

Supporting document

Comparison of Soluble Reactive Phosphorus (SRP) status in 2018 classification with SRP status in 2015 classification

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Introduction

Interim figures published in September 2018 (the half-way point for the second cycle River Basin Management Plans) show that overall water quality status for NI waterbodies remains at 37% good status or better, the same position as in 2015. While there has been a reduction from 147 to 141 river bodies achieving good status or better in 2018 (a drop of 1.4%) the percentage of individual assessments at good status or better has improved marginally from 81.3% for 2015 to 82.0% for 2018.

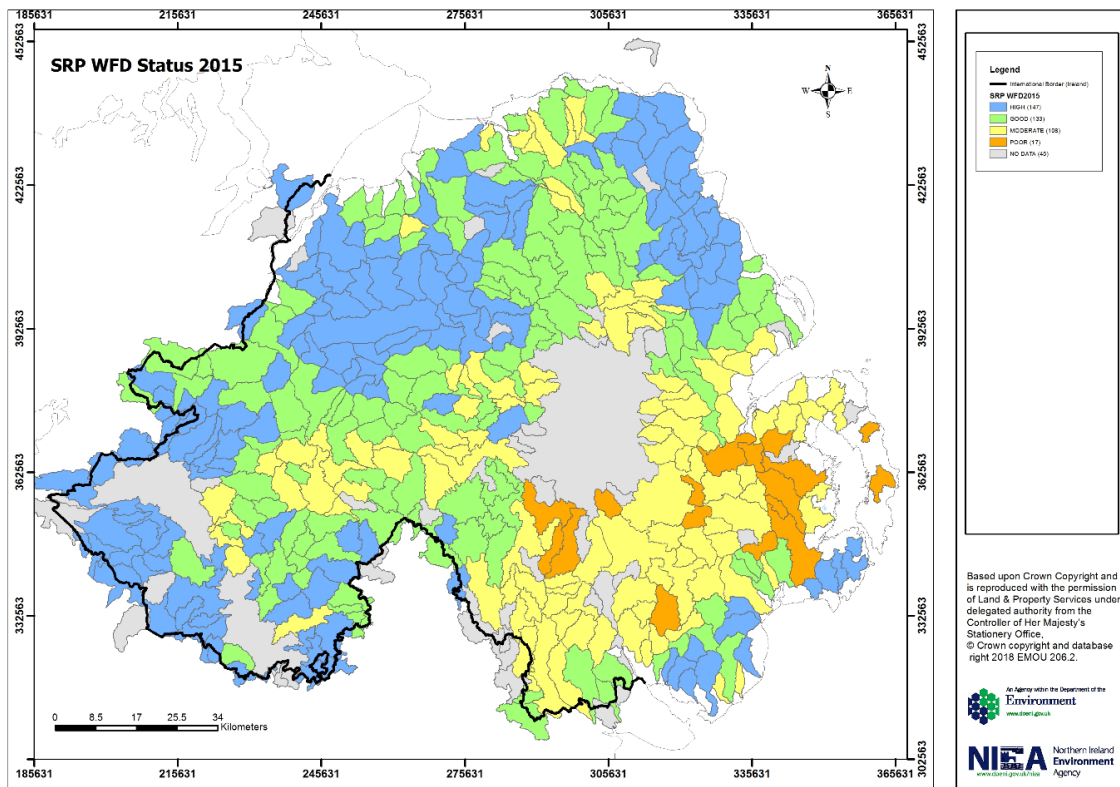
Summary

- SRP status remained unchanged in 66% of NI river water bodies in 2018 compared to 2015.
- New SRP data was collected in the 2nd River Basin Cycle in 5% of river water bodies
- SRP status improved in 1% of river water bodies
- SRP deteriorated in 22% of river water bodies
- 5% of river water bodies have no SRP data

Detail

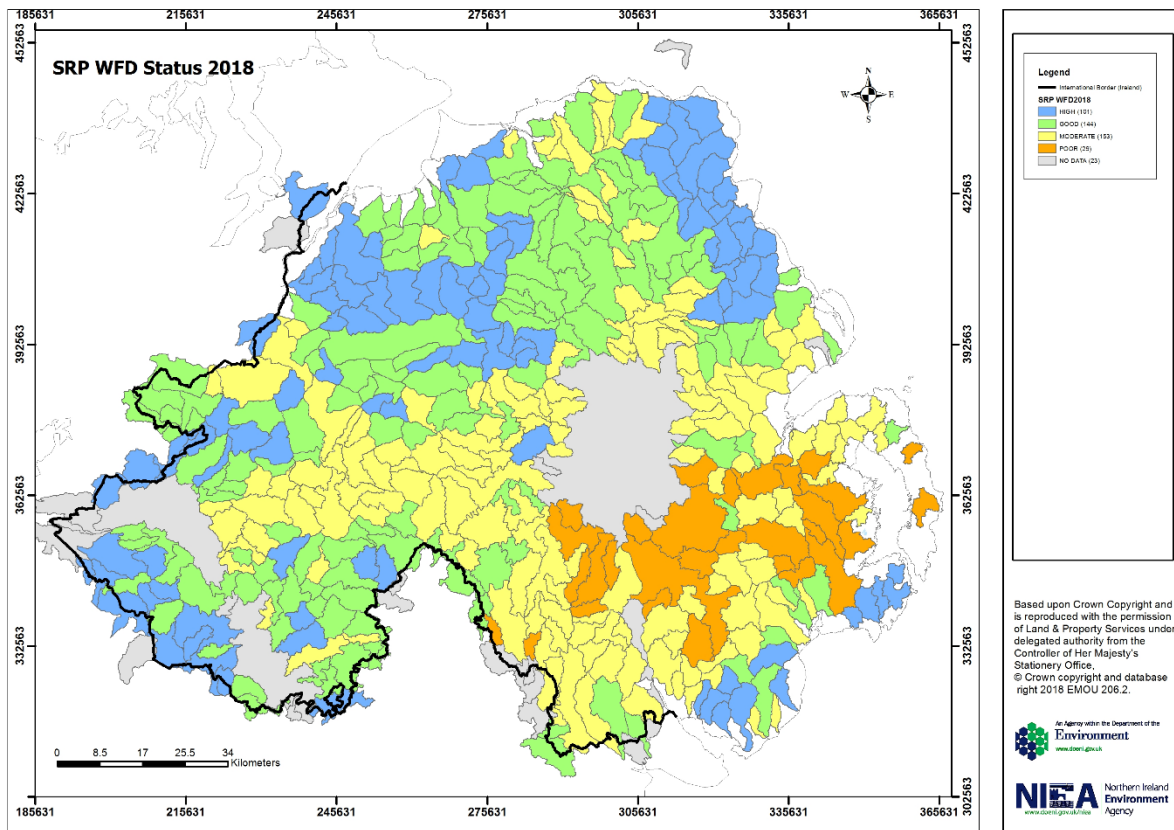
The status of SRP in river water bodies in 2015 is illustrated in Map 1.

Map 1: showing SRP status in NI river water bodies in 2015



The status of SRP in river water bodies in 2018 is illustrated in Map 2.

Map 2: showing SRP status in NI river water bodies in 2018



The breakdown comparing SRP status in NI 450 river water bodies in 2018 with SRP status in 2015 is shown in Table 1.

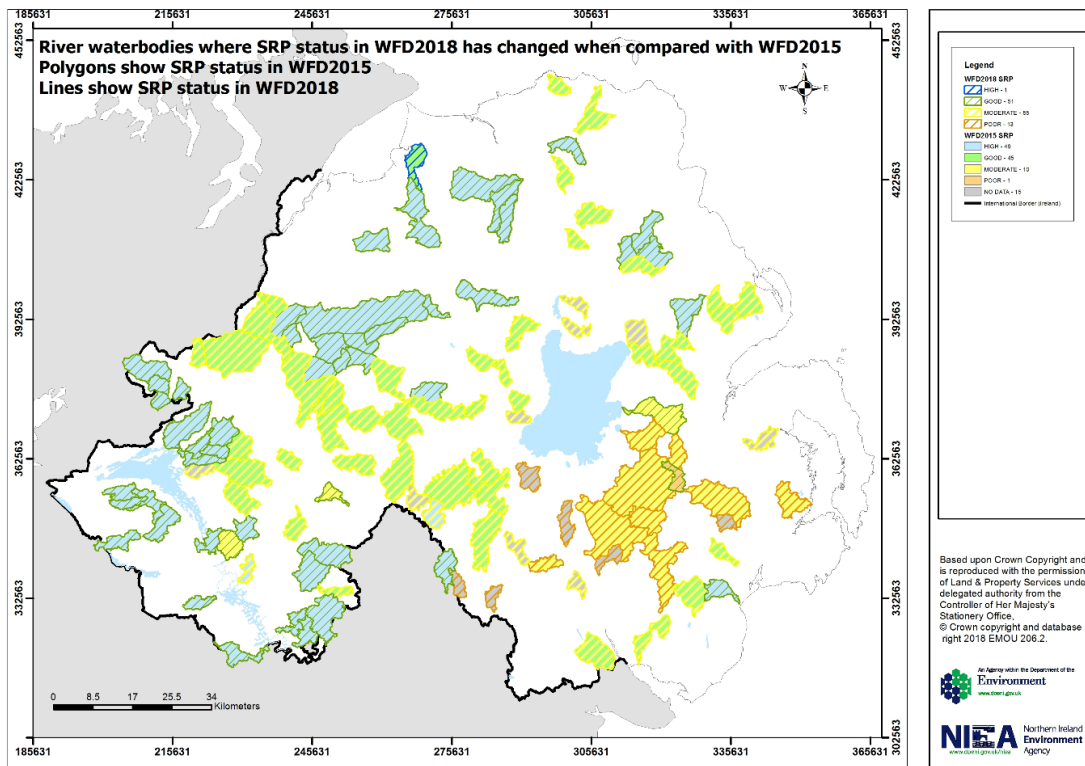
Table 1: SRP status in 2018 compared to 2015

	No. of river water bodies (Total 450)
Deteriorated from 2015 to 2018	
Deteriorated from High to Good	47
Deteriorated from Good to Moderate	44
Deteriorated from High to Moderate	2
Deteriorated from Moderate to Poor	7
	100 (22%)
No data for SRP in 2015	
New monitoring High 2018	4
New monitoring Good 2018	5
New monitoring Moderate 2018	9
New monitoring Poor 2018	6
	24 (5%)
SRP Unchanged from 2015 to 2018	
Remain High Status	96
Remain Good Status	88

	No. of river water bodies (Total 450)
Remain Moderate Status	98
Remain Poor Status	16
	298 (66%)
SRP improved from 2015	
Improved from Moderate to Good	3
Improved from Poor to Good	1
Improved from Good to High	1
	5 (1%)
No river SRP data	
EPA provide overall physiochemical status	13
AWB	1
No chemistry site	1
Classified by donor waterbody	3
Reported as No Data (Rathlin)	1
Classified by lake	4
	23 (5%)

Where changes in SRP status have occurred between 2015 and 2018 these are illustrated in Map 3.

Map 3: showing River water bodies where SRP status in 2018 has changed when compared to SRP status in 2015.



A table comparing the number of river waterbodies at each of the five WFD classes for WFD2015 and WFD2018 is shown in table 2.

Table 2: SRP river waterbody status in WFD2015 and WFD2018.

WFD Class	WFD2015	WFD2018
HIGH	147	101
GOOD	133	144
MODERATE	108	153
POOR	17	29
BAD	0	0
No Data	45	23

The number of river waterbodies at High or Good in WFD2015 and WFD2018 along with the percentage is shown in table 3.

Table 3: Number and Percentage of river waterbodies with SRP at High or Good in WFD2015 and WFD2018.

HIGH or GOOD SRP status	WFD2015	WFD2018
Number	280	245
Percentage	62.2	54.4

The percentage change indicates a deterioration of 7.8%.

SRP Deteriorations

The status of SRP declined in 22% (100) river water bodies from 2015 to 2018. An assessment of the confidence in these SRP deteriorations (See methodology in HPRM AE1/18/879738) was carried out. These 100 river water bodies were classified using data from 120 monitoring sites and at 34 of these monitoring sites there was a >75% confidence that status had deteriorated.

Of the 52 river water bodies that deteriorated in Overall status, SRP alone is responsible for the deterioration of 12 river water bodies from Good to Moderate and SRP along with at least one other element is responsible for the deterioration to Moderate of a further seven river waterbodies. The 19 river water bodies where overall status has declined from Good to Moderate due to SRP alone or SRP in conjunction with another element(s) are detailed in Table 4 along with an assessment of the confidence in the deterioration. Where there is >75% confidence of a true deterioration these are highlighted in red.

Table 4: River water bodies where overall status has declined from Good to Moderate due to SRP alone or SRP and another element(s) and confidence in the deterioration

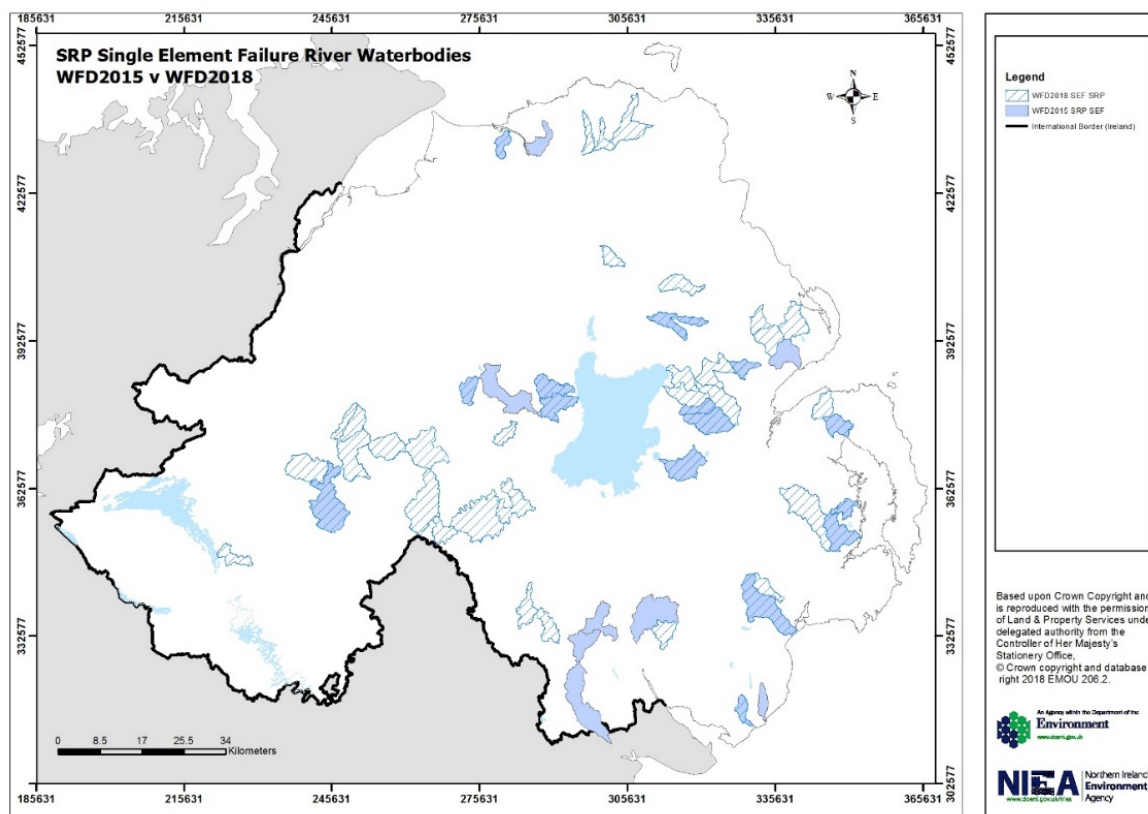
River Waterbody Number	Driver for Deterioration	River waterbody name	% Confidence that SRP status has deteriorated
GBNI1NB030307175	SRP	Ballygawley Water	16.13
GBNI1NB030304061	SRP	Killymoon River	17.8
GBNI1NE050505059	SRP	Moneycarragh Feeder	19
GBNI1NB030305203	SRP	Castle Water	23
GBNI1NB030305202	SRP	Six Mile Water Millikenstown	24.24
GBNI1NE040405046	SRP	Glynn River	29
GBNI1NB030302157	SRP	Aghill Burn	39.49
GBNI1NB030305207	SRP	Clady Water	48.2
GBNI1NW010102092	SRP	Camowen River (Ramackan)	51.02
GBNI1NW010108257	SRP	Camowen River (Omagh)	52.96
GBNI1NB030302021	SRP	Devenagh Burn	86.43
GBNI1NW010102039	SRP	Glenscollip Burn	94.86
GBNI1NB030308102	SRP, Ammonia	Leitrim River	84.61
GBNI1NW010102064	SRP, D Fe AA	Mourne Beg River (Lisnacloone)	99.66
GBNI1NW010102091	SRP, D Fe AA, D Pb MAC	Owenreagh (East) River (Greencastle)	88.05
GBNI1NB060604042	SRP, Diatoms	Moygannon River	78.75
GBNI1NW363601046	SRP, Diatoms	Ballinamallard River (Magheracross)	62.28
GBNI1NW363604039	SRP, Diatoms	Ballinamallard River (Keenogue)	92.5
GBNI1NW363602017	SRP, DO% sat	Ballina Tributary	98.04

SRP Single Element Failures

In 2015 there were 23 water bodies failing on SRP alone. In 2018 this number had increased to 43 SEF for SRP.

The SEF SRP failures in 2015 and 2018 are illustrated in Map 4.

Map 4: SEF SRP failures in 2015 and 2018



Of the 43 river waterbodies that are SEF for SRP in WFD2018;

- 15 were also SEFs for SRP in 2015
- 5 had been SEF in WFD2015 but for an element other than SRP
- 23 are new SEFs: 11 had been Multiple Element Failures (MFE) in WFD2015, 12 had been Good status in WFD2015.

The 43 river waterbodies are monitored using 48 monitoring stations and in 5 of these there was >75% confidence of a true deterioration in class.

Table 5 records the 43 river waterbodies that are SRP SEF in WFD2018.

Table 5: WFD2018 SEF SRP river waterbodies and details of changes in quality elements where relevant since WFD2015

River Waterbody Number	River Waterbody Name	WFD2015	2018 River Waterbody Fate	Comment
GBNI1NB030304061	Killymoon River	Good Status	New SEF	SRP now Moderate
GBNI1NE040405046	Glynn River	Good Status	New SEF	SRP now Moderate
GBNI1NB030307175	Ballygawley Water	Good Status	New SEF	SRP now Moderate

River Waterbody Number	River Waterbody Name	WFD2015	2018 River Waterbody Fate	Comment
GBNI1NW010108257	Camowen River (Omagh)	Good Status	New SEF	SRP now Moderate
GBNI1NW010102039	Glenscollip Burn	Good Status	New SEF	SRP now Moderate
GBNI1NW010102092	Camowen River (Ramackan)	Good Status	New SEF	SRP now Moderate
GBNI1NB030302021	Devenagh Burn	Good Status	New SEF	SRP now Moderate
GBNI1NB030302157	Aghill Burn	Good Status	New SEF	SRP now Moderate
GBNI1NE050505059	Moneycarragh Feeder	Good Status	New SEF	SRP now moderate
GBNI1NB030305202	Six Mile Water (Millikenstown)	Good Status	New SEF	SRP now Moderate
GBNI1NB030305203	Castle Water	Good Status	New SEF	SRP now Moderate
GBNI1NB030305207	Clady Water	Good Status	New SEF	SRP now Moderate
GBNI1NB030305122	Six Mile Water (Antrim)	Good Status	New SEF (HMWB MEP)	SRP now Moderate. HMWB MEP
GBNI1NB030307036	River Rhone (Dungannon)	MFE	New SEF	SRP now Moderate. 2015/2016 Diatom, mac, inverts now Good.
GBNI1NB030307044	Callan River (Milford)	MFE	New SEF	SRP still Moderate. 2015 inverts now Good
GBNI1NB030307111	Ballymacone River	MFE	New SEF	SRP still Moderate. Ammonia now Good.
GBNI1NE040404002	Dervock River (Ballynagor)	MFE	New SEF	DO% sat now High. SRP still Moderate
GBNI1NE040404004	Dervock River (Dervock)	MFE	New SEF	DO% sat now High. SRP still Moderate
GBNI1NW010102018	Ballynahatty (Drumragh) Water	MFE	New SEF	DO% sat now High. SRP still Moderate
GBNI1NB030306127	Dunore River	MFE	New SEF	Fish now Good. SRP still Moderate
GBNI1NW363601032	St Angelo Stream	MFE	New SEF	DO% sat now Good. SRP still Moderate
GBNI1NE050502083	Crawfordsburn River	MFE	New SEF	Inverts now Good. SRP still Moderate

River Waterbody Number	River Waterbody Name	WFD2015	2018 River Waterbody Fate	Comment
GBNI1NB060601003	Clanrye North River	MFE	New SEF	Inverts and Diatoms now Good. SRP still Moderate
GBNI1NE050505124	Glasswater River	MFE	New SEF	Inverts now High. SRP still Poor
GBNI1NB030307041	River Blackwater Tributary (Aughnacloy)	SEF: Inverts	Still SEF but different QE	Inverts now Good. New chem monitoring Moderate SRP.
GBNI1NB030308217	Oona Water (Eglis)	SEF: Inverts	Still SEF but different QE	Inverts now Good. SRP now Moderate at two sites.
GBNI1NE040405116	Doughery Water	SEF: Inverts	Still SEF but different QE	Inverts now Good. SRP now Moderate
GBNI1NW010104047	Camowen River (Termon)	SEF: Inverts	Still SEF but different QE	Inverts now Good. SRP now Moderate
GBNI1NB030304136	Ballinderry River (Coagh)	SEF: SRP	Remains SEF	Still Moderate for SRP
GBNI1NB030304176	Tulnacross Tributary	SEF: SRP	Remains SEF	SRP still Moderate
GBNI1NB030306125	Dundesert River	SEF: SRP	Remains SEF	SRP still Moderate
GBNI1NB030308207	Crumlin River (Dundrod)	SEF: SRP	Remains SEF	SRP still Moderate
GBNI1NW010104049	Quiggery Water	SEF: SRP	Remains SEF	SRP still Moderate
GBNI1NE050505097	Aughrim River	SEF: SRP	Remains SEF	SRP still Moderate
GBNI1NB030306141	Salterstown River	SEF: SRP	Remains SEF	SRP still Moderate
GBNI1NB030306193	Ballinderry (Antrim) River	SEF: SRP	Remains SEF	SRP still Moderate
GBNI1NB030301071	Bann Brook	SEF: SRP	Remains SEF	SRP still Moderate. New biol monitoring planned.
GBNI1NB030302014	Kellswater (Kells)	SEF: SRP	Remains SEF	SRP still Moderate
GBNI1NE050504085	Cully's Burn	SEF: SRP	Remains SEF	SRP still Moderate. No biol here.
GBNI1NE050504006	Ballymorran Burn	SEF: SRP	Remains SEF	SRP still Moderate. No biol here.

River Waterbody Number	River Waterbody Name	WFD2015	2018 River Waterbody Fate	Comment
GBNI1NE050504009	Dibney River	SEF: SRP	Remains SEF	SRP now at Poor
GBNI1NE050505113	Carrigs River	SEF: SRP	Remains SEF	SRP still Moderate
GBNI1NB030305205	Lisnalinchy Burn	SEF: SRP	Remains SEF	SRP still Moderate



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