

<b>Indicator:</b>	<b>Levels of soluble reactive phosphorus in our rivers and levels of Dissolved Inorganic Nitrogen in our marine waters</b>																																														
<b>Responsible Statistician:</b>	Paul Caskie, Department of Agriculture, Environment and Rural Affairs																																														
<b>Web Link to Statistical Publication:</b>	<a href="https://www.daera-ni.gov.uk/articles/northern-ireland-environmental-statistics-report">https://www.daera-ni.gov.uk/articles/northern-ireland-environmental-statistics-report</a>																																														
<b>Frequency of update:</b>	Annually																																														
<b>Time lag:</b>	12 months																																														
<b>Data Source:</b>	Administrative																																														
<b>National Statistics Status</b>	Official Statistics																																														
<b>Quality Report:</b>	<p>Details on the Water Framework Directive can be found here: <a href="https://www.daera-ni.gov.uk/articles/water-framework-directive">https://www.daera-ni.gov.uk/articles/water-framework-directive</a></p> <p>The document 'Rationale for Water Framework Directive Freshwater Classification' describes how WFD freshwater classification has been undertaken and the rationale behind classification, the biological, chemical and physical quality elements monitored, the monitoring networks and how classification is produced.  <a href="https://www.daera-ni.gov.uk/sites/default/files/publications/doe/surface-water-monitoring-and-methodology-for-the-final-river-basin-plans-2015.PDF">https://www.daera-ni.gov.uk/sites/default/files/publications/doe/surface-water-monitoring-and-methodology-for-the-final-river-basin-plans-2015.PDF</a></p> <p>The complete Water Framework Directive classification is updated every 3 years. One of the key elements for assessing the status of freshwater bodies is soluble reactive phosphorus (SRP) for rivers. One of the key elements for assessing the potential eutrophication state of marine surface waters is to examine the extent and degree of winter Dissolved Inorganic Nitrogen levels. These measures are updated annually.</p>																																														
<b>Historic Data available from:</b>	2004 (soluble reactive phosphorous), 2012 (Winter dissolved inorganic nitrogen)																																														
<b>Time-series trend:</b>	<p>River water quality - soluble reactive phosphorus (SRP)</p> <table border="1"> <thead> <tr> <th></th> <th>2004</th> <th>2005</th> <th>2006</th> <th>2007</th> <th>2008</th> <th>2009</th> <th>2010</th> </tr> </thead> <tbody> <tr> <td>Average SRP in rivers (MG/l)</td> <td><b>0.076</b></td> <td><b>0.083</b></td> <td><b>0.070</b></td> <td><b>0.066</b></td> <td><b>0.063</b></td> <td><b>0.049</b></td> <td><b>0.052</b></td> </tr> <tr> <th></th> <th>2011</th> <th>2012</th> <th>2013</th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> </tr> <tr> <td>Average SRP in rivers (MG/l)</td> <td><b>0.058</b></td> <td><b>0.047</b></td> <td><b>0.053</b></td> <td><b>0.064</b></td> <td><b>0.059</b></td> <td><b>0.067</b></td> <td><b>0.066</b></td> </tr> </tbody> </table> <p>Note: This is the average concentrations at 93 river monitoring surveillance sites</p> <p>Some progress on reducing phosphorus from agricultural sources has been achieved since the introduction of the Phosphorus (Use in Agriculture) Regulations (Northern Ireland) 2006. However, recent river monitoring results indicate that soluble phosphorus levels in rivers is rising again with a negative impact on river water quality.</p> <p>Marine water quality – winter dissolved inorganic nitrogen (winter DIN)</p> <table border="1"> <thead> <tr> <th></th> <th>2012</th> <th>2013</th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> </tr> </thead> <tbody> <tr> <td>Average DIN in marine water bodies (µM)</td> <td><b>24.19</b></td> <td><b>21.26</b></td> <td><b>25.19</b></td> <td><b>26.45</b></td> <td><b>25.59</b></td> <td><b>20.82</b></td> </tr> </tbody> </table> <p>In Northern Ireland levels of winter DIN have been monitored consistently at 24 marine waterbodies since 2012. The levels of winter DIN remained relatively stable between 2012 and 2016. In 2017, winter DIN fell to a low of 20.82µM. This was a 5.6 µM decrease on 2015 levels.</p>		2004	2005	2006	2007	2008	2009	2010	Average SRP in rivers (MG/l)	<b>0.076</b>	<b>0.083</b>	<b>0.070</b>	<b>0.066</b>	<b>0.063</b>	<b>0.049</b>	<b>0.052</b>		2011	2012	2013	2014	2015	2016	2017	Average SRP in rivers (MG/l)	<b>0.058</b>	<b>0.047</b>	<b>0.053</b>	<b>0.064</b>	<b>0.059</b>	<b>0.067</b>	<b>0.066</b>		2012	2013	2014	2015	2016	2017	Average DIN in marine water bodies (µM)	<b>24.19</b>	<b>21.26</b>	<b>25.19</b>	<b>26.45</b>	<b>25.59</b>	<b>20.82</b>
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<b>For Survey Data Sample size and confidence interval for the latest available year:</b>	Sample size: SRP based on 93 rivers; Winter DIN based on 24 marine waterbodies Confidence interval: N/A																																														

<b>UK/Rol/International comparisons:</b>	UK: Yes UK Regional: Yes Rol: Yes International (please specify countries): Europe
<b>Issues in relation to this data, e.g. data limitations, future data availability, changes to methodology</b>	For SRP in rivers there are no data issues.  Winter DIN is based on monitoring data with number of yearly observations dependent on status of each water body and weather conditions.
<b>Is this measure being used to monitor performance against your current/latest Departmental/ Agency Plan</b>	Yes
<b>If yes, please specify any particular baseline point/year for the measure which is being for performance monitoring purposes</b>	2015

Available groupings*	Yes/No	Notes
NI Level	Yes	
Parliamentary Constituency level	No	
Local Government District (2014) level	No	
Deprivation Quintile	No	
NISRA Geography Urban/Rural Measure	No	
Gender	No	
Age	No	
Marital Status	No	
Religion	No	
Political Opinion	No	
Disability	No	
Dependants	No	
Sexual Orientation	No	
Racial Group	No	
<b>Lowest level geography at which the measure is available:</b>	Northern Ireland	

\* Due to confidentiality constraints, in some instances breakdowns may not be available due to small numbers