FUNDACIÓN BOTÍN

La revisión de la Directiva de tratamiento de las aguas residuales urbanas:

avances y retos futuros en España

31 de mayo de 2023

Cambios en la infraestructura de depuración en la propuesta de Directiva: Reducción de Nutrientes

Antonio Bolinches
Profesor Asociado

GRUNDFOS

UNIVERSIDAD COMPLUTENSE MADRID

COUNCIL DIRECTIVE

of 21 May 1991

concerning urban waste water treatment

(91/271/EEC)

(OJ L 135, 30.5.1991, p. 40)

Article 5

2. Member States shall ensure that urban waste water entering collecting systems shall before discharge into sensitive areas be subject to more stringent treatment than that described in Article 4, by 31 December 1998 at the latest for all discharges from agglomerations of more than 10 000 p.e.

Valores en mg/l	Ntot	Ptot
10.000 < h-e < 100.000	15	2
100.000 < h-e	10	1

[Proposal for a revised Urban Wastewater Treatment Directive (europa.eu)]

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

concerning urban wastewater treatment (recast)

Article ~~7~~5

⌦ Tertiary treatment ⌫

⇩ new

1. By 31 December 2030, Member States shall ensure that discharges from 50 % of urban wastewater treatment plants treating a load of 100 000 p.e. and above and not applying tertiary treatment on [OP please insert the date = the date of entry into force of this Directive] are subject to tertiary treatment in accordance with paragraph 4.

By 31 December 2035, Member States shall ensure that all urban wastewater treatment plants treating a load of 100 000 p.e. and above are subject to tertiary treatment in accordance with paragraph 4.

Parameters	Concentration	Minimum percentage of reduction[7] ⌦ (See Note 1) ⌫	Reference method of measurement
Total phosphorus	➔2 ~~2 mg/l (10000 — 100000 p.e.)~~ ← ~~1 mg/l (more than 100000 p.e.)~~ ⇨ 0,5 mg/L ⇦	~~80~~ ⇨ 90 ⇦	Molecular absorption spectrophotometry
Total nitrogen[8]	~~15 mg/l (10000-100000 p.e.)[9]~~ ~~10 mg/l (more than 100000 p.e.)[10]~~ ⇨ 6 mg/L ⇦	~~70-80~~ ⇨ 85 ⇦	Molecular absorption spectrophotometry

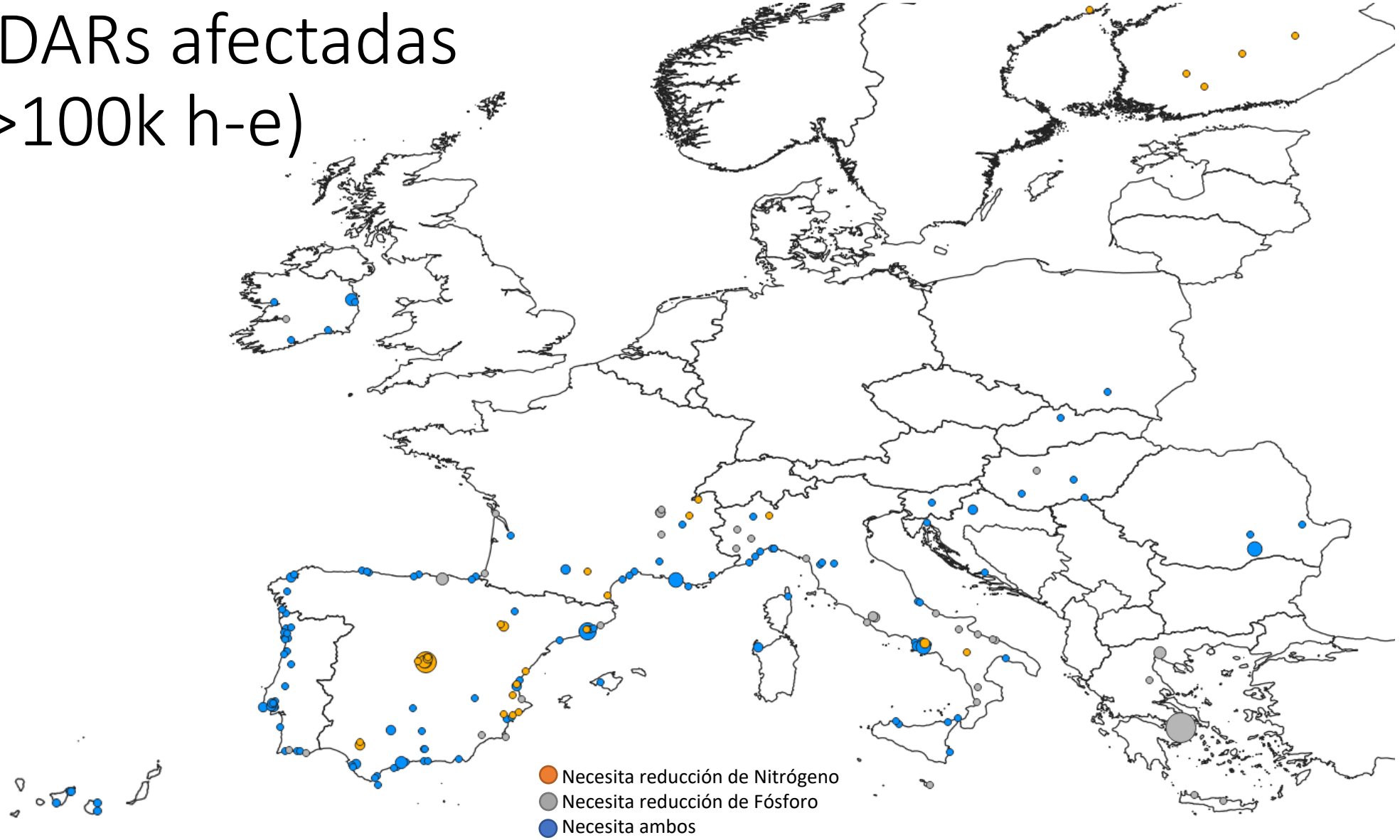
UWWTD: Datos reportados, extracto

European Environment Agency

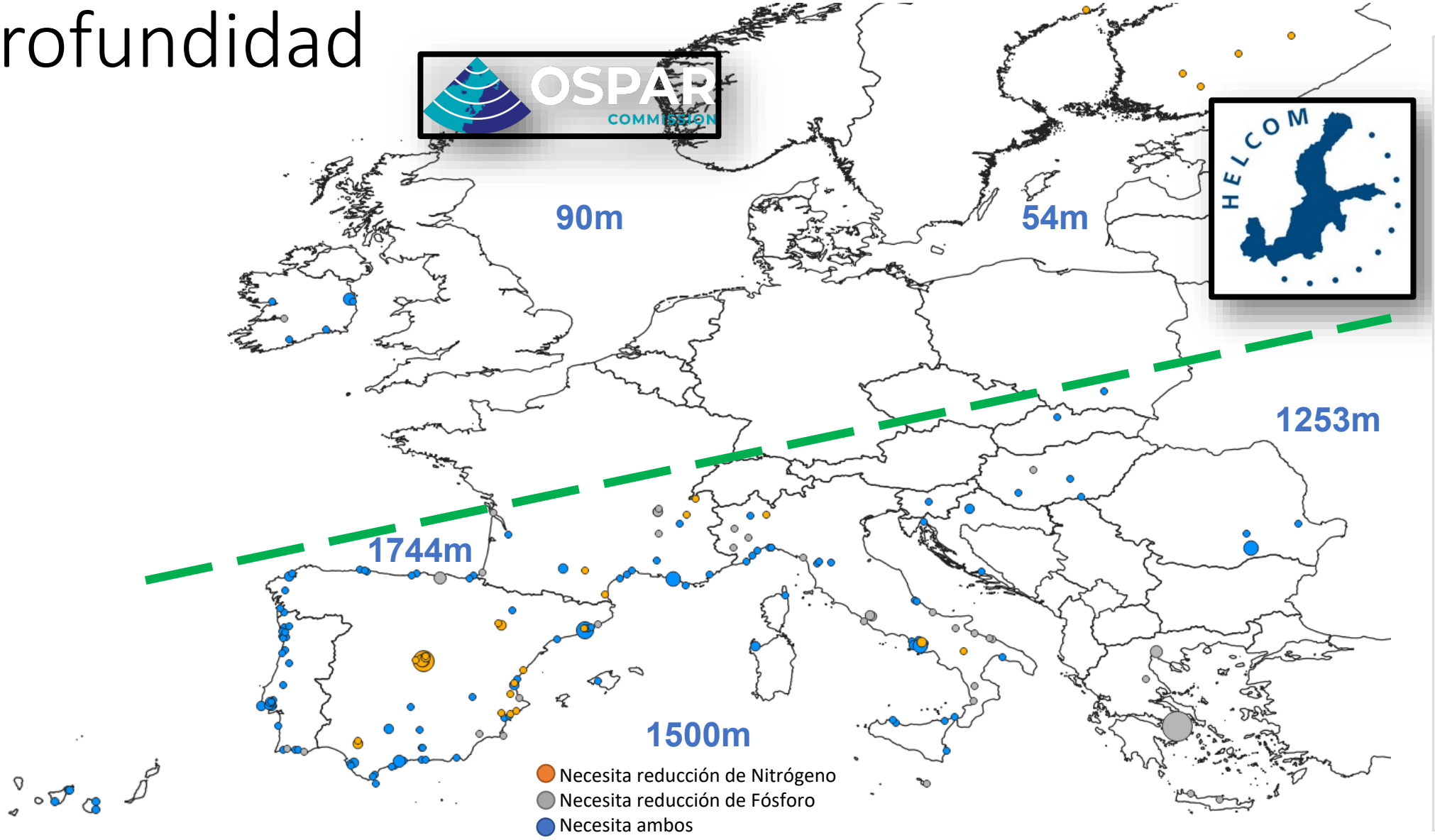
[Waterbase - UWWTD: Urban Waste Water Treatment Directive – reported data — European Environment Agency (europa.eu)]

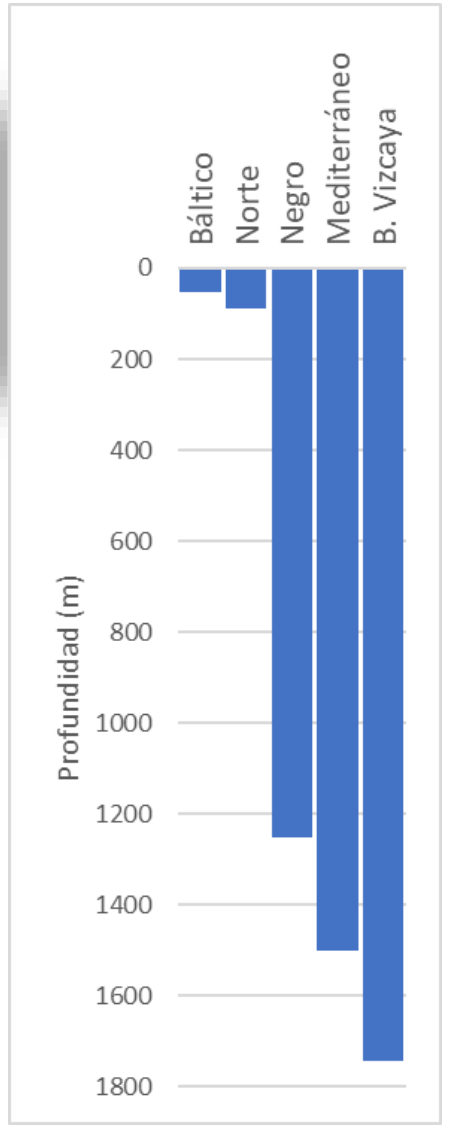
uwwLoadEntering UWWTP	uwwName	uwwNRemoval	uwwPRemoval
203 224	ALCALA DE HENARES OESTE	1	1
183 362	SOTO GUTIERREZ	0	1
975 186	SUR	0	1
396 002	BUTARQUE	0	1
455 183	VIVEROS DE LA VILLA	1	1
416 603	REJAS	0	1
132 590	VALDEBEBAS	0	1
596 628	LA GAVIA	1	1
108 896	MONTORNES DEL VALLES	1	1
137 814	PINEDA DE MAR (ALT MARESME NORD)	1	0

EDARs afectadas (>100k h-e)

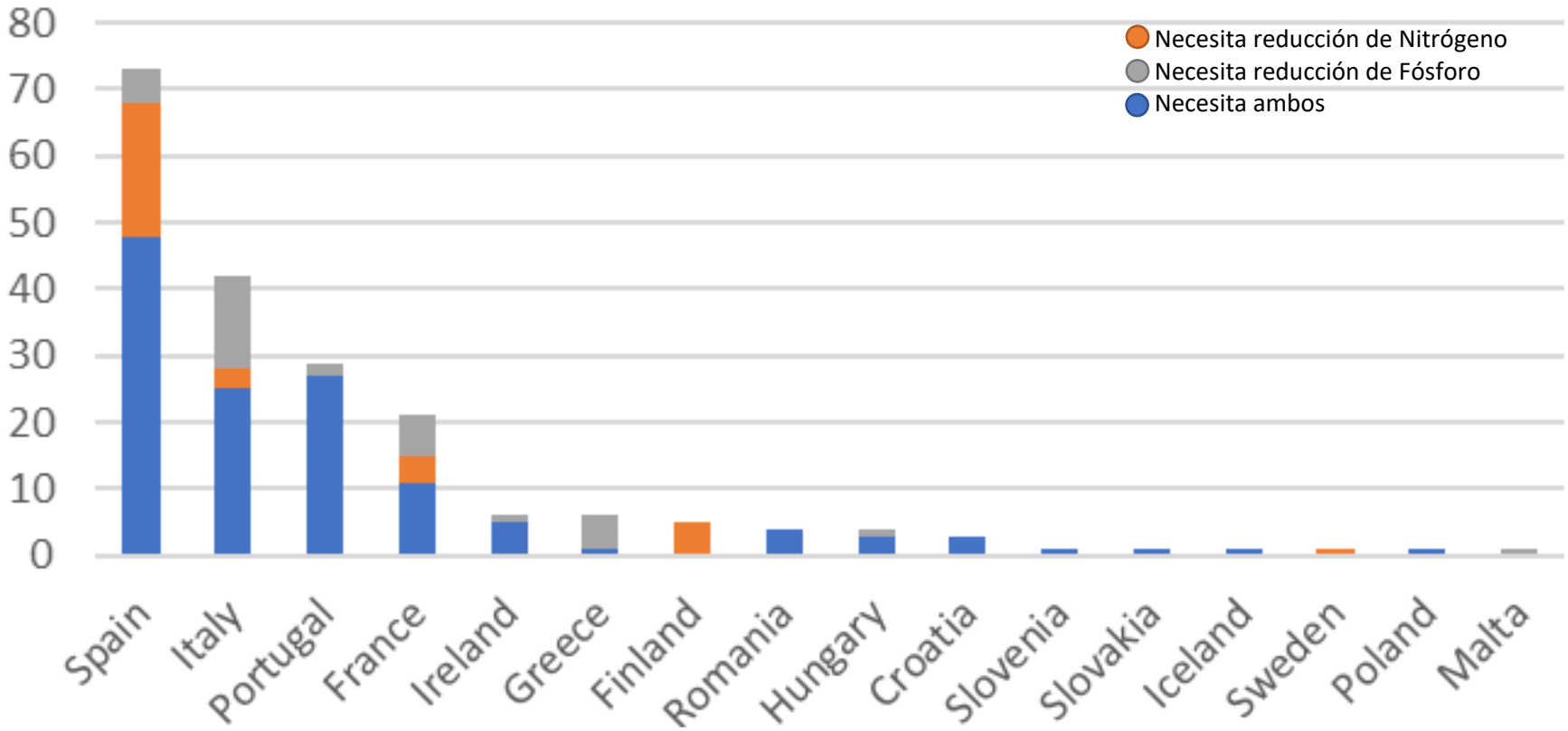


Profundidad

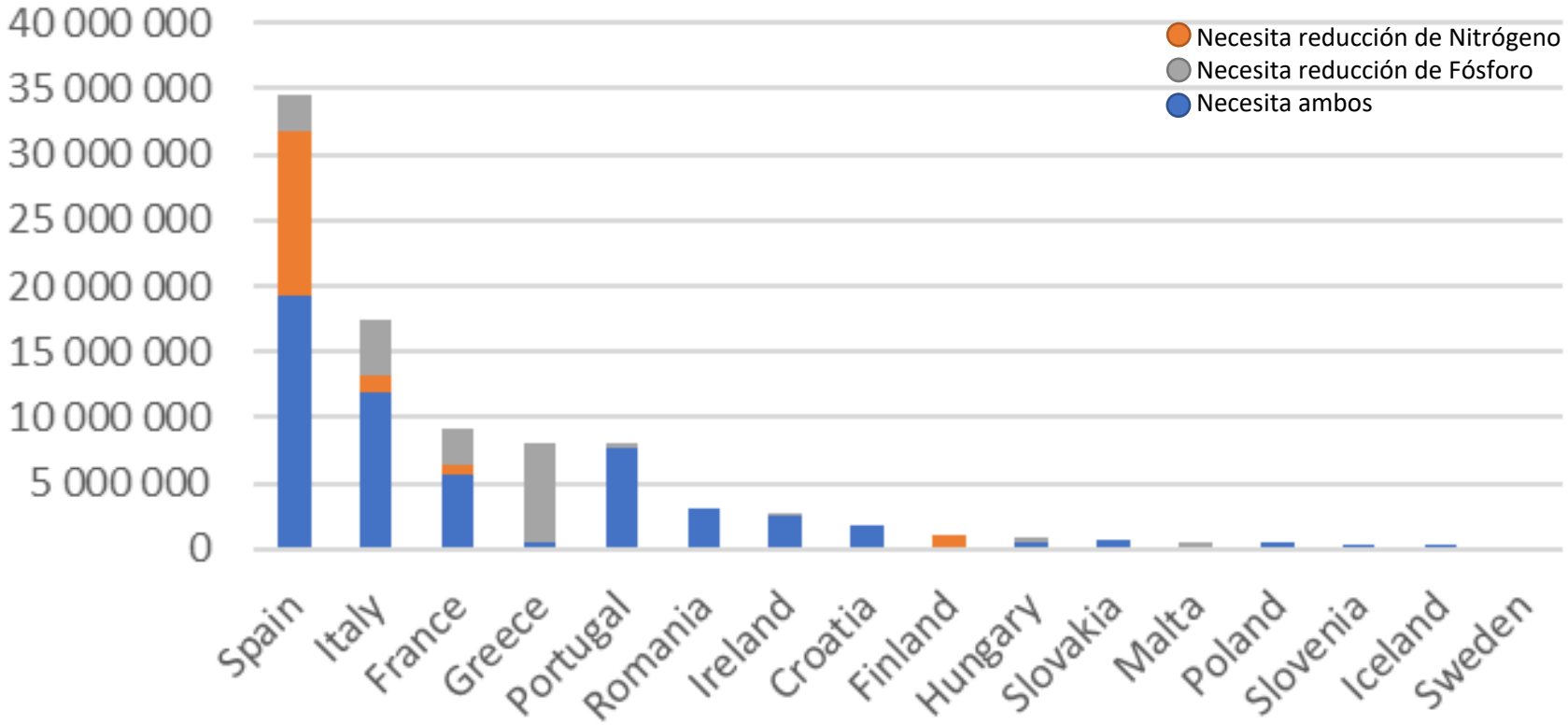




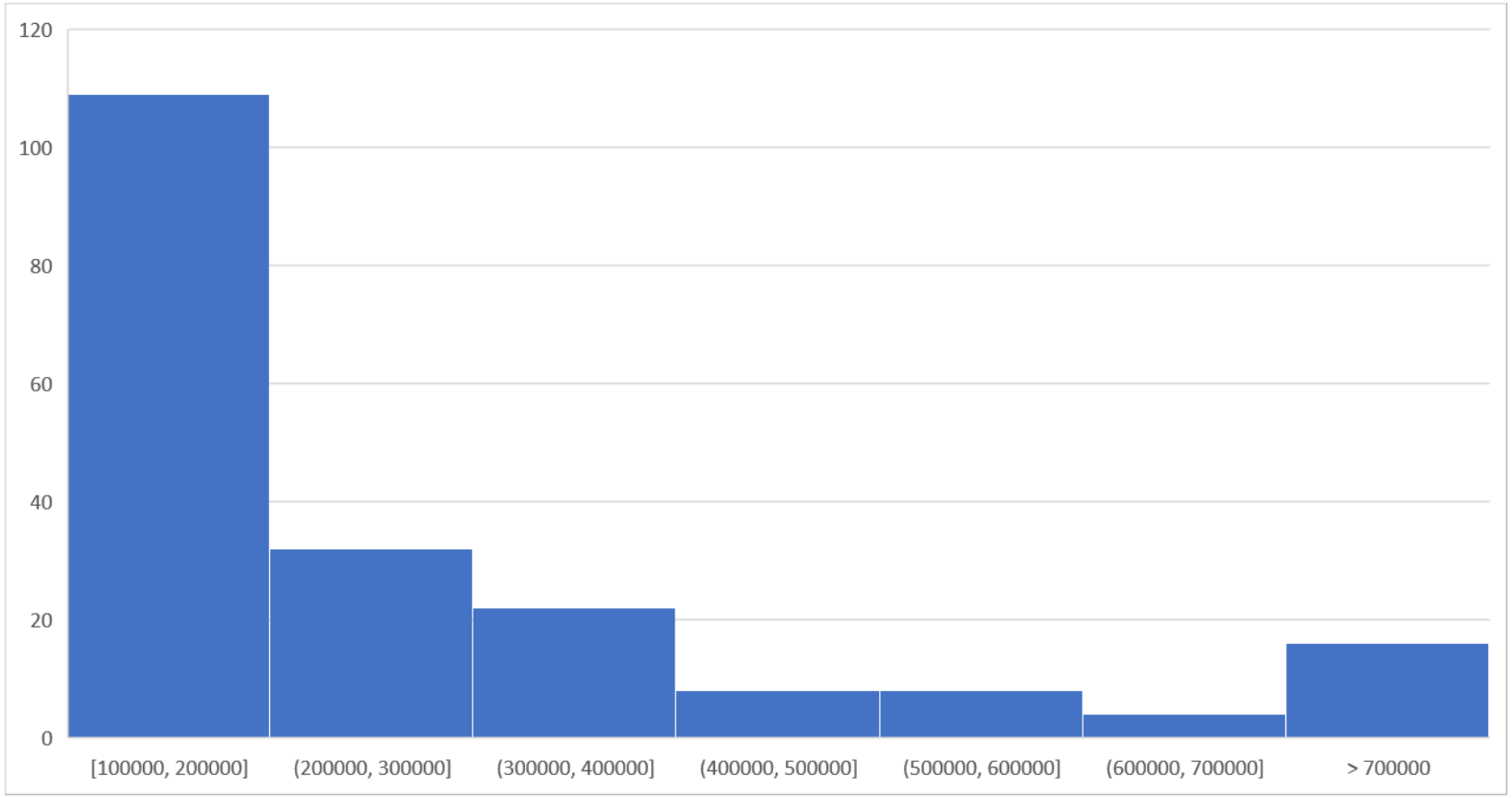
Número de EDARs >100k h-e que requieren tratamiento adicional



Suma de h-e (EDAR >100k h-e) que requieren tratamiento adicional

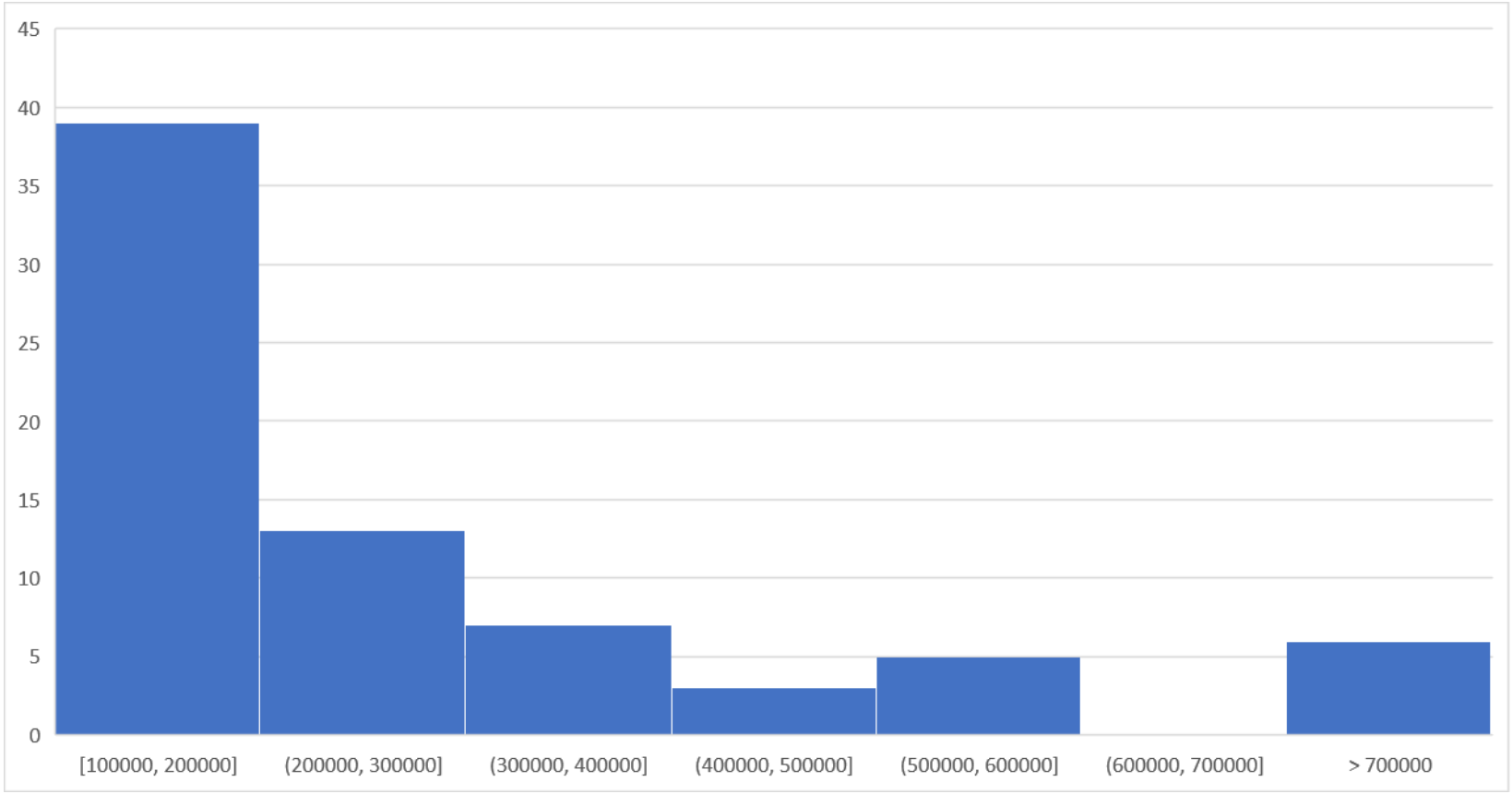


Tamaño de las EDAR que requieren tratamiento adicional, UE



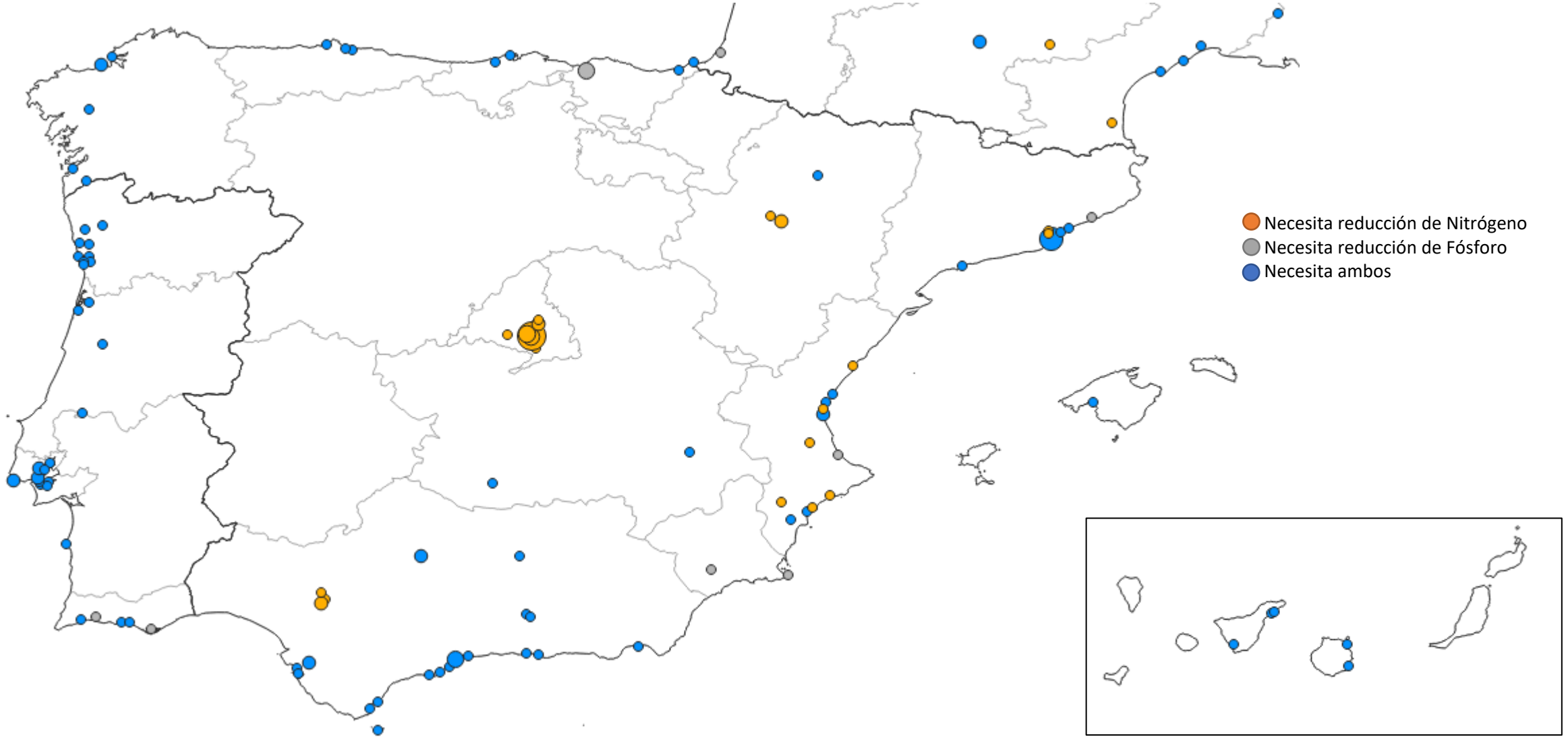
199 EDARs, tamaño medio 320’000 h-e

Tamaño de las EDAR que requieren tratamiento adicional, España

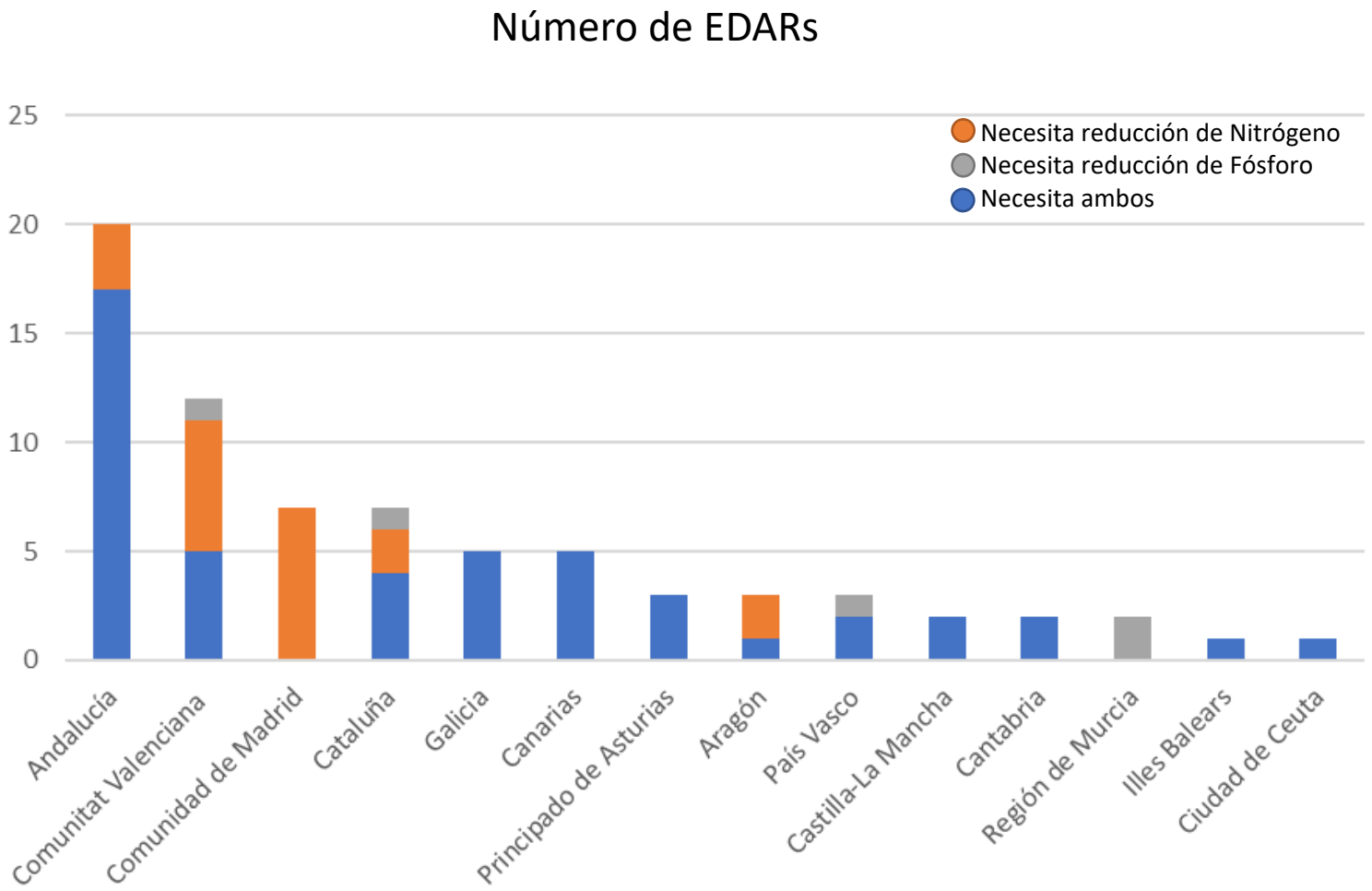


73 EDARs, tamaño medio 311’000 h-e

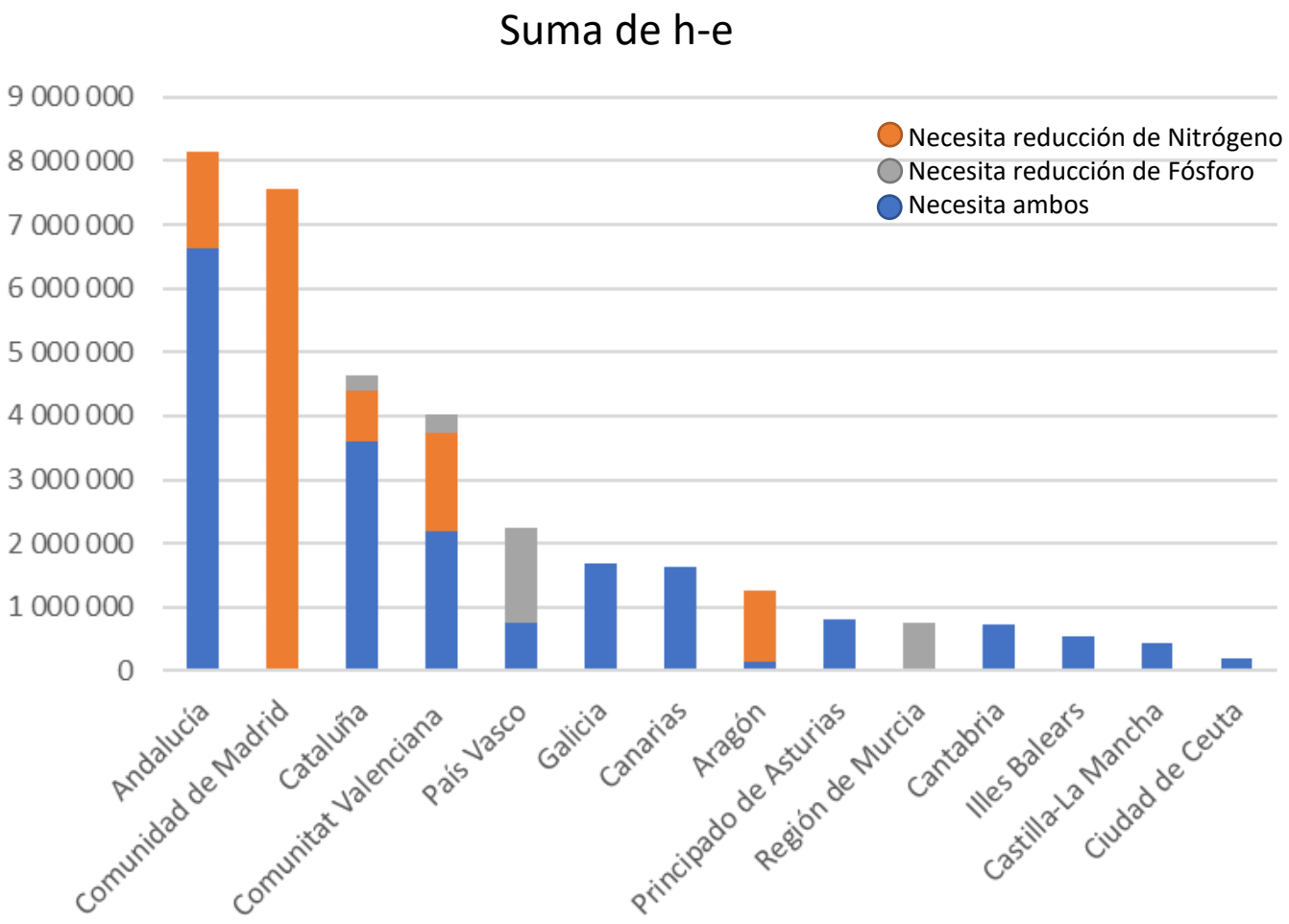
Por Comunidades Autónomas



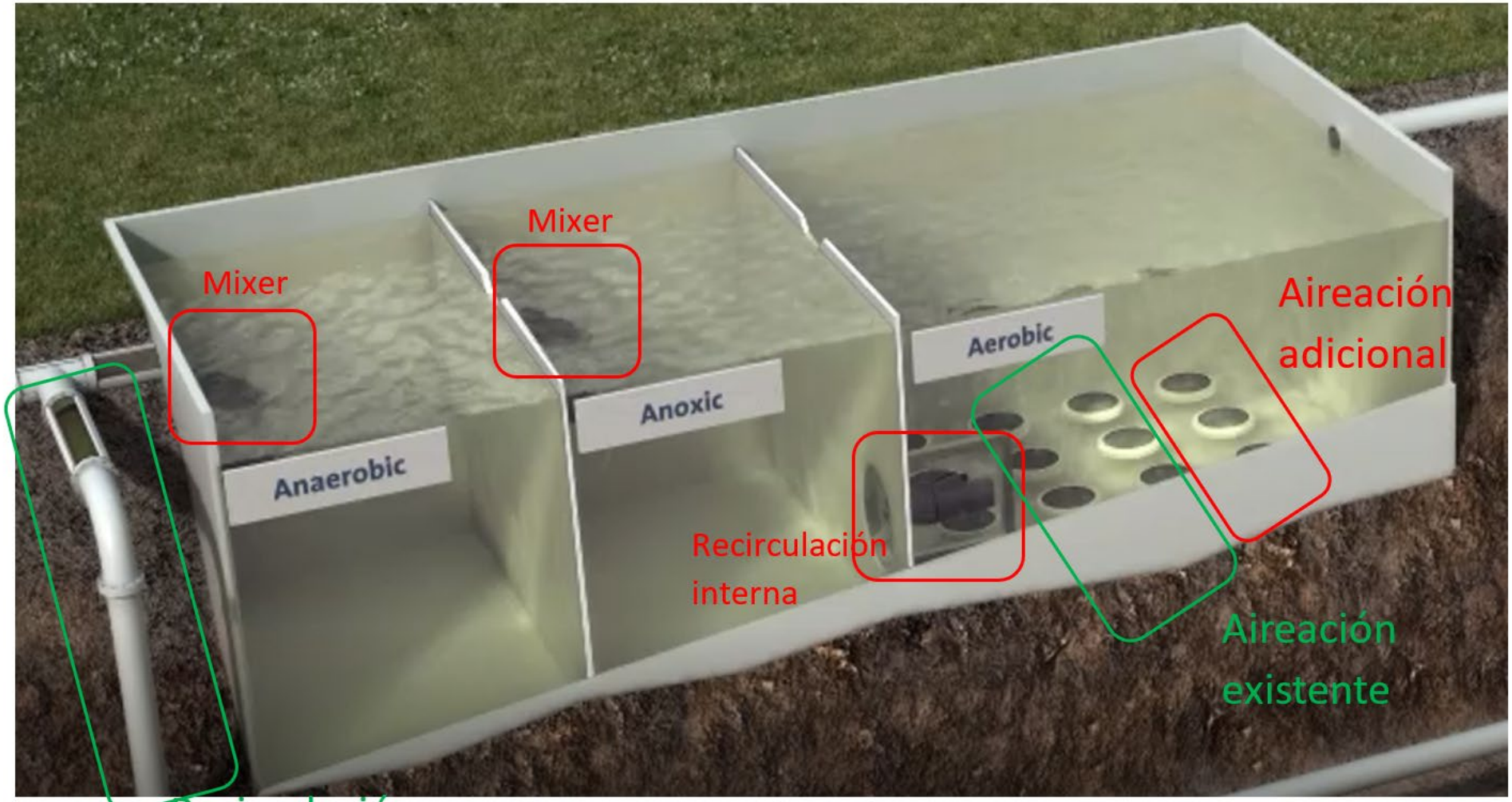
Distribución por Comunidad Autónoma



Distribución por Comunidad Autónoma



Cambios en infraestructura

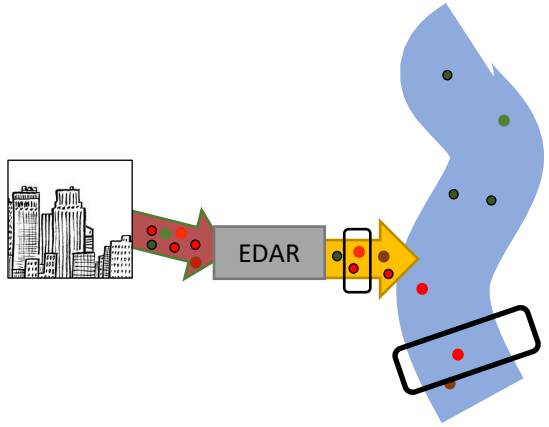


DMA: Prioridad a las aguas receptoras

Efluente:

- Carga: 11 gN/he
- Caudal: 0,2 m^3/he

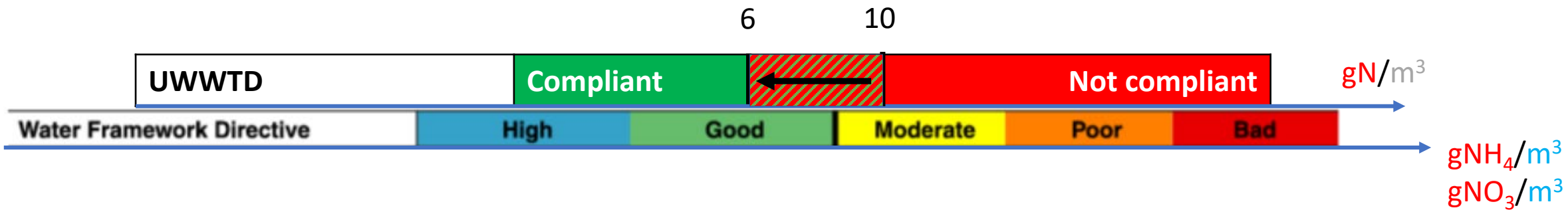
} 55 gN/m^3



Aguas receptoras:

Caudal m^3/día

EDAR: Reducción de carga a 6 gN/m^3

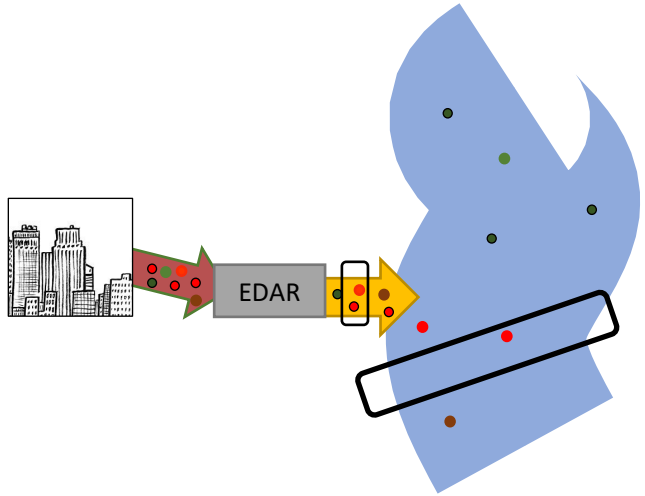


DMA: Prioridad a las aguas receptoras

Efluente:

- Carga: 11 gN/he
- Caudal: 0,2 m^3/he

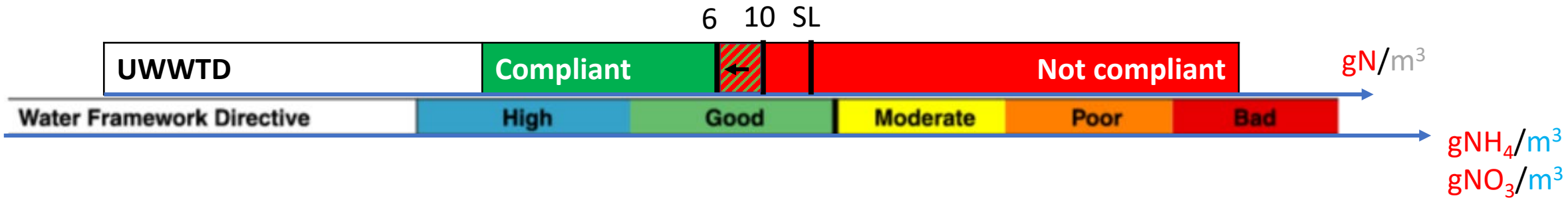
} 55 gN/m^3



Aguas receptoras:

Caudal m^3/día

EDAR: Reducción de carga a 6 gN/m^3



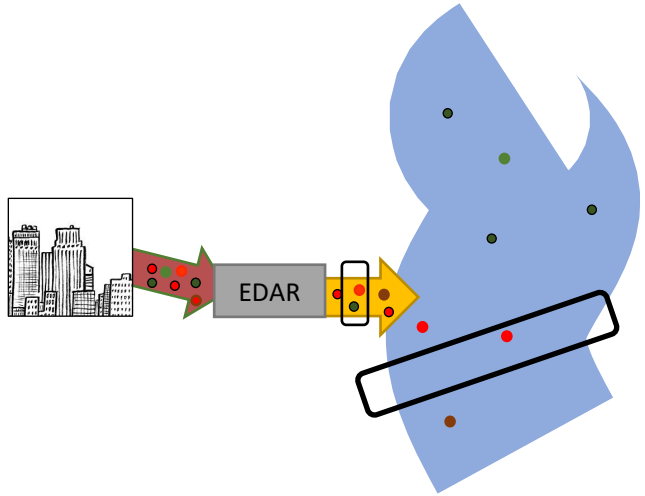
DMA: Prioridad a las aguas receptoras

Efluente:

- Carga: 11 gN/he
- Caudal: 0,2 m^3/he

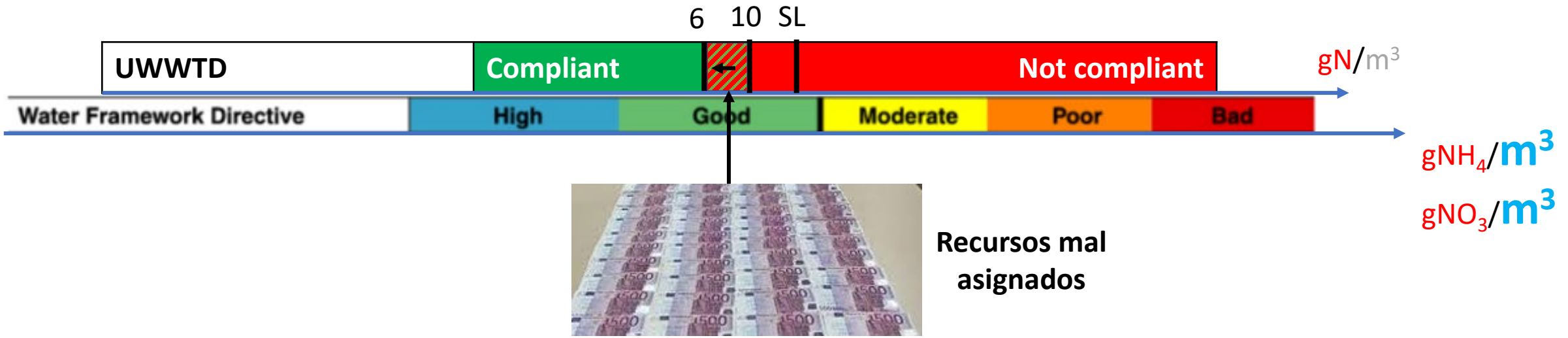
} 55 gN/m^3

EDAR: Reducción de carga a 6 gN/m^3



Aguas receptoras:

Caudal m^3/día



Recursos mal asignados

Gracias

GRUNDFOS

FUNDACIÓN BOTÍN

UNIVERSIDAD COMPLUTENSE MADRID