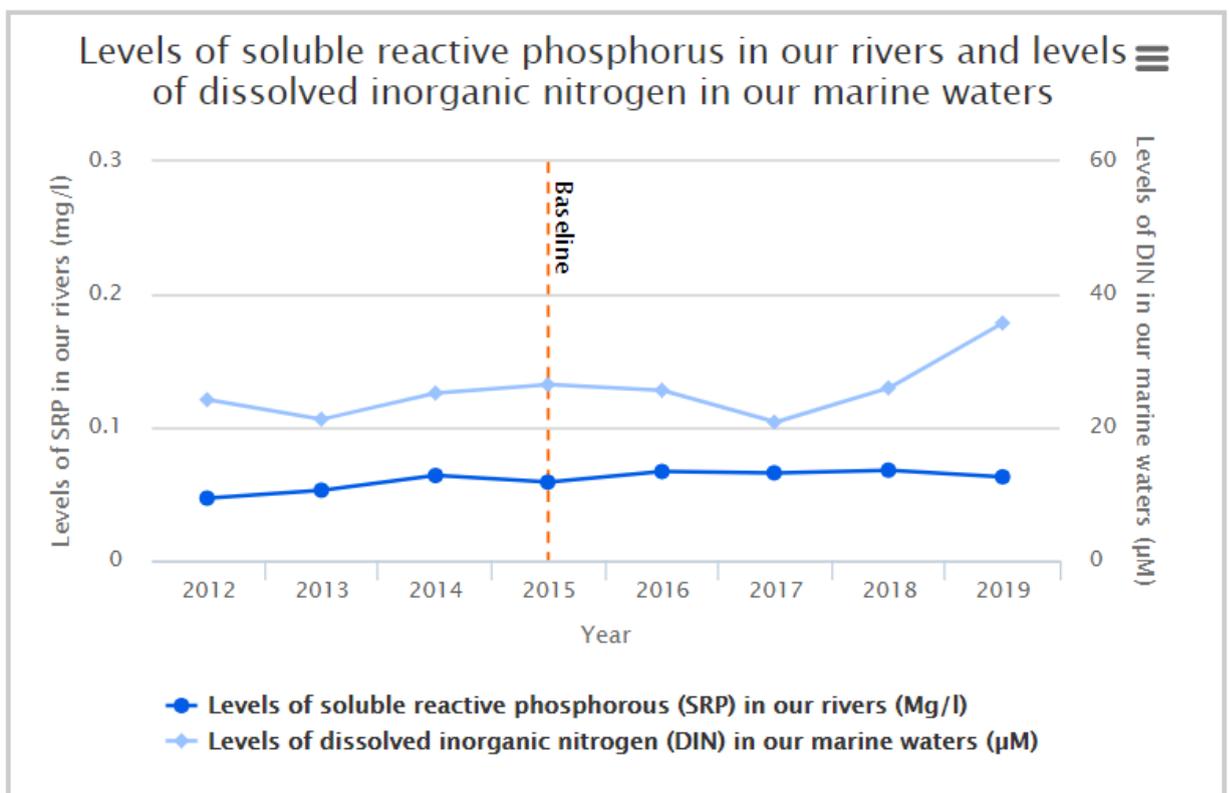
Indicator 44 - Levels of soluble reactive phosphorus in our rivers and levels of dissolved inorganic nitrogen in our marine waters

Soluble reactive phosphorus (SRP) is a plant nutrient, which, when present in rivers in elevated concentrations, can lead to accelerated growth of algae and other plants.

Dissolved inorganic nitrogen (DIN) which consists of nitrate, nitrite and ammonia, is an important indicator of marine nutrient status, as nitrogen is the most important nutrient in limiting marine algal growth.

According to the 2016-21 PfG, the baseline year for soluble reactive phosphorus (SRP) and dissolved inorganic nitrogen (DIN) in our rivers was 2015. In 2015 the level of SRP in rivers was recorded at 0.059 mg/l of phosphorus per litre of water and the level of DIN was 26.45 μ M¹⁵. In 2019 the level of soluble reactive phosphorus (SRP) in rivers was recorded at 0.063 mg/l of phosphorus per litre of water. This was 0.004 mg/l more than the baseline level of 0.059 mg/l reported in 2015 and a rise of approximately 6.7%. The PfG describes this as representing no change from the baseline year (2015). In 2019, dissolved inorganic nitrogen (DIN) in marine waters was recorded at 35.71 μ M. This was 9.26 μ M more than the 2015 baseline level of 26.45 μ M a rise of 35%

Figure 4 Levels of soluble reactive phosphorus in our rivers and levels of dissolved inorganic nitrogen in our marine waters 2012 – 2019



Source: The Executive Office Indicator 44¹⁶

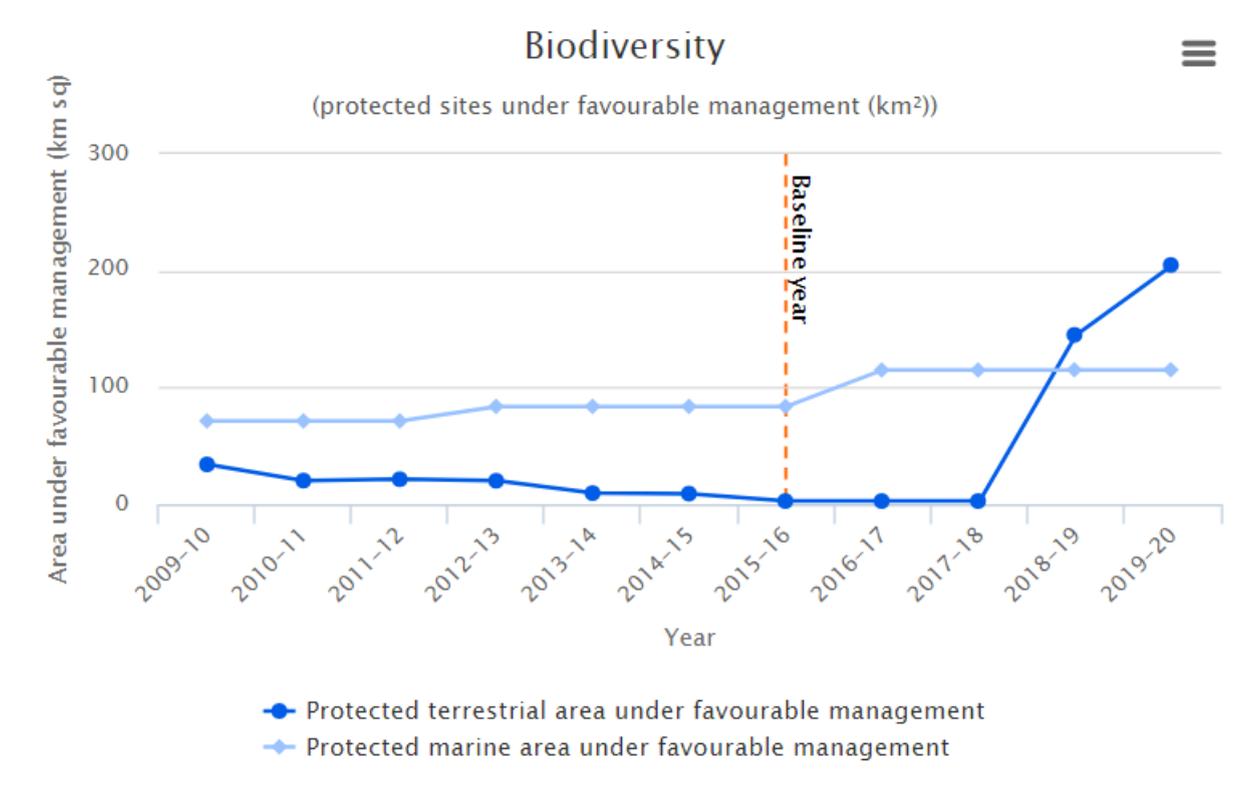
¹⁵ μ M = micromolar = micromoles per litre = 10^{-6} moles per litre

¹⁶ <https://www.executiveoffice-ni.gov.uk/indicators/levels-soluble-reactive-phosphorus-our-rivers-and-levels-dissolved-inorganic-nitrogen-our-marine>

Indicator 45 - Biodiversity (% of protected area under favourable management)

The area of terrestrial protected areas under favourable management increased significantly to 204.83 km² in 2019/20 from 2.63 km² in the PfG baseline year of 2015/16¹⁷. According to the Environmental Statistics Report, this represents an increase from 0.18% in 2016/17¹⁸ to 13.7% (204 km² out of 1,494 km²) of terrestrial protected areas in 2019/20¹⁹. In 2019/20, 115 km² of NI's Marine Protected Areas (MPAs) was under favourable management²⁰ the same level as reported in 2016/17 and 2017/18 but higher than the 3.62 km² in the baseline year of 2015/16²¹. This means that 4.5% of NI's 2,566 km² of MPAs in 2019/21²² was under favourable management. As such, while the figures for terrestrial protected areas in particular shows improvement, overall, the picture on land and sea is still one of an inadequate level of protection.

Figure 5 % of protected areas under positive management km² 2009-10 to 2019-20



Source: The Executive Office Indicator 45²³

¹⁷ <https://www.executiveoffice-ni.gov.uk/indicators/biodiversity-protected-sites-under-favourable-management-km-squared>

¹⁸ DAERA Environmental Statistics Report 2019 https://www.daera-ni.gov.uk/sites/default/files/publications/daera/ni-environmental-statistics-report-2019_1.pdf

¹⁹ https://www.daera-ni.gov.uk/sites/default/files/publications/daera/ni-environmental-statistics-report-2020_0.pdf

²⁰ <https://www.executiveoffice-ni.gov.uk/indicators/biodiversity-protected-sites-under-favourable-management-km-squared>

²¹ <https://www.daera-ni.gov.uk/publications/environmental-statistics-report-supplementary-publication-biodiversity-indicator-45>

²² Ibid

²³ <https://www.executiveoffice-ni.gov.uk/indicators/biodiversity-protected-sites-under-favourable-management-km-squared>