CIFM e CIA: analisi dei dati WISE

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ISPRA – Istituto Superiore per la Protezione e la Ricerca Ambientale

Workshop "Applicazione della Metodologia di Classificazione del potenziale ecologico di cui al DD 341/STA del 2016". Stato di avanzamento del miglioramento della stessa. Analisi delle criticità di applicazione del DM 27 novembre 2013, n.156 sulla base dei dati del sistema SINTAI-WISE."

Roma, 10 Aprile 2018

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Per un cambiamento sostenibile

UNIONE EUROPEA
Fondo Sociale Europeo
Fondo Europeo di Sviluppo Regionale

Agenzia per la Coesione Territoriale

Presidenza del Consiglio dei Ministri
Dipartimento della Funzione Pubblica

MINISTERO DELL'AMBIENTE E DELLA TUTELA DEL TERRITORIO E DEL MARE

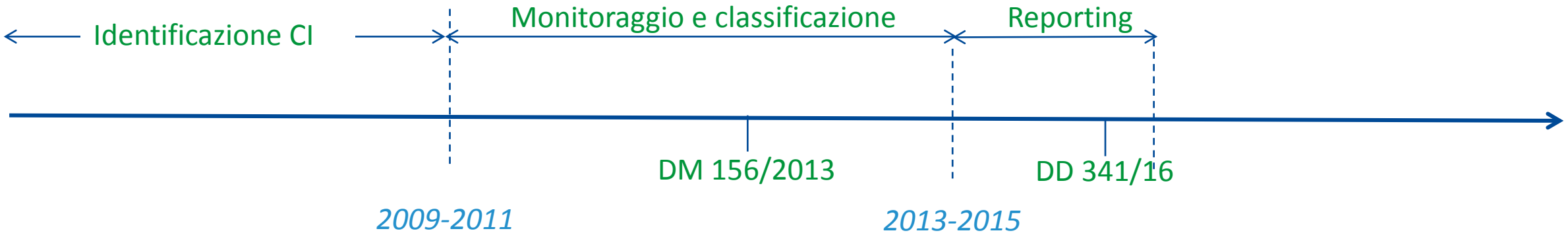
PON GOVERNANCE E CAPACITÀ ISTITUZIONALE 2014-2020

SOGESID

Termini di riferimento: dati reporting WFD 2016

I dati derivano dal reporting 2015 e si riferiscono a periodi di monitoraggio compresi tra il 2009 e il 2015.

Monitoraggio e classificazione sono relativi ai CI identificati prima dei DM+DD



1. Analisi dei CI riportati in WISE come HMWB e AWB
2. Analisi coerenza GIS
3. Dati hymo non riportati

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HMWB in breve

- Deve essere **sostanzialmente** alterato dal punto di vista idromorfologico
- Tale alterazione è causata da un **uso ritenuto indispensabile** altrove e in altro modo
- Non può raggiungere il buono stato **senza compromettere l'uso** in maniera significativa

- Una valutazione della severità dell'alterazione idromorfologica deve essere effettuata e riportata (QE2!)
- Lo stato deve essere valutato e riportato
- L'inesistenza di alternative per raggiungere l'uso deve essere dimostrata
- L'impatto significativo sull'uso deve essere quantificato

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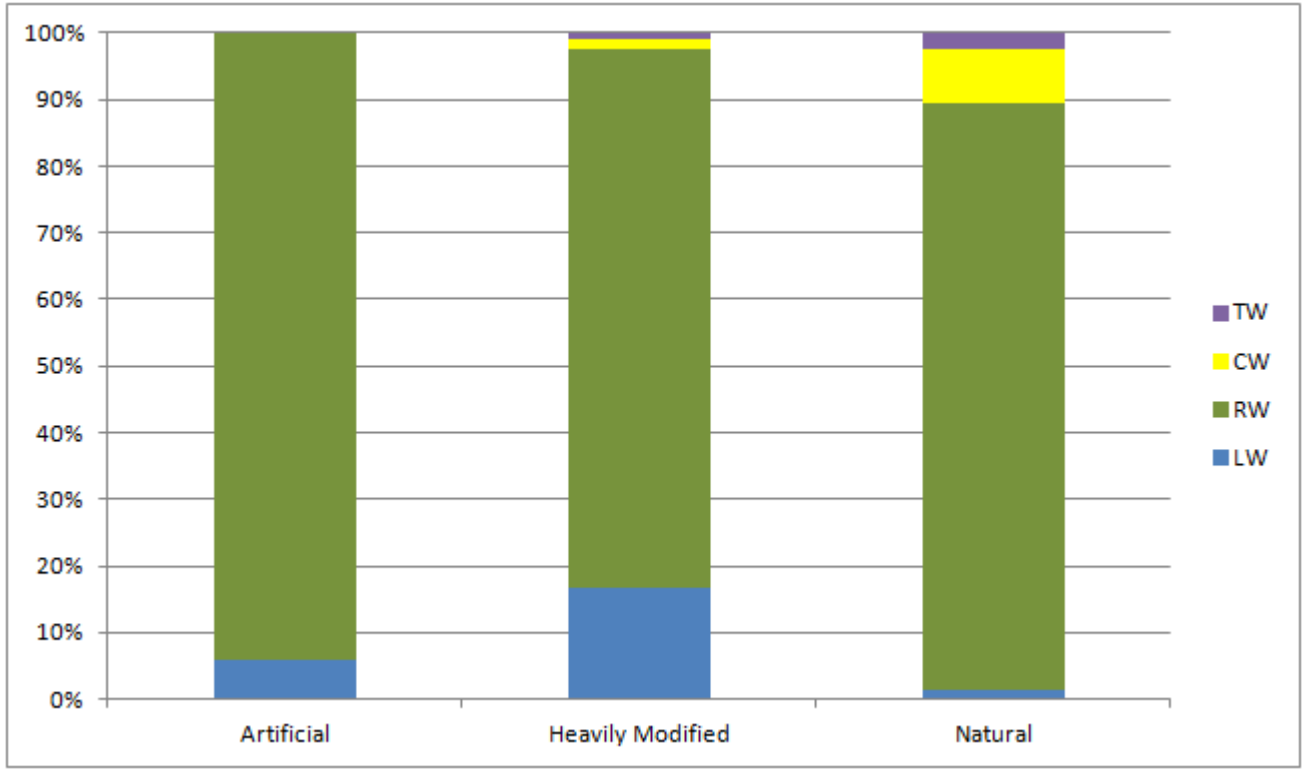
Distribuzione per categorie

HMWB: corpo idrico superficiale la cui natura è sostanzialmente modificata a seguito di alterazioni fisiche dovute a un'attività umana.
AWB: un corpo idrico superficiale creato da un'attività umana.



	LW	RW	CW	TW
Artificial	39	610	0	1
Heavily Modified	212	1028	19	14
Natural	96	5855	542	157
Totale complessivo	347	7493	561	172

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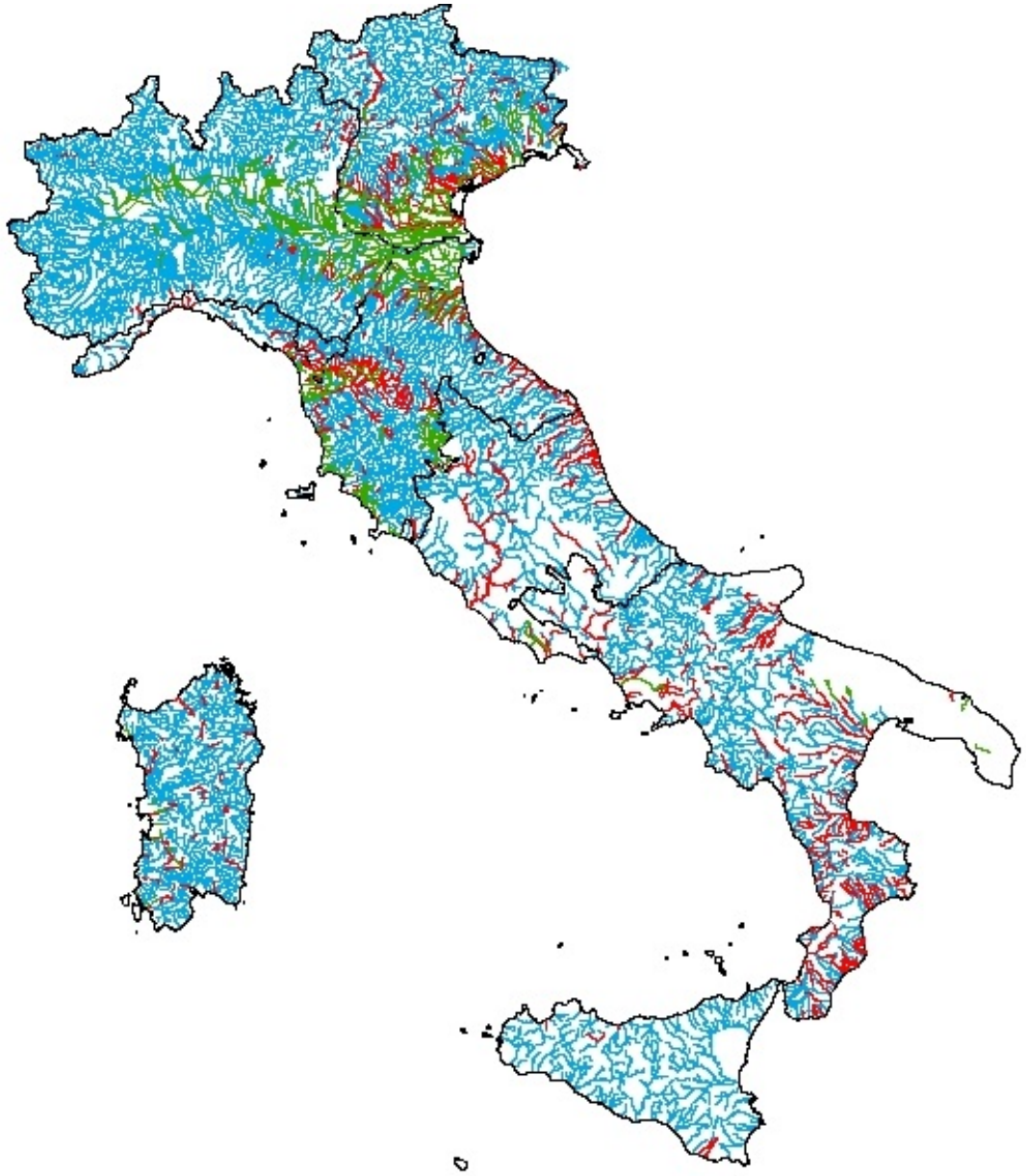
Distribuzione per categorie



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Artificial	39	610	0	1
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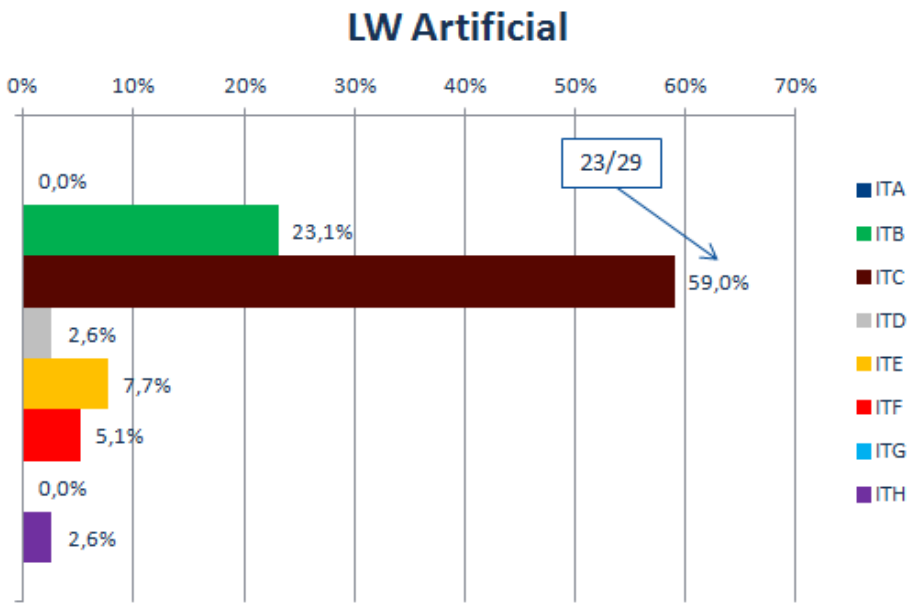
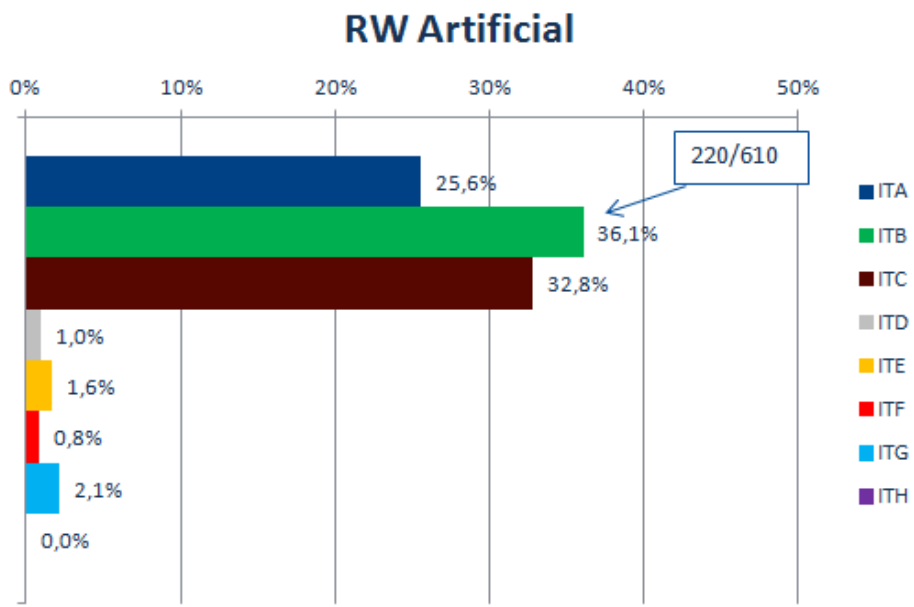
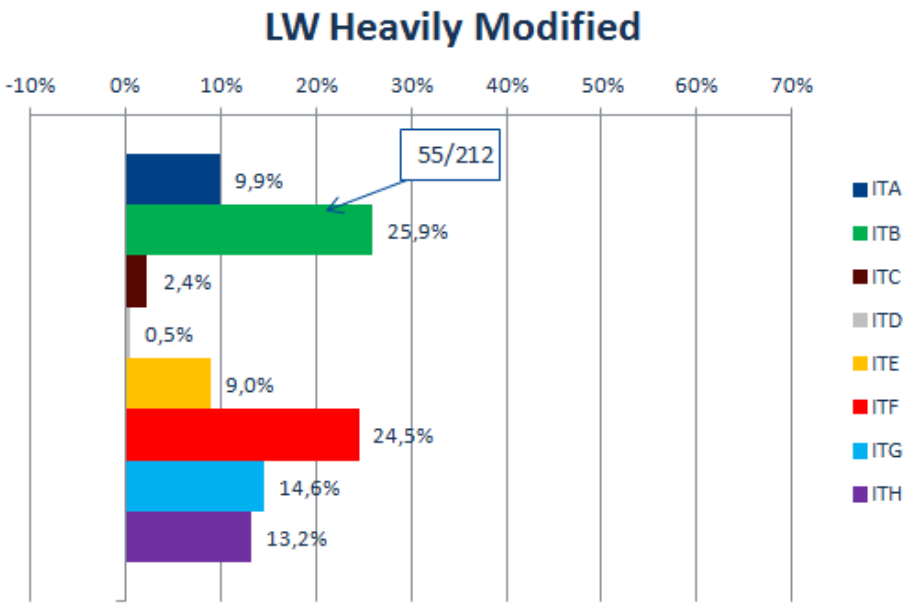
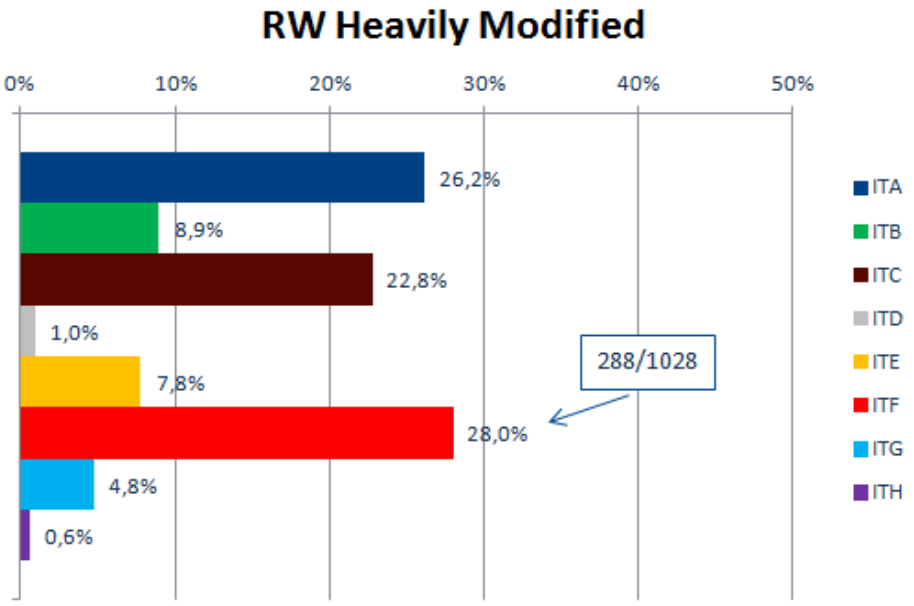

LW Artificial
0%
10%
20%
30%
40%
50%
60%
70%
23/29
0,0%
23,1%
59,0%
2,6%
7,7%
5,1%
0,0%
2,6%
ITA
ITB
ITC
ITD
ITE
ITF
ITG
ITH


RW Artificial
0%
10%
20%
30%
40%
50%
220/610
25,6%
36,1%
32,8%
1,0%
1,6%
0,8%
2,1%
0,0%
ITA
ITB
ITC
ITD
ITE
ITF
ITG
ITH


LW Heavily Modified
-10%
0%
10%
20%
30%
40%
50%
60%
70%
55/212
9,9%
25,9%
2,4%
0,5%
9,0%
24,5%
14,6%
13,2%
ITA
ITB
ITC
ITD
ITE
ITF
ITG
ITH


RW Heavily Modified
0%
10%
20%
30%
40%
50%
26,2%
8,9%
22,8%
1,0%
7,8%
288/1028
28,0%
4,8%
0,6%
ITA
ITB
ITC
ITD
ITE
ITF
ITG
ITH

Reporting WISE informazioni obbligatorie per HMWB

- Stato ecologico (inferiore al buono)/Potenziale ecologico
- Alterazione idromorfologica significativa e permanente (QE2 valutati)
- Tipo di alterazione fisica
- Uso HMWB
- Campo "*reservoir*"

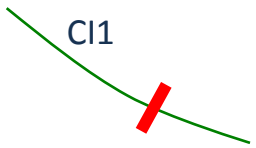
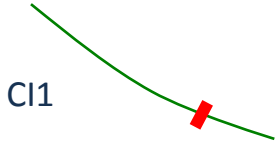
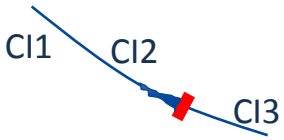
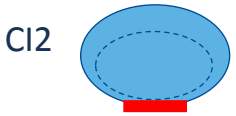
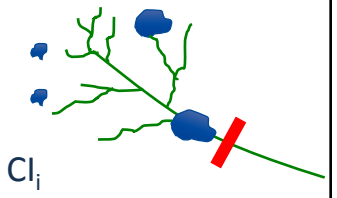
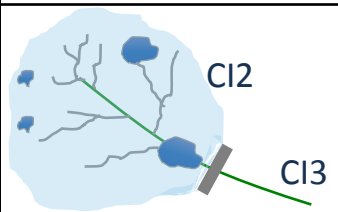
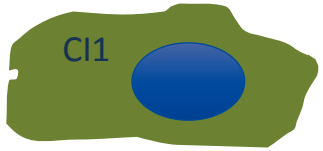
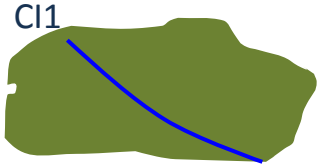
Schema element: naturalAWBHMWB
Field type / facets / relationship: NaturalCode_Enum:
- Natural
- Artificial
- Heavily Modified

Schema element: reservoir
Field type / facets / relationship: YesNoUnclearReservoir_Enum:
- Yes, it is a reservoir and the water body was originally a river
- No, it is a reservoir but the water body was originally a lake
- Unclear, it is a reservoir but originally included chained rivers and lakes
- The water body is not a reservoir

Guidance on completion of schema element: Conditional. For heavily modified river or lake water bodies,...

23% non compilato

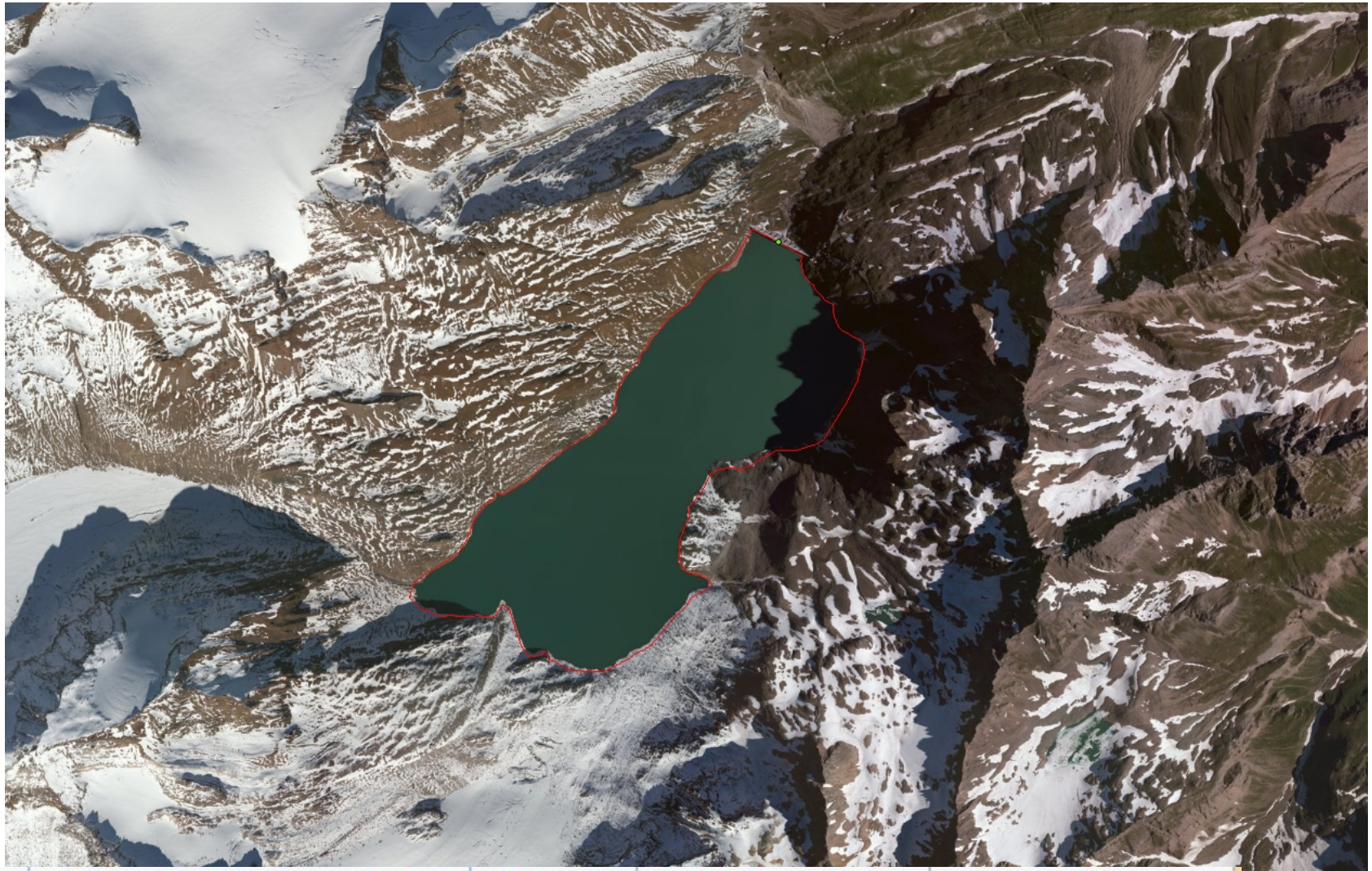
WFD: cosa/come definire

pre	*post*	*da/a*	*DM 131/08*	*Def WFD*	*Def WFD WISE*
		CI2 è CIFM Da CI fiume a CI lago	CI2 “invaso”	HMWB RW (LW)	Yes, it is a reservoir and the water body was originally a river
		CI2 è CIFM Da CI fiume a CI fiume		HMWB RW	The water body is not a reservoir
		CI2 è CIFM Da CI lago a CI lago	CI2 “invaso”	HMWB LW	No, it is a reservoir but the water body was originally a lake
		CI2 è CIFM Da Σ CI_i lago a CI lago	CI2 “invaso”	HMWB LW	Unclear, it is a reservoir but originally included chained rivers and lakes
		CI1 è CIA Creazione lago ex novo	CI2 “invaso”	CIA LW	
		CI1 è CIA Creazione canale ex novo		CIA RW	

Esempi di LW Artificial - Busin inferiore

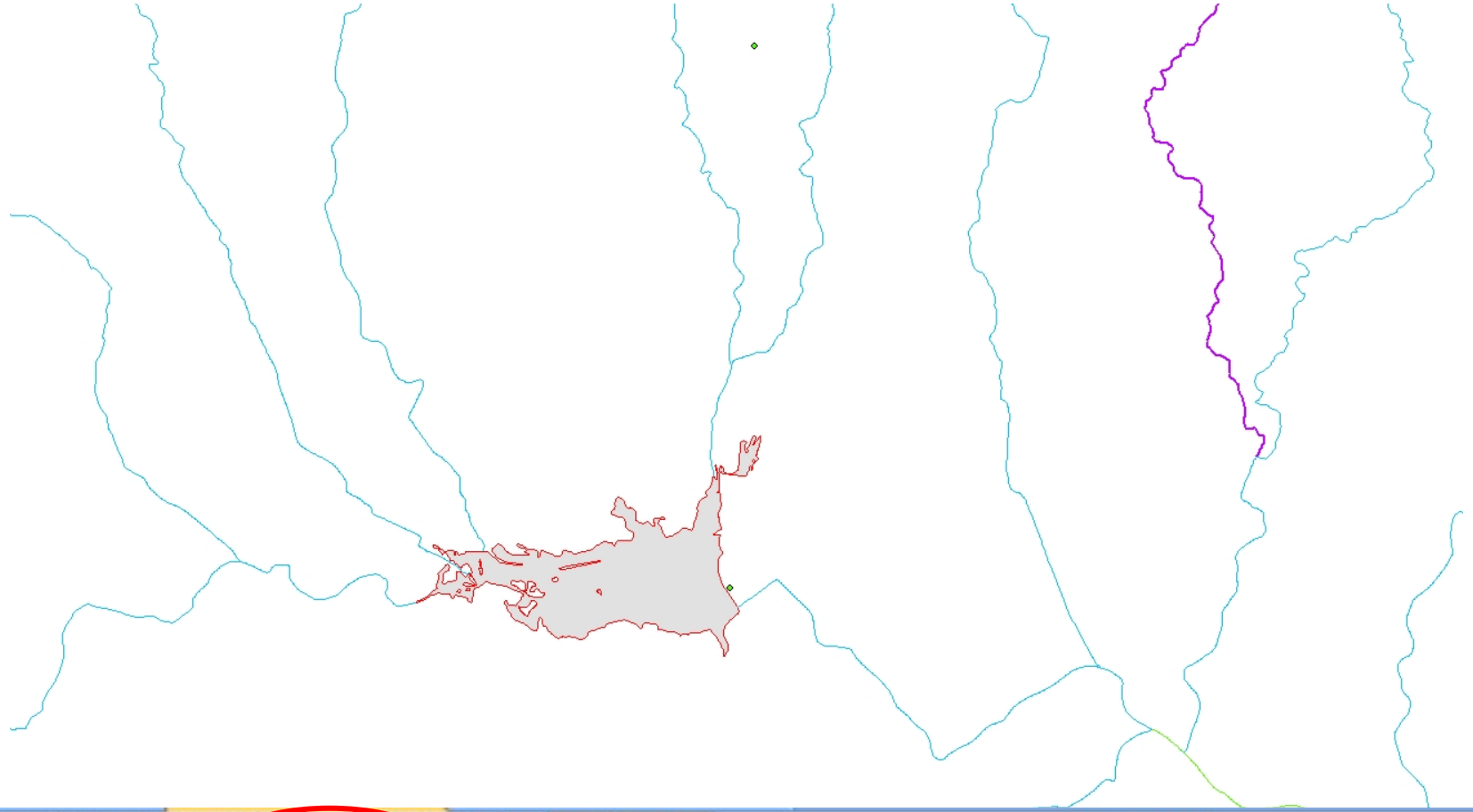
euSurfaceWaterI	euRBDC	surfaceWaterBodyName	surfaceW	naturalAWBHMW	reservoir
IT01AL-2_020PI	ITB	Busin inferiore	LW	Artificial	

Esempi di LW Artificial - Diga del Sabbione



euSurfaceWaterI	euRBDC	surfaceWaterBodyName	surfaceW	naturalAWBHMW	reservoir
IT01AL-2_016PI	ITB	Del Sabbione	LW	Artificial	

Esempio LW artificial – Invaso del Bilancino



euRBDCode	euSurfaceWaterBodyCode	naturalAWBHMV	surface\	reservoir
ITC	IT09N002AR002IN	Artificial	LW	Yes, it is a reservoir and the water body was originally a river
*				

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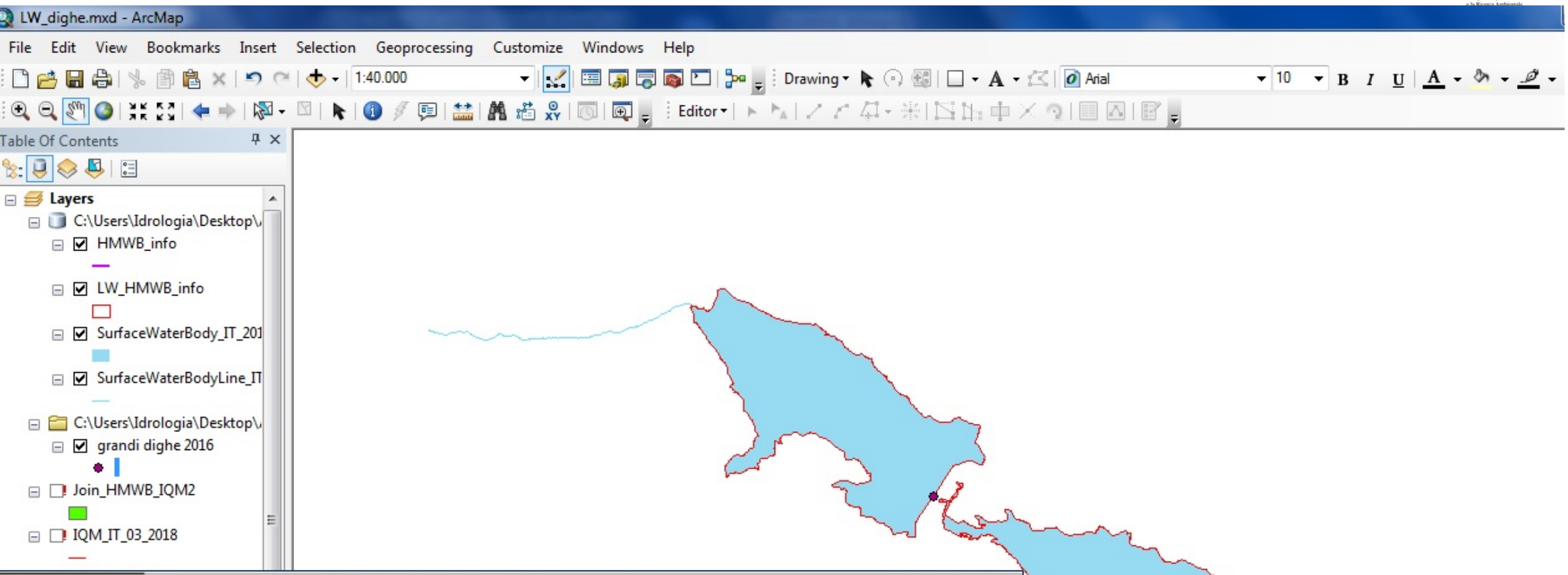
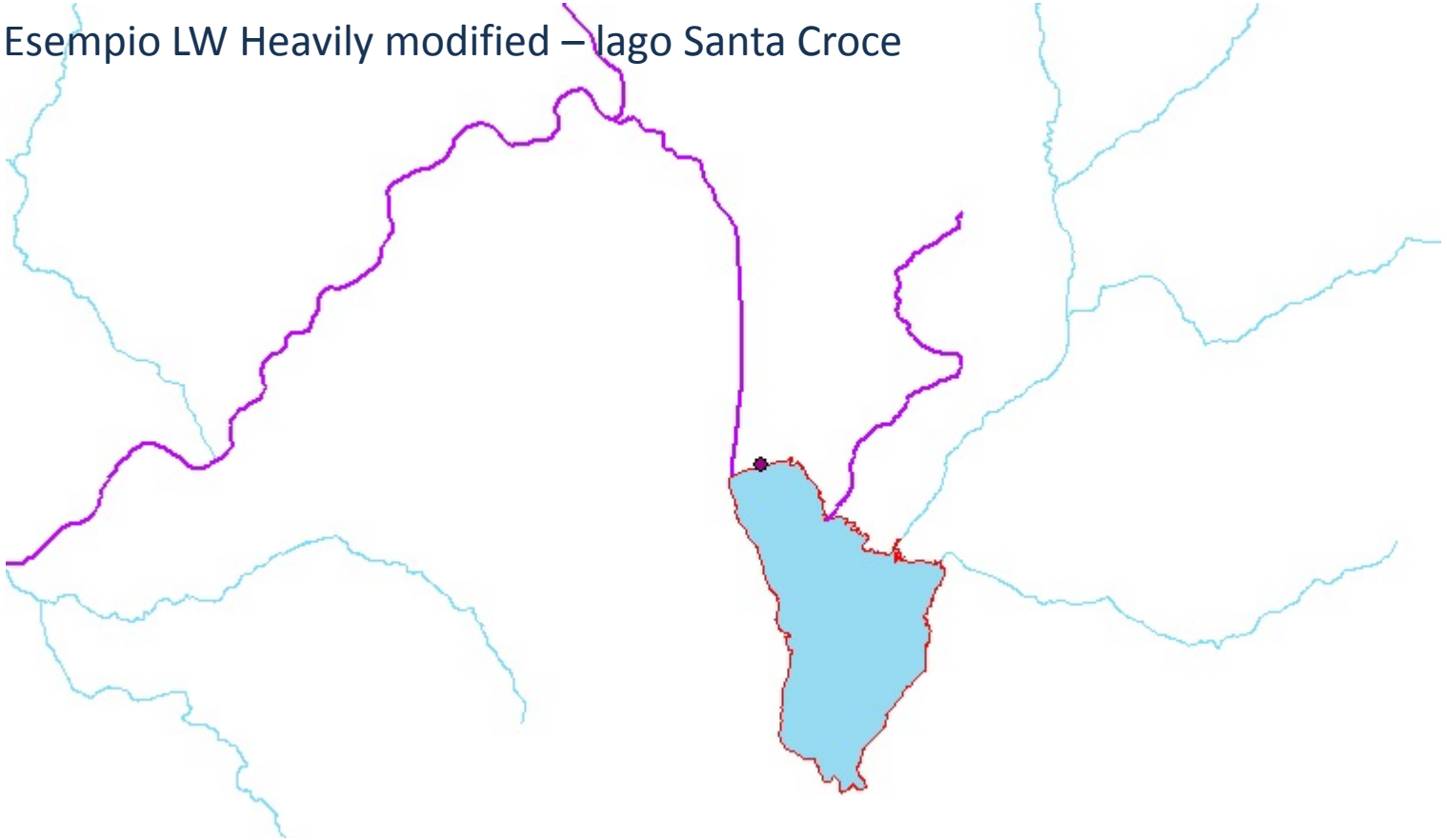
Esempio LW Heavily modified – Lago di San Giacomo e lago di Cancano



euSurfaceWaterBodyCode	euRBDCode	surfaceWaterBodyName	surfaceWaterBodyCategory	naturalAWB HMWB	reservoir	surfaceWaterBodyTypeCode
IT03POADSGLA1LO	ITB	San Giacomo di Fraele (lago)	LW	Heavily Modified	The water body is not a reservoir	AL-9
IT03POADCNLA1LO	ITB	Cancano (lago)	LW	Heavily Modified	The water body is not a reservoir	AL-9

Esempio LW Heavily modified – lago Santa Croce



IT_HMWB_AWB

euSurfaceWaterBoc	euRBDCode	surfaceWaterBodyName	surfaceWate	naturalAWBHMWB	reservoir	surfaceWate
ITALW06PI0600VN	ITA	LAGO DI SANTA CROCE	LW	Heavily Modified	The water body is not a reservoir	AL-5
ITALW02AD1600BZ	ITA	Bacino di Gioveretto	LW	Heavily Modified	The water body is not a reservoir	AL-10
ITALW02AD1500BZ	ITA	Bacino di Vernago	LW	Heavily Modified	The water body is not a reservoir	AL-10
ITALW02AD1400BZ	ITA	Bacino di Zoccolo	LW	Heavily Modified	The water body is not a reservoir	AL-10
ITALW02AD0200BZ	ITA	Bacino di Resia	LW	Heavily Modified	The water body is not a reservoir	AL-10
ITALW02AD0100BZ	ITA	Lago di S. Valentino alla Muta	LW	Heavily Modified	The water body is not a reservoir	AL-8

Reporting WISE informazioni obbligatorie per HMWB

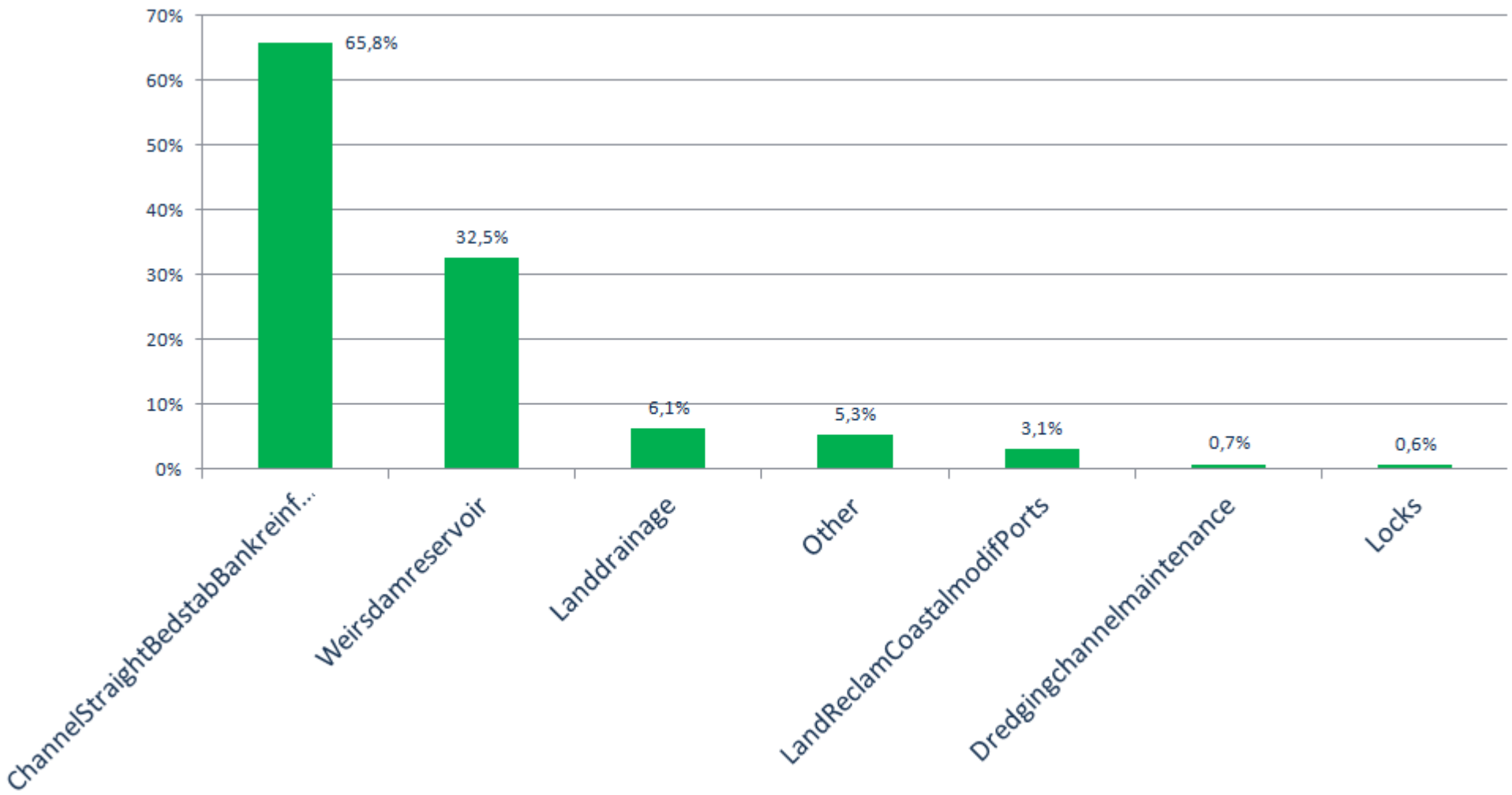
- Stato ecologico (inferiore al buono)/Potenziale ecologico
- Alterazione idromorfologica significativa e permanente (QE2 valutati)
- Tipo di alterazione fisica
- Uso HMWB
- Campo *"reservoir"*

Schema element: hmwbPhysicalAlteration
Field type / facets / relationship: HMWBPhysicalAlteration_Enum:

- Locks
- Weirs / dam / reservoir
- Channelisation / straightening / bed stabilisation / bank reinforcement
- Dredging / channel maintenance
- [...]

Guidance on completion of schema element: Conditional. For HMWBs only, report the physical alteration that has resulted in the designation of the surface water body as a HMWB. In the context of designation, physical alterations mean any significant alterations that have resulted in substantial changes to the hydromorphology of a surface water body such that the surface water body is substantially changed in character. In general, these hydromorphological characteristics are long-term and alter both the morphological and hydrological characteristics.

HMWB Physical Alteration



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Reporting WISE informazioni obbligatorie per HMWB

- Stato ecologico (inferiore al buono)/Potenziale ecologico
- Alterazione idromorfologica significativa e permanente (QE2 valutati)
- Tipo di alterazione fisica
- Uso HMWB
- Campo"*reservoir*"

Schema element: hmwbWaterUse
Field type / facets / relationship: HMWBWaterUse_Enum:

- Agriculture - land drainage
- Agriculture - irrigation
- Energy – hydropower
- [...]

Guidance on completion of schema element: Conditional. For HMWBs only, report the water use for which it has been designated.

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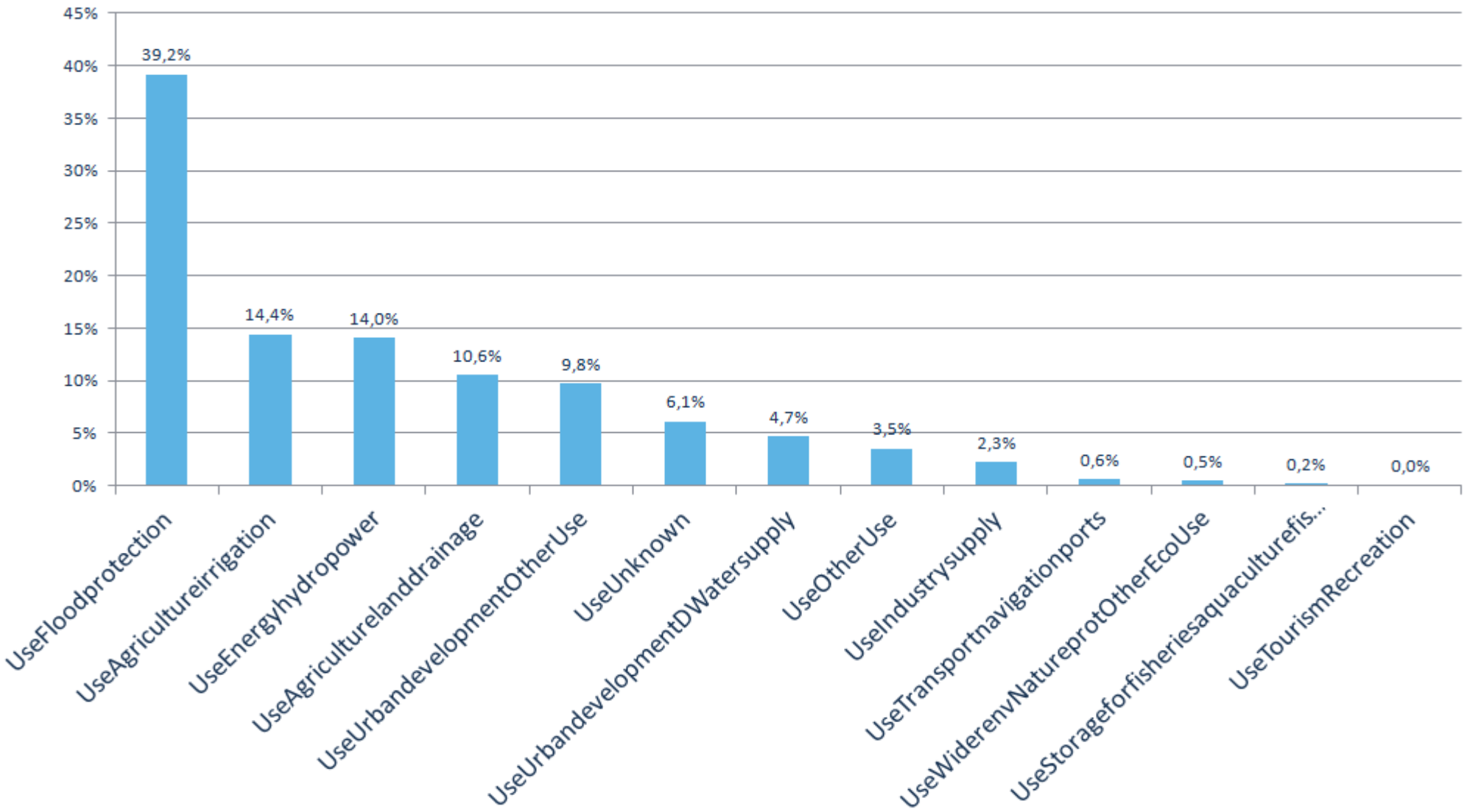
HMWB Water Use



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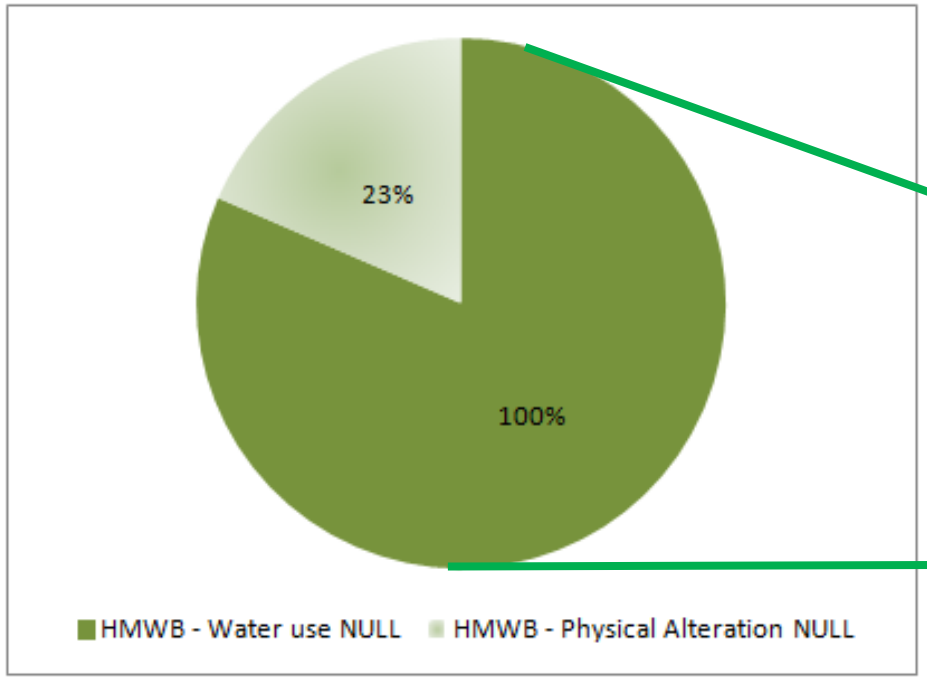
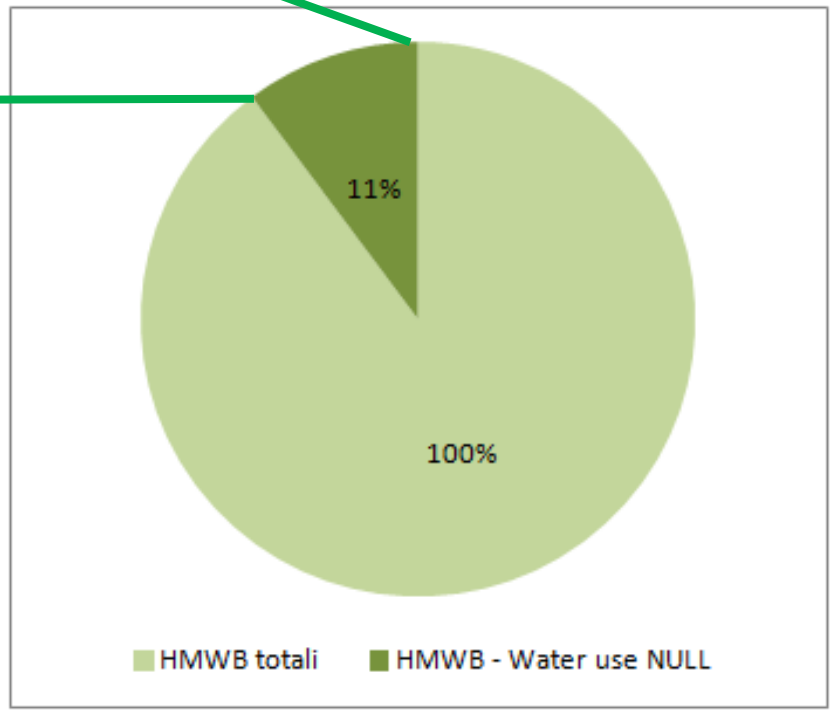
11% degli HMWB non riporta il WATER USE
e di questo 11% il 23% non riporta neanche la PHYSICAL ALTERATION





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HMWB: coerenza tra *Significant Pressure Type - Physical Alteration – Water Use*

Press421_errati | Press422_errati

swSignificantPressureType	PhWeirsdamreservoir	PhLocks	euRBDCode	ELAB_HMWB_	ELAB_HMWI	UseEnergyhydropower
4.2.1 - Dams, barriers and locks - Hydropower			ITD	IT09R019SE134FI	RW	
4.2.1 - Dams, barriers and locks - Hydropower			ITD	IT09R019SE134FI	RW	
4.2.1 - Dams, barriers and locks - Hydropower	1		ITB	IT07RW2065LI	RW	
4.2.1 - Dams, barriers and locks - Hydropower	1		ITB	IT07RW2067LI	RW	
4.2.1 - Dams, barriers and locks - Hydropower	1		ITC	IT09CI_R000OM6	RW	
4.2.1 - Dams, barriers and locks - Hydropower	1		ITC	IT09CI_N002AR0	RW	
4.2.1 - Dams, barriers and locks - Hydropower	1		ITC	IT09CI_N002AR1	RW	
4.2.1 - Dams, barriers and locks - Hydropower			ITE	IT10N010012607	RW	1
4.2.1 - Dams, barriers and locks - Hydropower			ITE	IT10N0100126CF	RW	1
4.2.1 - Dams, barriers and locks - Hydropower			ITE	IT10N01004AL	LW	1
4.2.1 - Dams, barriers and locks - Hydropower			ITE	IT10N01004BL	LW	1
4.2.1 - Dams, barriers and locks - Hydropower	1		ITF	ITF015LWLAGOD	LW	
4.2.1 - Dams, barriers and locks - Hydropower	1		ITF	ITF015LWLAGOS	LW	

Record: 1 di 13 | Nessun filtro | Cerca

HMWB: coerenza tra *Significant Pressure Type - Physical Alteration – Water Use*

Press422_errati

swSignificantPressureType	PhWeirsdamreservoir	PhLocks	euRBDCode	ELAB_HMWB_AWB_euSurfa	ELAB_HI	UseFloodprotection
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW08LI04100010FR	RW	1
4.2.2 - Dams, barriers and locks - Flood protection	1		ITE	IT00N010_TEVERE_11SS5T_01	RW	
4.2.2 - Dams, barriers and locks - Flood protection	1		ITE	IT12N010_TEVERE_11SS5T_02	RW	
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW12SL00600010FR	RW	1
4.2.2 - Dams, barriers and locks - Flood protection	1		ITA	ITARW13IS00300020FR	RW	
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW13IS02100020FR	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW13IS02300020FR	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW13IS02500010FR	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW13IS02500020FR	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW02AD00900010VN	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW02AD02600010VN	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW02AD03300010VN	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW03BB00600050VN	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW03BB00600060VN	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW03BB05200030VN	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW03BB10200010VN	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW06PI10100010VN	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW08LI00300030VN	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW08LI00300040VN	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW08LI01200010VN	RW	1
4.2.2 - Dams, barriers and locks - Flood protection			ITA	ITARW08LI04900030VN	RW	1
4.2.2 - Dams, barriers and locks - Flood protection	1		ITC	IT09CI_N002AR198FI	RW	
4.2.2 - Dams, barriers and locks - Flood protection			ITC	IT09CI_R000TN138FI	RW	1

Record: 1 di 35 Nessun filtro Cerca

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HMWB: coerenza tra *Significant Pressure Type - Physical Alteration – Water Use*

Press423_errati

swSignificantPressureType	PhWeirsDamReservoir	PhLocks	euRBDCode	HMWB_AWB_euSurf	HMW	UseUrbandevelopDrinkingWatersupply
4.2.3 - Dams, barriers and locks - Drinking water	1		ITF	ITI027_ME_4	LW	
4.2.3 - Dams, barriers and locks - Drinking water	1		ITB	IT07RW2067LI	RW	
4.2.3 - Dams, barriers and locks - Drinking water	1		ITF	IT18L_AMPOLLINO1	LW	
4.2.3 - Dams, barriers and locks - Drinking water	1		ITF	IT18L_ANGITOLA1	LW	
4.2.3 - Dams, barriers and locks - Drinking water	1		ITF	IT18L_ARVO1	LW	
4.2.3 - Dams, barriers and locks - Drinking water	1		ITF	IT18L_CECITA1	LW	
4.2.3 - Dams, barriers and locks - Drinking water	1		ITH	IT19RW03304	RW	
4.2.3 - Dams, barriers and locks - Drinking water	1		ITH	IT19RW08201	RW	

Record: 1 di 8 Nessun filtro Cerca

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HMWB: coerenza tra *Significant Pressure Type - Physical Alteration – Water Use*

Press423_errati | Press424_errati

swSignificantPressureType	PhWeirsdamreservc	PhLocks	euRBDCode	ELAB_HMWB_AWB_euSurfaceWaterBodyCode	ELAB_HM	UseAgricultureIrrigation
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITI027_ME_4	LW	
4.2.4 - Dams, barriers and locks - Irrigation			ITE	IT09CI_N010TE136FI3	RW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	IT18L_ANGITOLA1	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	IT18L_CECITA1	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	IT18L_ESARO1	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	IT18L_PASSANTE1	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	IT18L_TARSIA1	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITF015LWLAGODELCARMINE	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITF015LWLAGODICAMPOLATTARO	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITF015LWLAGODICONZA	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITF015LWLAGODIGALLO	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITF015LWLAGODIMACCHIONI	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITF015LWLAGODINOCELLITO	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITF015LWLAGODIPONTEANNIBALE	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITF015LWLAGODISGIOVANNI	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITF015LWLAGODISUIO	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITF015LWLAGOPDELLAROCCA	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITF015LWLAGOSPIETRO	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITF017_LW-ME-1-ORTODELTUFO	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITF017_LW-ME-3-MUROLUCANO	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITF017_LW-ME-3-PANTANODIPIGNOLA	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITI-I012-16-03ME-2	LW	
4.2.4 - Dams, barriers and locks - Irrigation	1		ITF	ITI-I020-16-01ME-4	LW	

Record: 1 di 30 | Nessun filtro | Cerca

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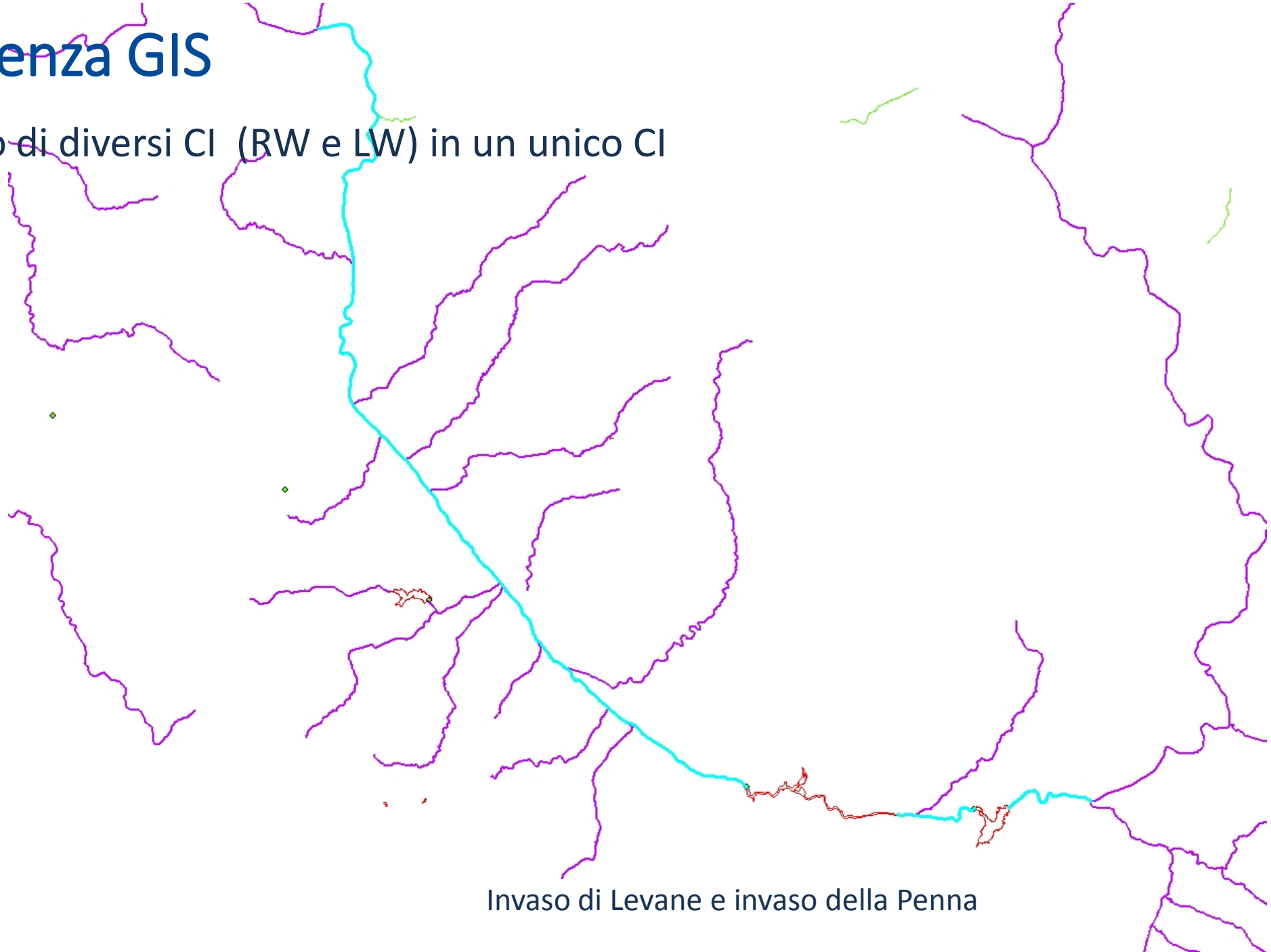
Analisi coerenza GIS

Raggruppamento di diversi CI (RW e LW) in un unico CI



Invaso di Levane e invaso della Penna

CReIAMO PA


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

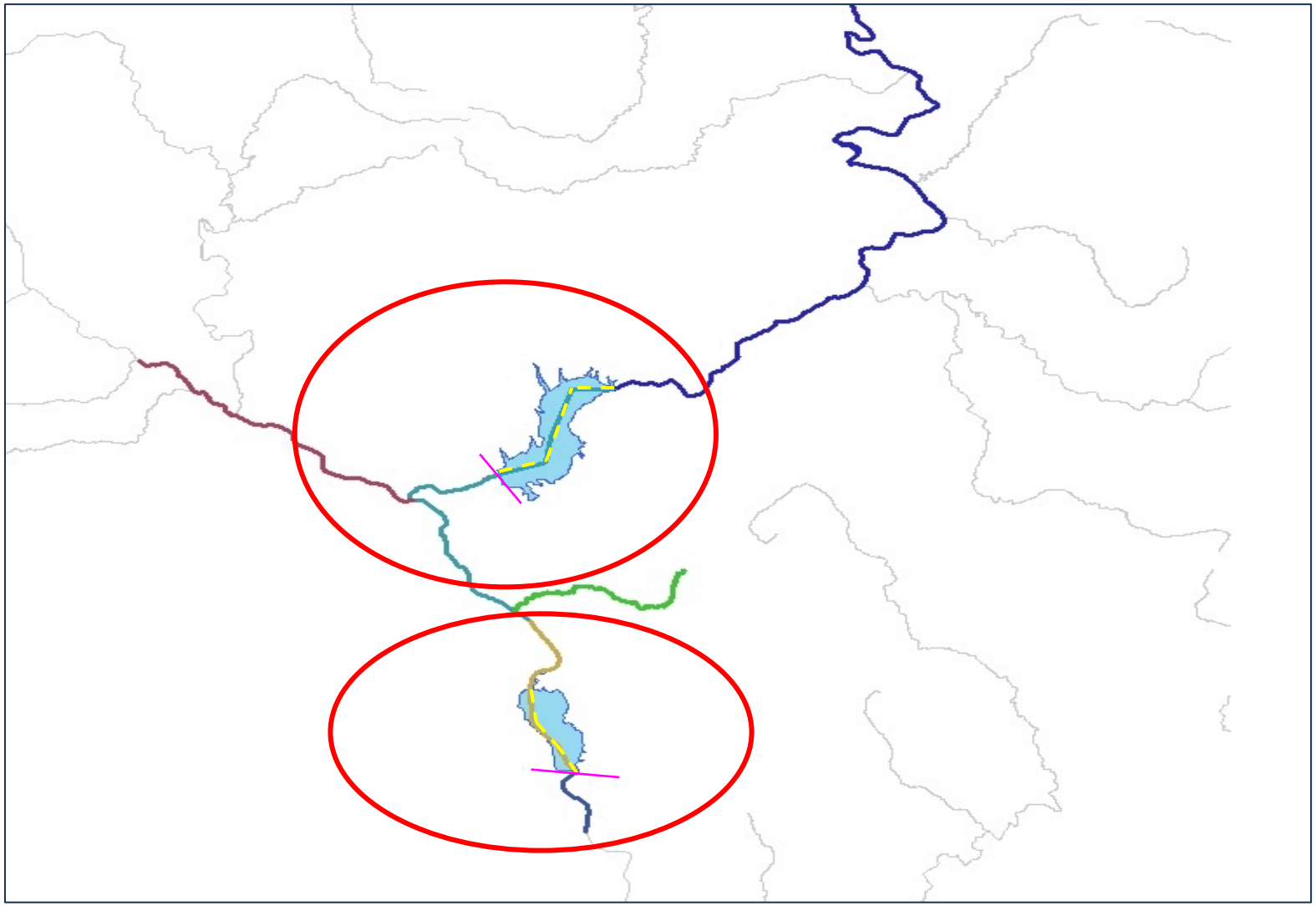
CReIAMO PA

ISPRA
Istituto Superiore per la Protezione e la Ricerca Ambientale

Sistema Nazionale per la Protezione dell'Ambiente

SWB – Fiume Tevere

CReIAMO PA



Problemi di identificazione o di rappresentazione?

Lago di Corbara

(reservoir per sbarramento fiume Tevere)

Lago di Alviano

(reservoir per sbarramento fiume Tevere)

Alviano?

Reporting WISE informazioni obbligatorie per HMWB

- Stato ecologico (inferiore al buono)/Potenziale ecologico
- Alterazione idromorfologica significativa e permanente (QE2 valutati)
- Tipo di alterazione fisica
- Uso HMWB
- Campo *"reservoir"*

~~Unknown + monitoring~~

Monitored but not used

Schema element: qeMonitoringResults

Field type / facets: MonitoringResults_Enum: Monitoring, Grouping, Expert judgement

Properties: maxOccurs = 1 minOccurs = 0

Guidance on completion of schema element: Conditional. If the status is reported, indicate on what basis the status classification was derived:

'Monitoring': means the QE was monitored in this surface water body and the results are used as a basis for classification.

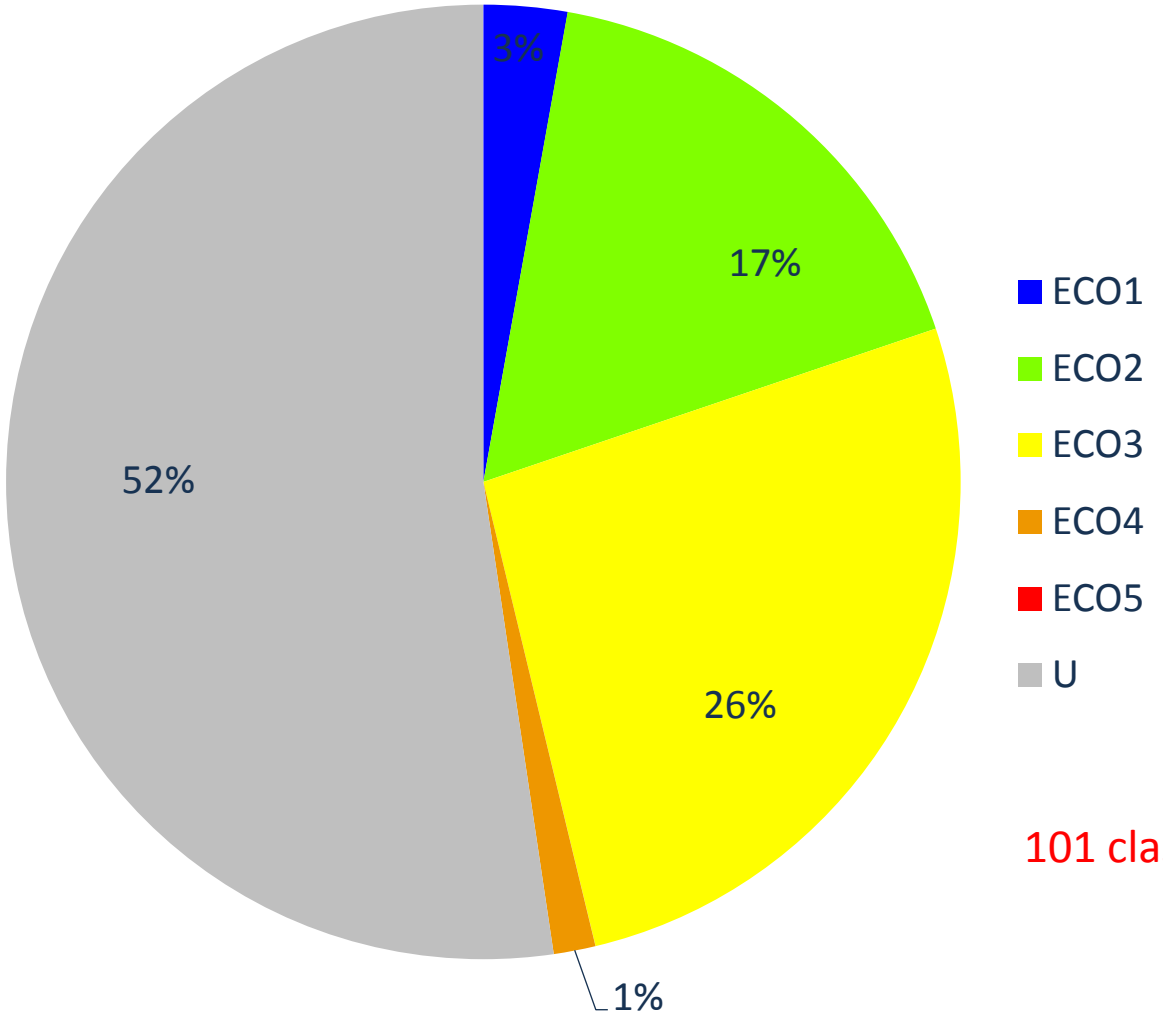
'Grouping': the QE was not monitored in this surface water body. Monitoring from other similar water bodies was used as a basis for classification, as described in the methodology for classification.

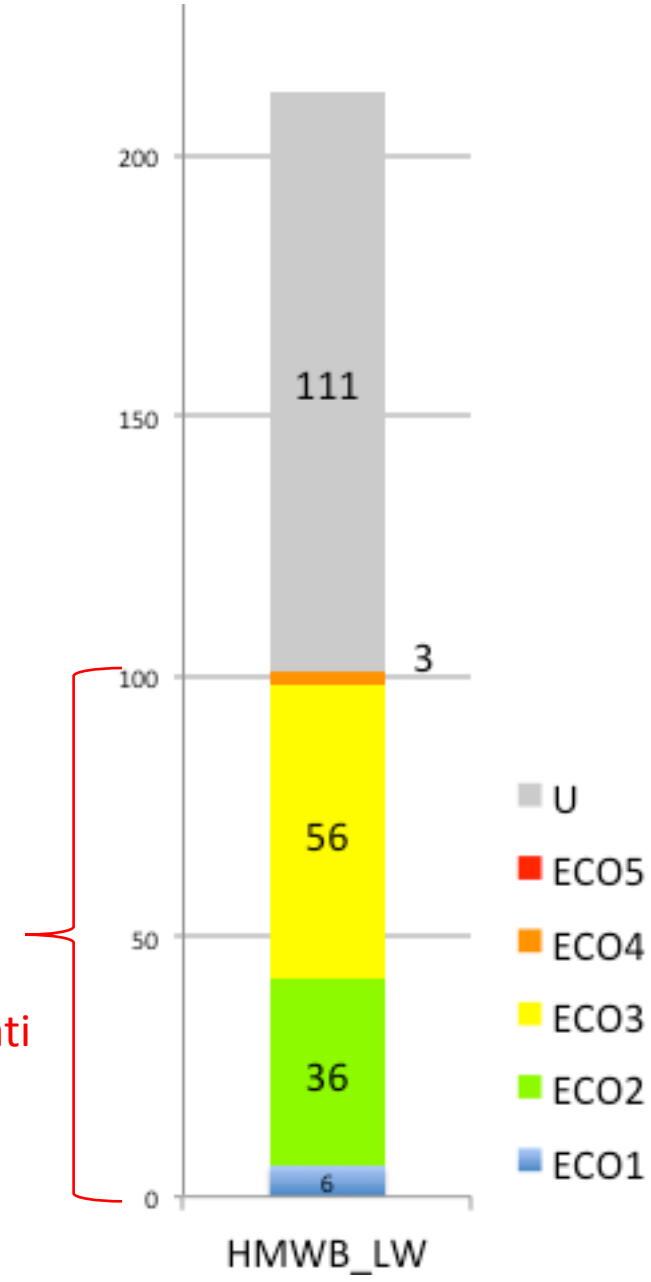
'Expert judgement': the QE was not monitored in this surface water body. Results from other similar water bodies were not used. The QE status is mainly based on expert judgement.

Quality checks: Conditional check: Report if element qeStatusOrPotentialValue is '1', '2', '3', '4' or '5' (i.e. not 'MonitoredButNotUsed', 'Unknown', 'Not applicable').

If there is no monitoring information for this QE and/or status is unknown then select ' Unknown' from the enumeration list. If the QE is not applicable in the surface water category or type then select option 'Not applicable' from the enumeration list.

HMWB_LW





101 classificati

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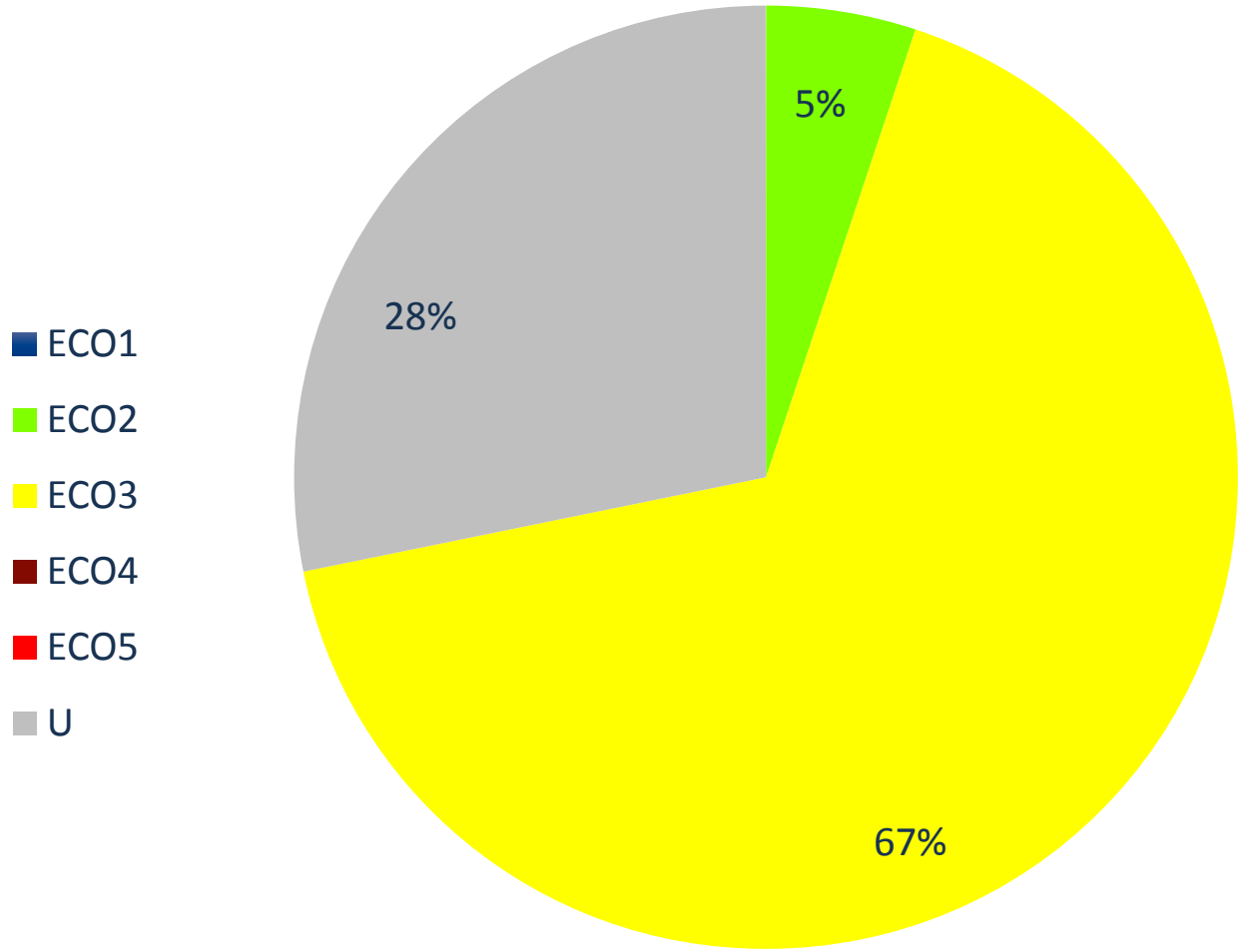
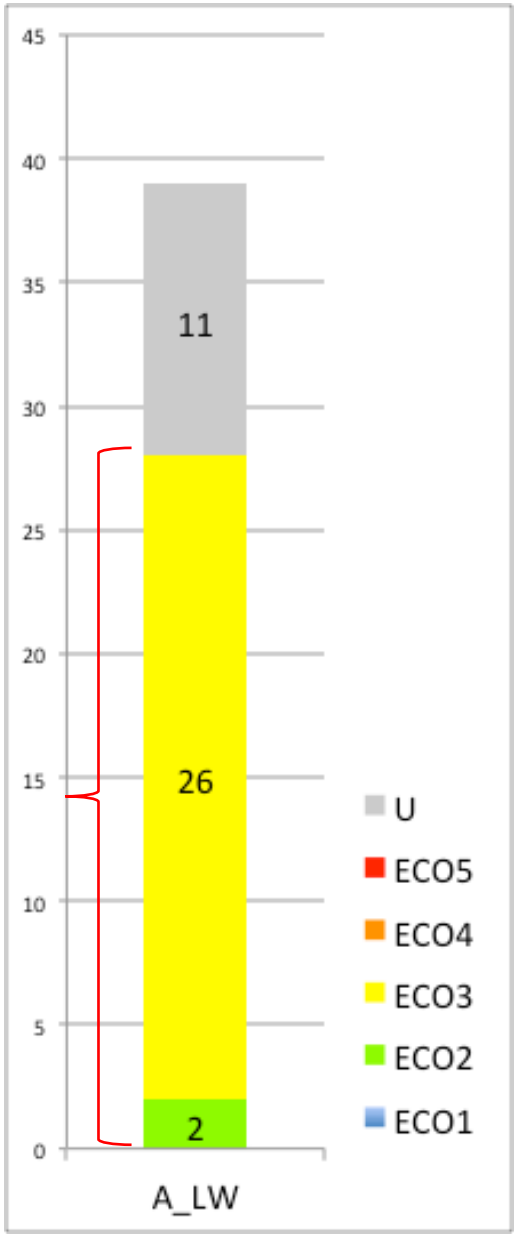
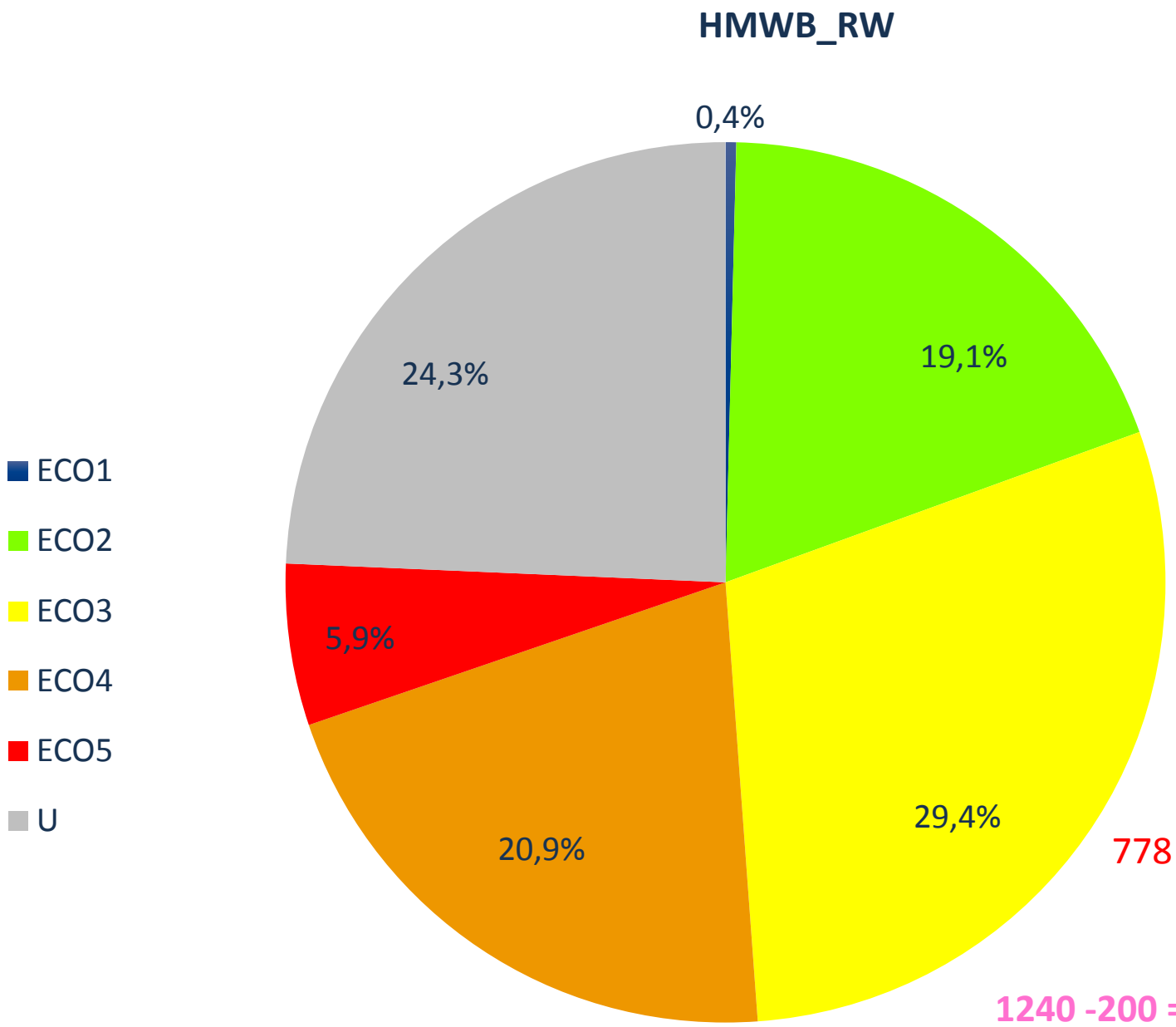
AWB_LW

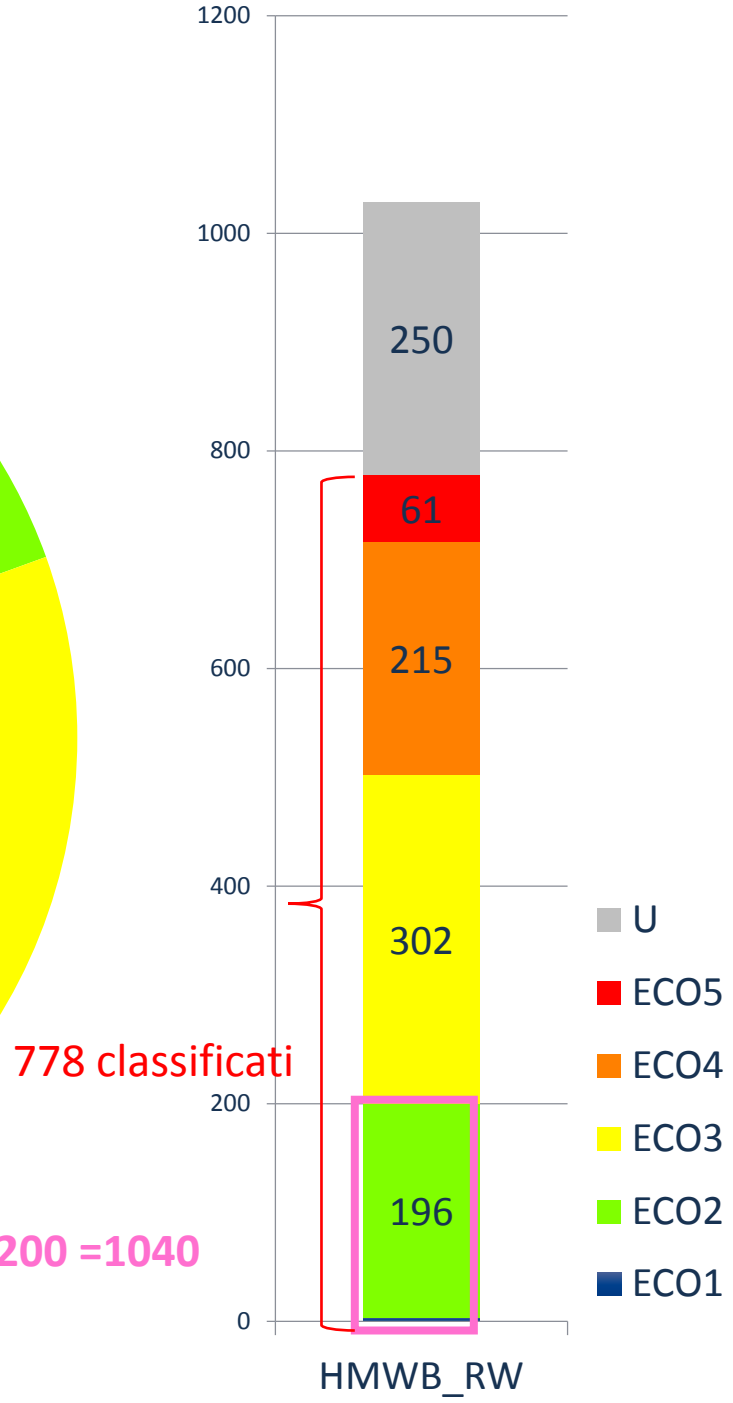


28classificati

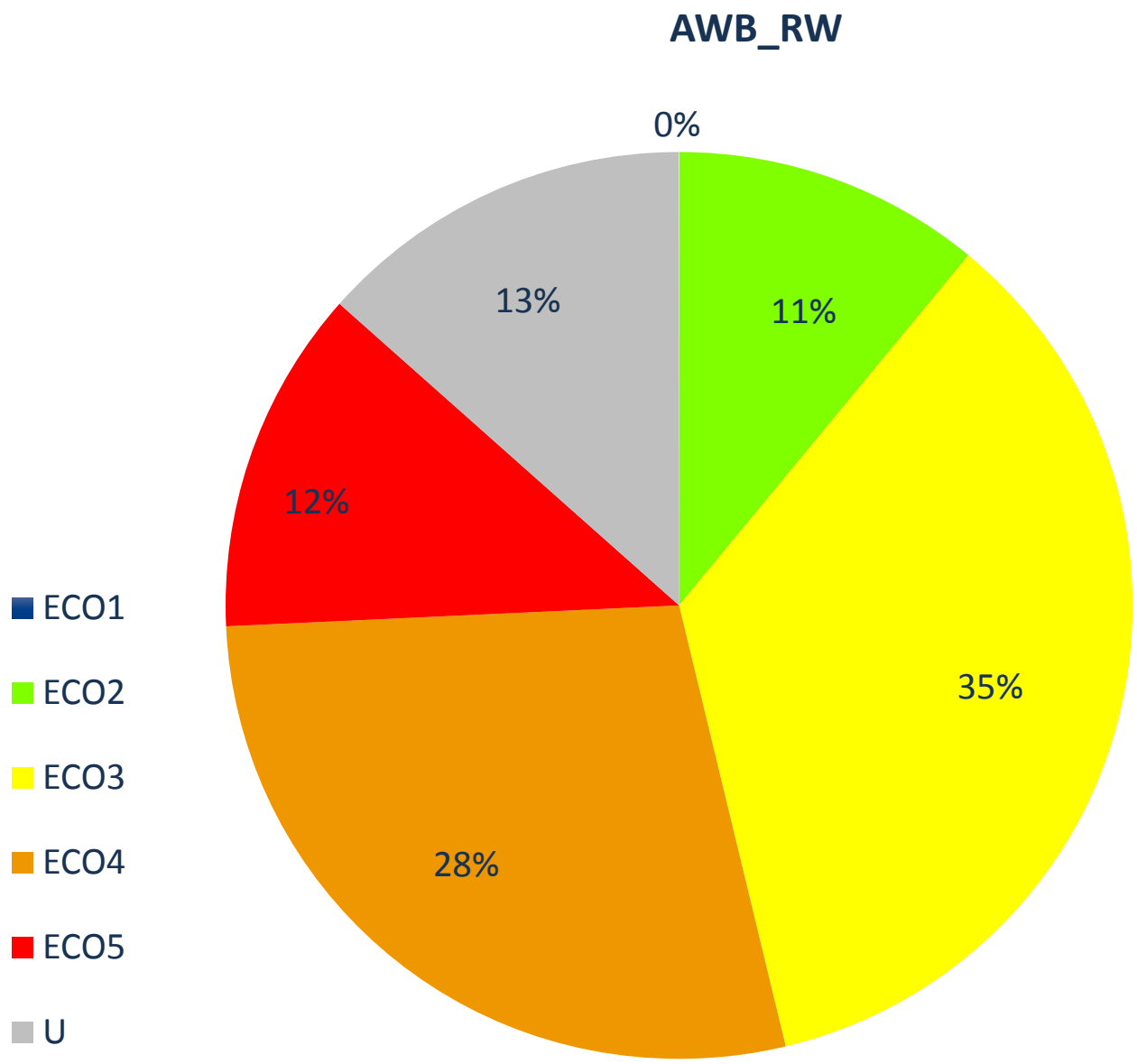


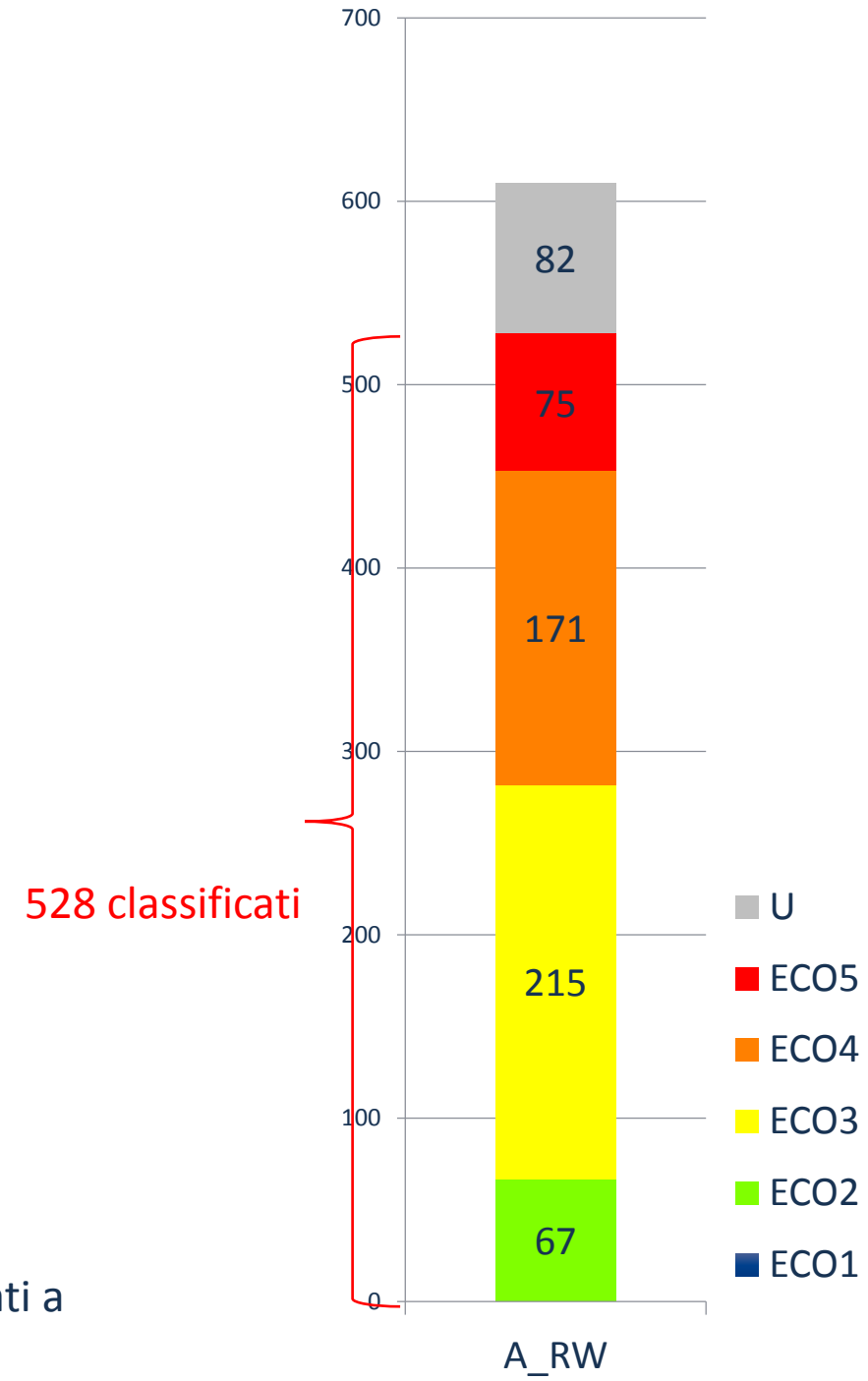
CReIAMO PA


HMWB_RW
0,4%
19,1%
29,4%
20,9%
5,9%
24,3%
ECO1
ECO2
ECO3
ECO4
ECO5
U


1200
1000
800
600
400
200
0
250
61
215
302
196
778 classificati
1240 -200 =1040
HMWB_RW
U
ECO5
ECO4
ECO3
ECO2
ECO1

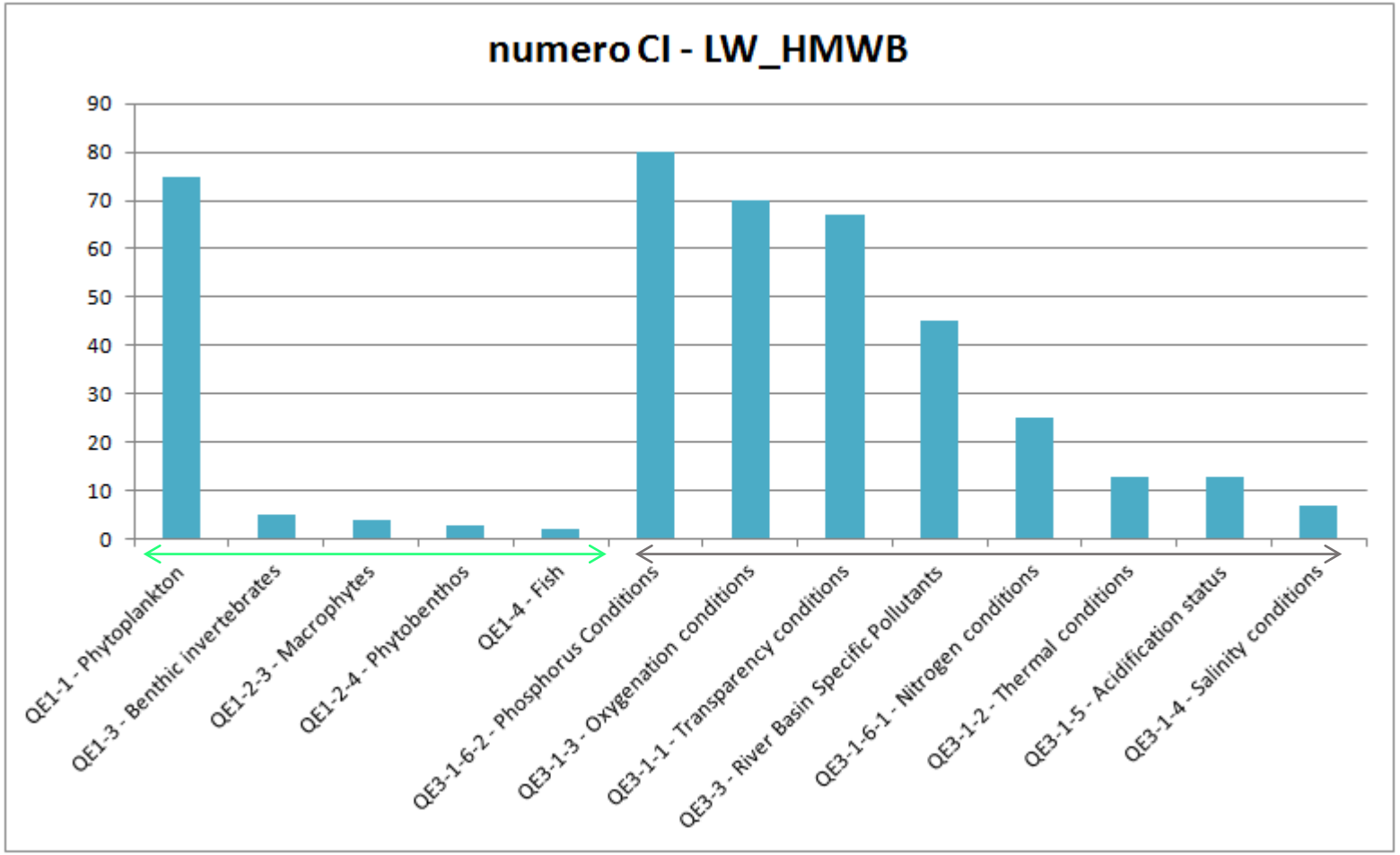
CReIAMO PA





Su 610 CIA RW 67 sono in buono stato quindi potrebbero essere equiparati a naturali?

EQ monitorati nei laghi HMWB e AWB

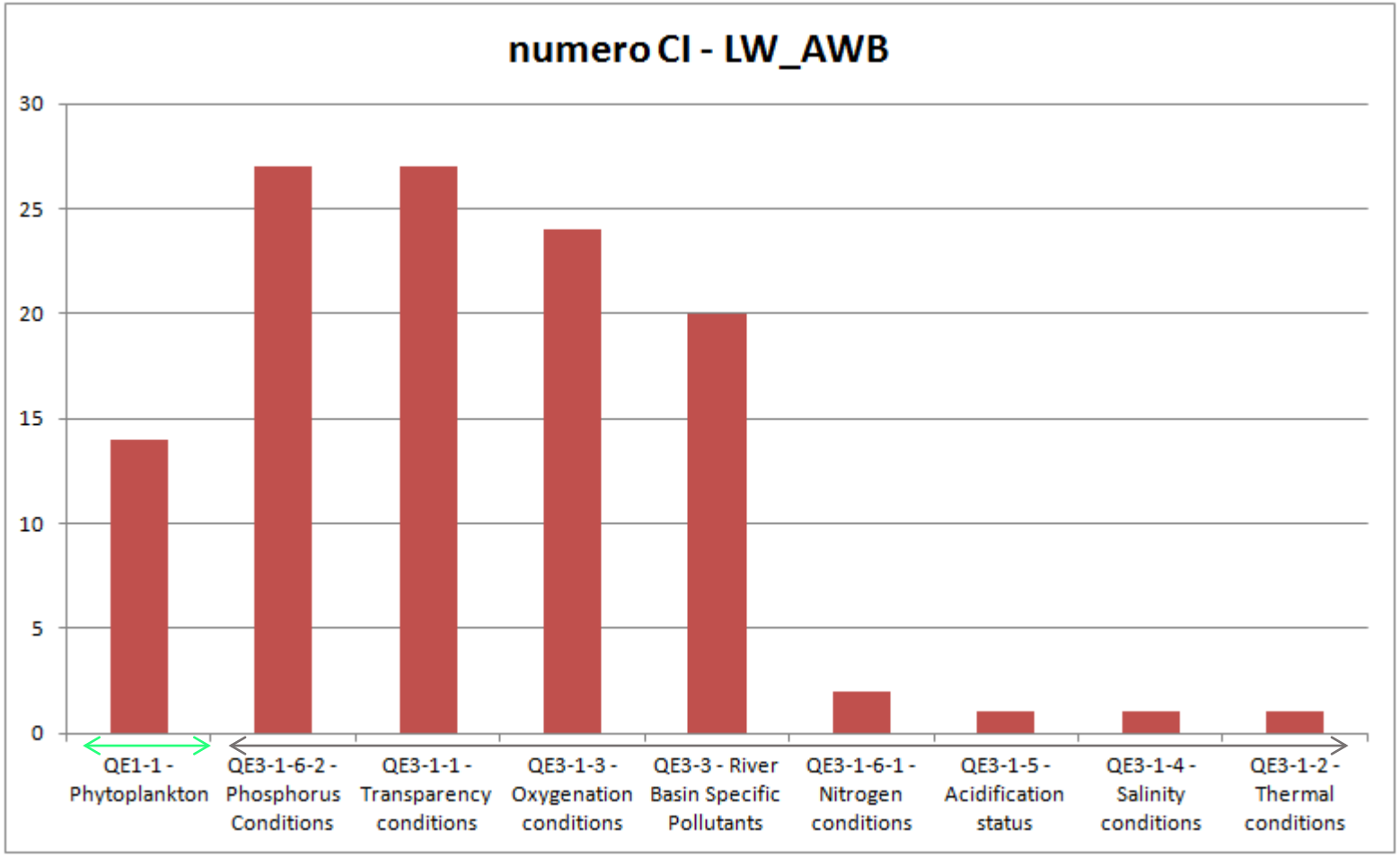


	HMWB	AWB
Tipizzati	212	39
Totali	212	39
classif	*101*	*28*

CReIAMO PA

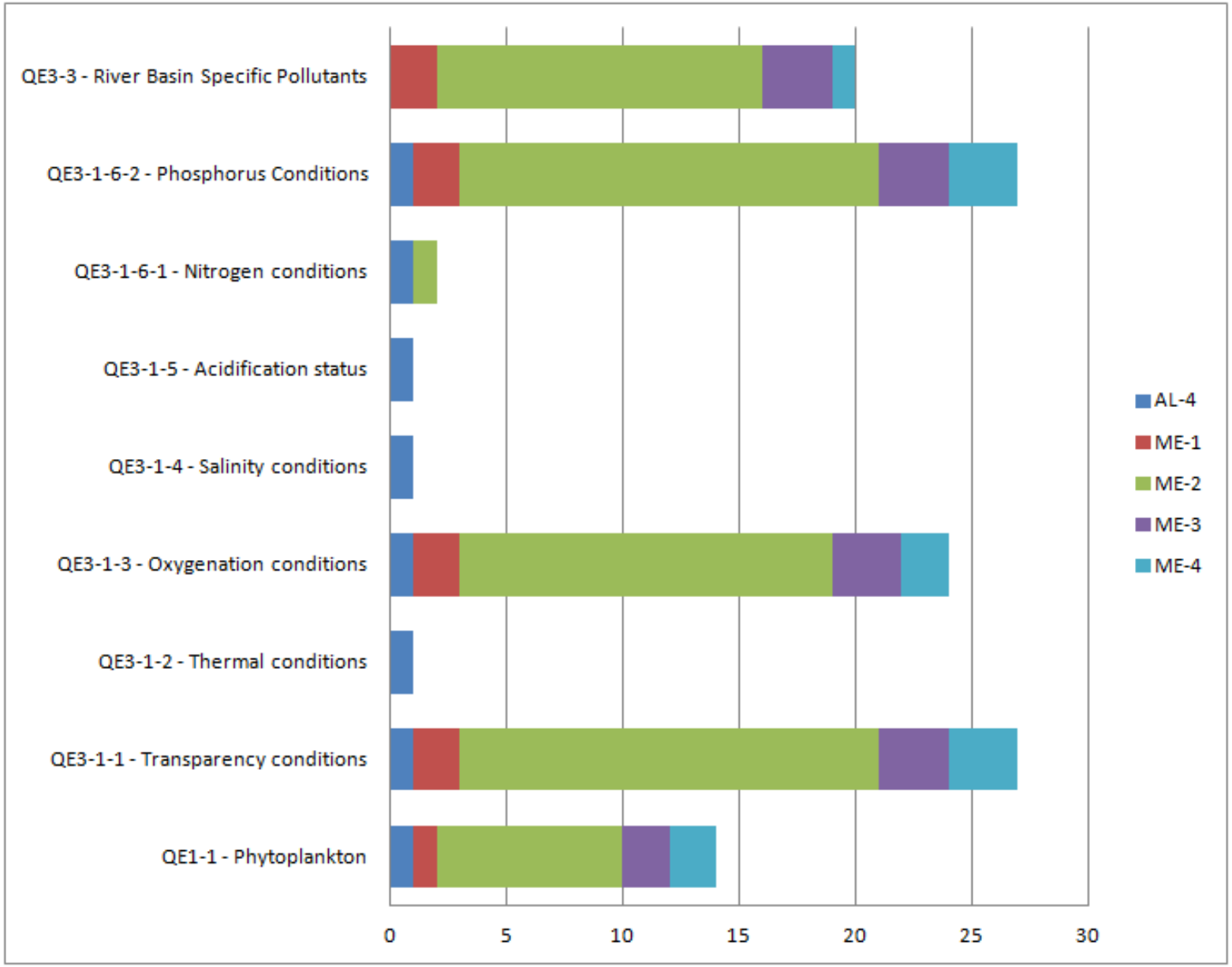
EQ monitorati nei laghi HMWB e AWB

	HMWB	AWB
Tipizzati	212	39
Totali	212	39
classif	*101*	*28*

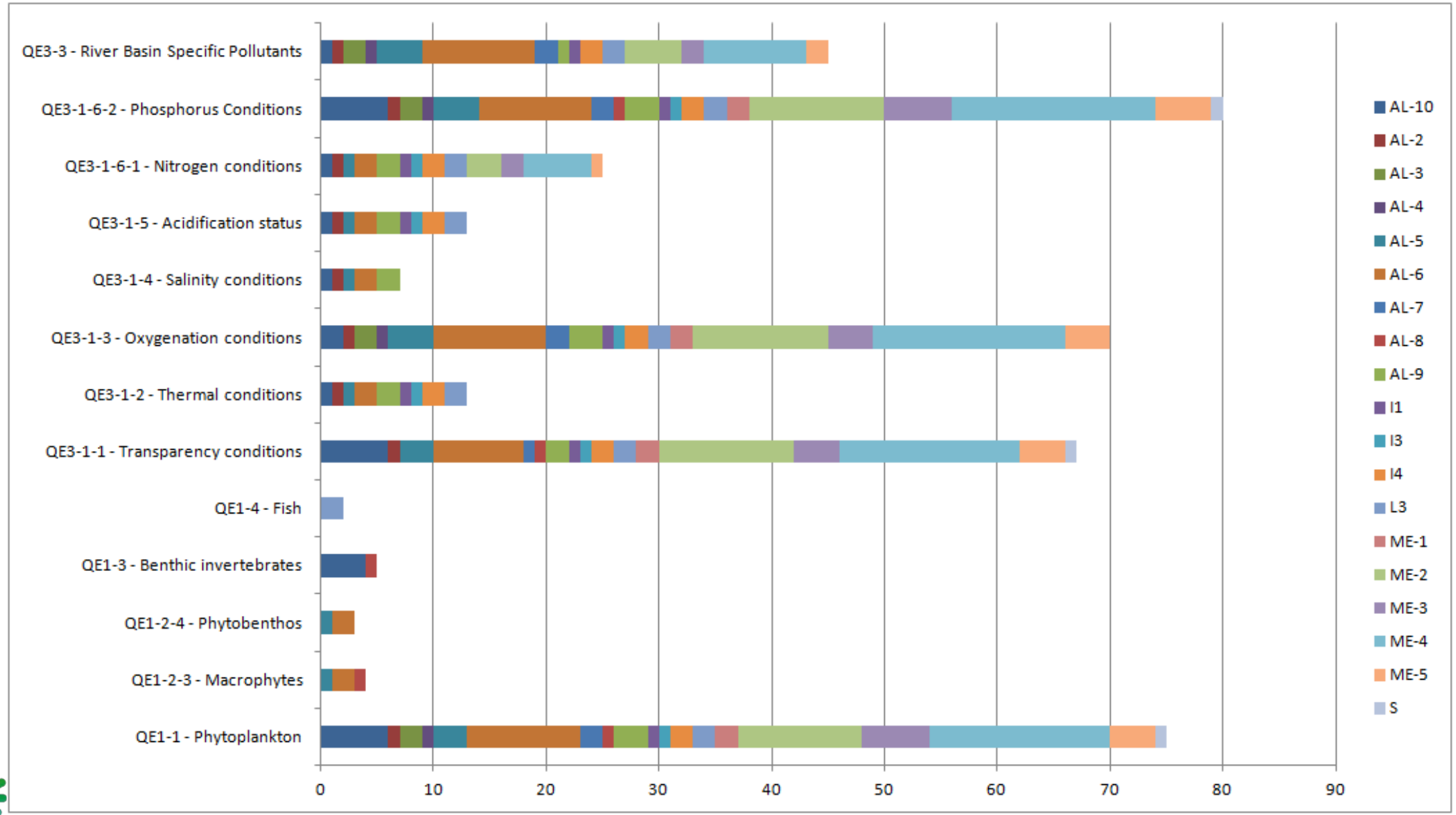


CReIAMO PA

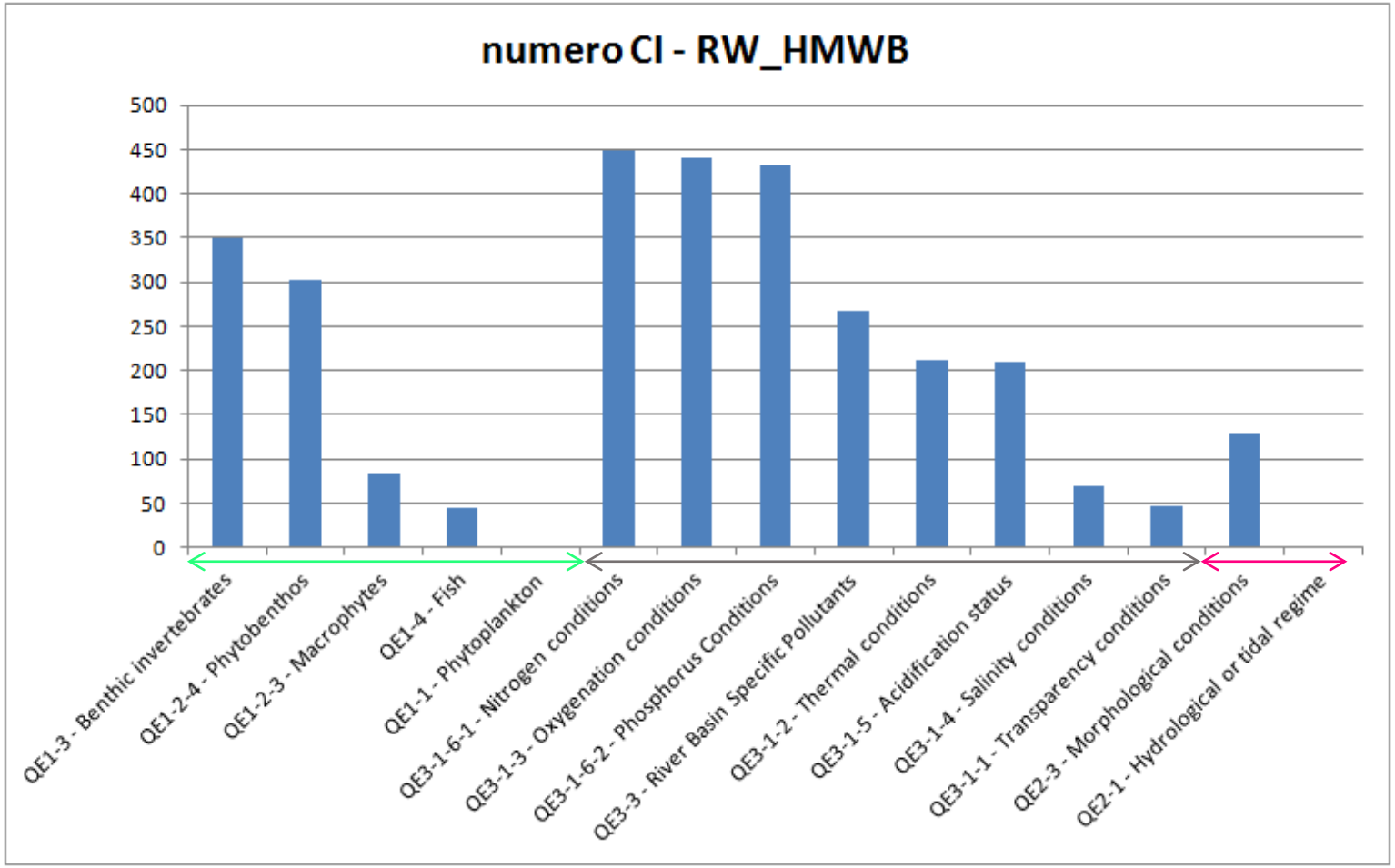
EQ monitorati nei laghi AWB per tipi



EQ monitorati nei laghi HMWB per tipi



EQ monitorati nei fiumi HMWB e AWB

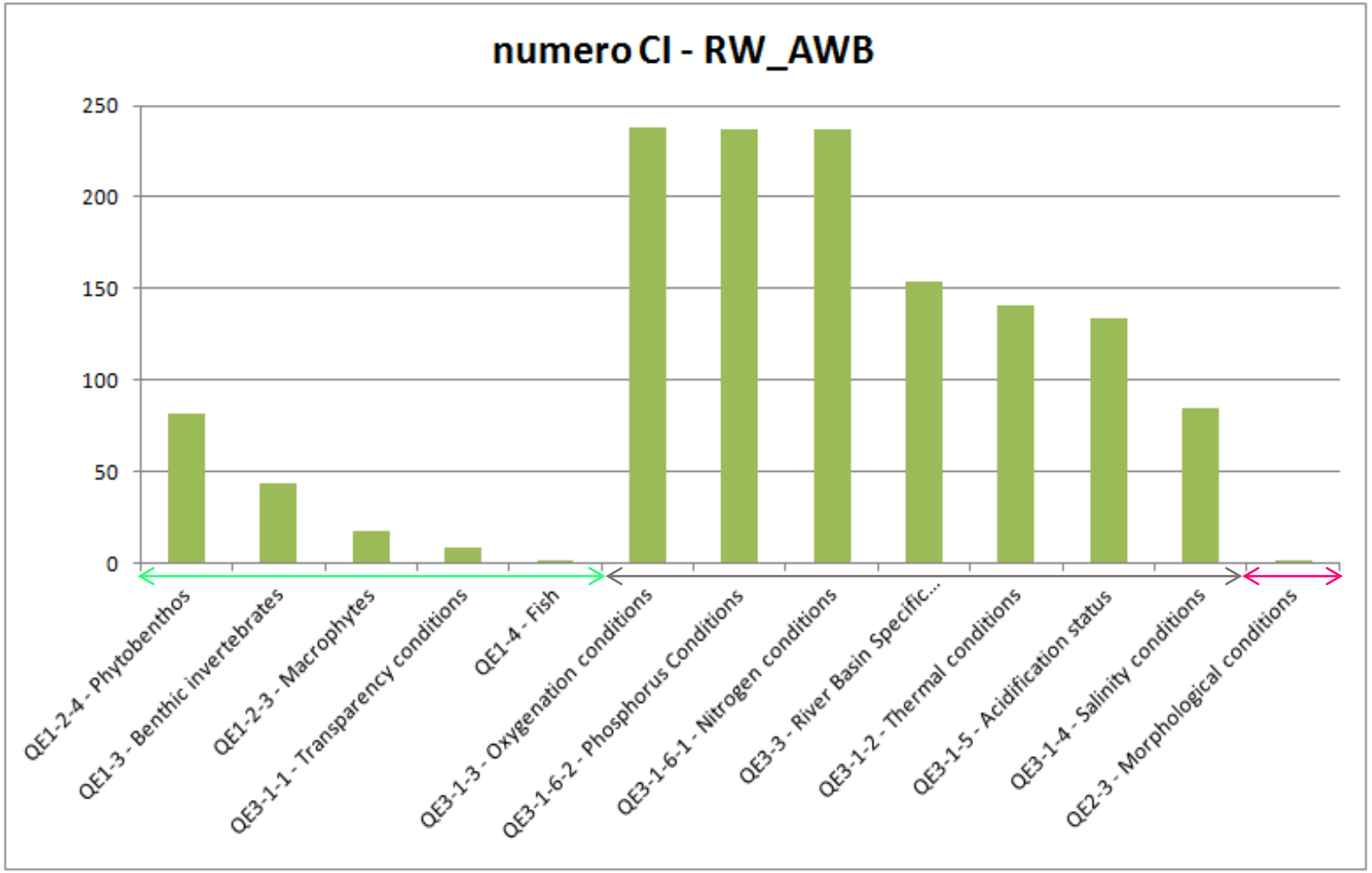


	HMWB	AWB
Tipizzati	1028	203
Totali	1028	610
classif	*778*	*528*

CReIAMO PA

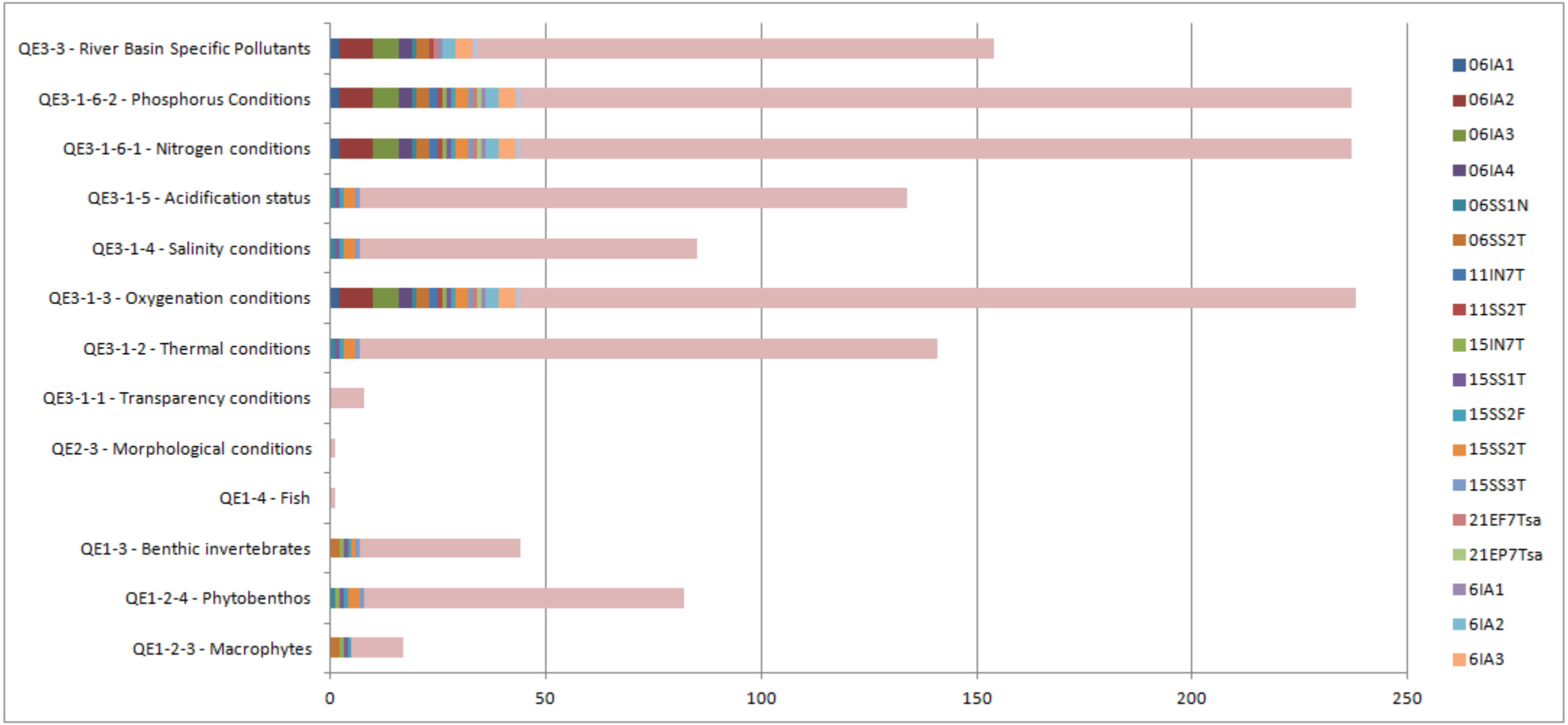
EQ monitorati nei fiumi HMWB e AWB

	HMWB	AWB
Tipizzati	1028	203
Totali	1028	610
classif	*778*	*528*



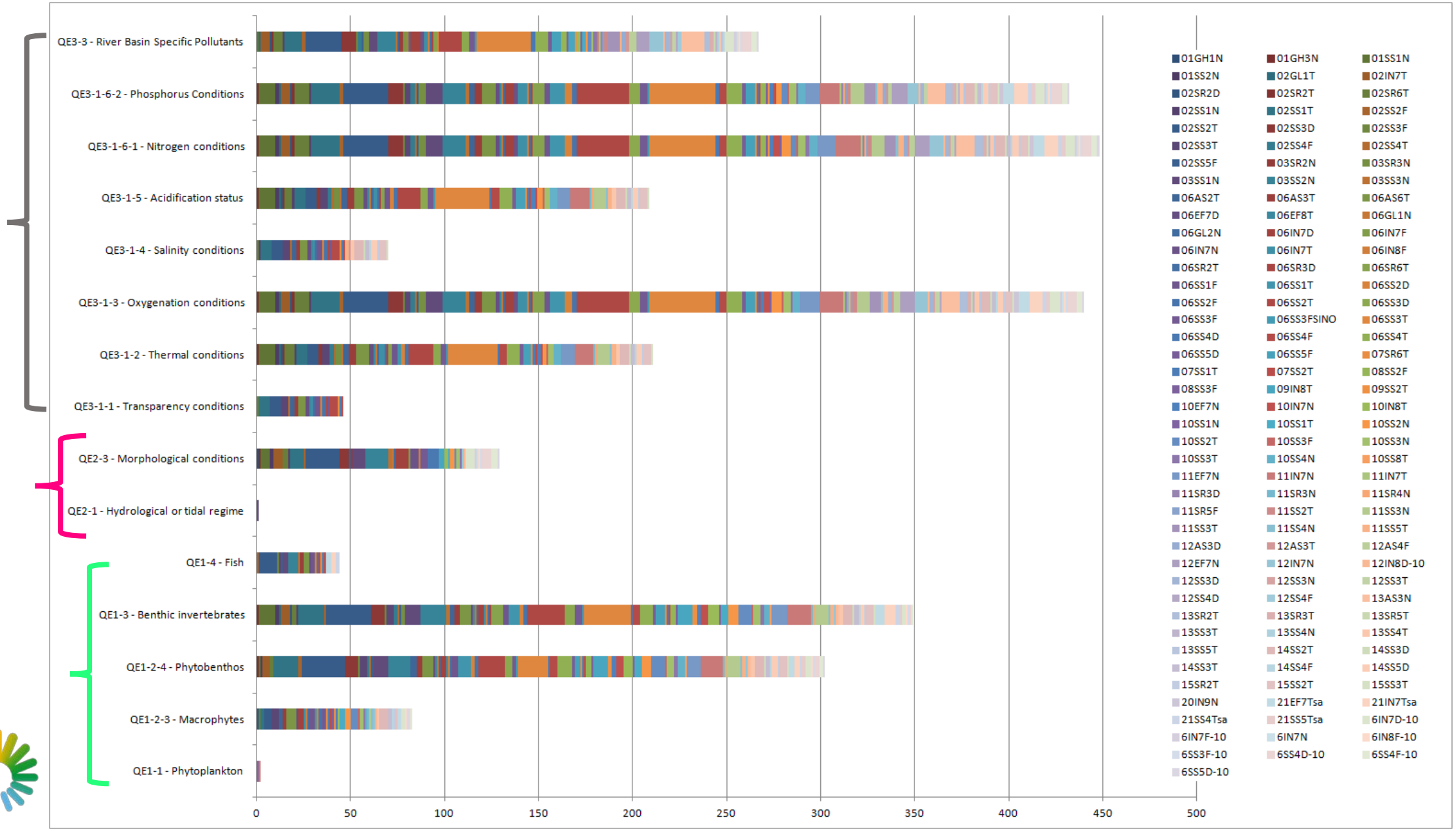
CReIAMO PA

EQ monitorati nei fiumi AWB per tipi

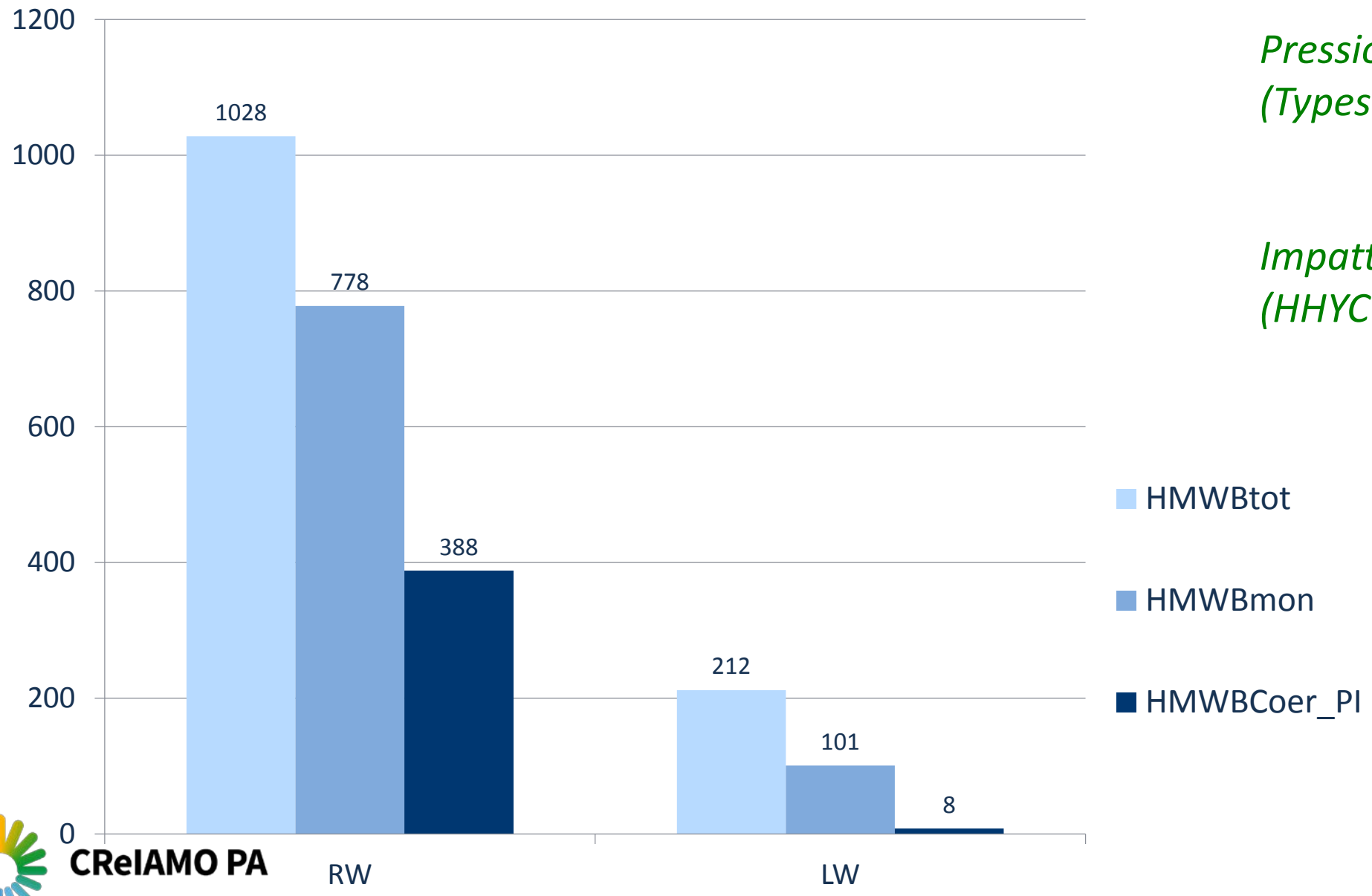


CReIAMO PA

EQ monitorati nei fiumi HMWB per tipi



HMWB: coerenza tra *Significant Pressure Type - Impacts*



Pressione hymo significativa (Types 3 e 4)

Impatti hymo significativi (HHYC e HMOC)

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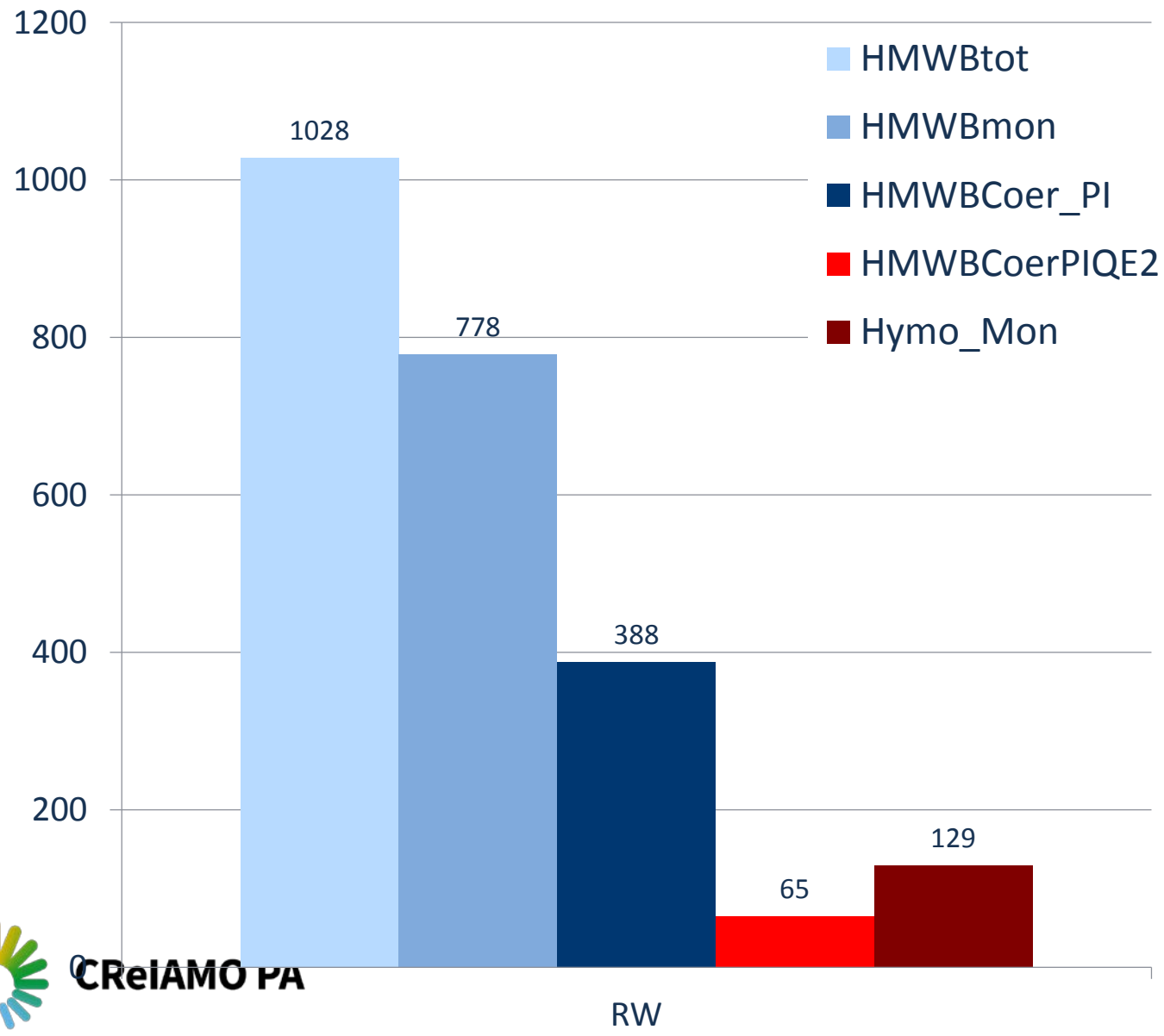
HMWB: coerenza tra *Significant Pressure Type - Impacts – QE2*



Pressione hymo significativa (Types 3 e 4)

Impatti hymo significativi (HHYC e HMOC)

Monitoraggio e valutazione HYMO

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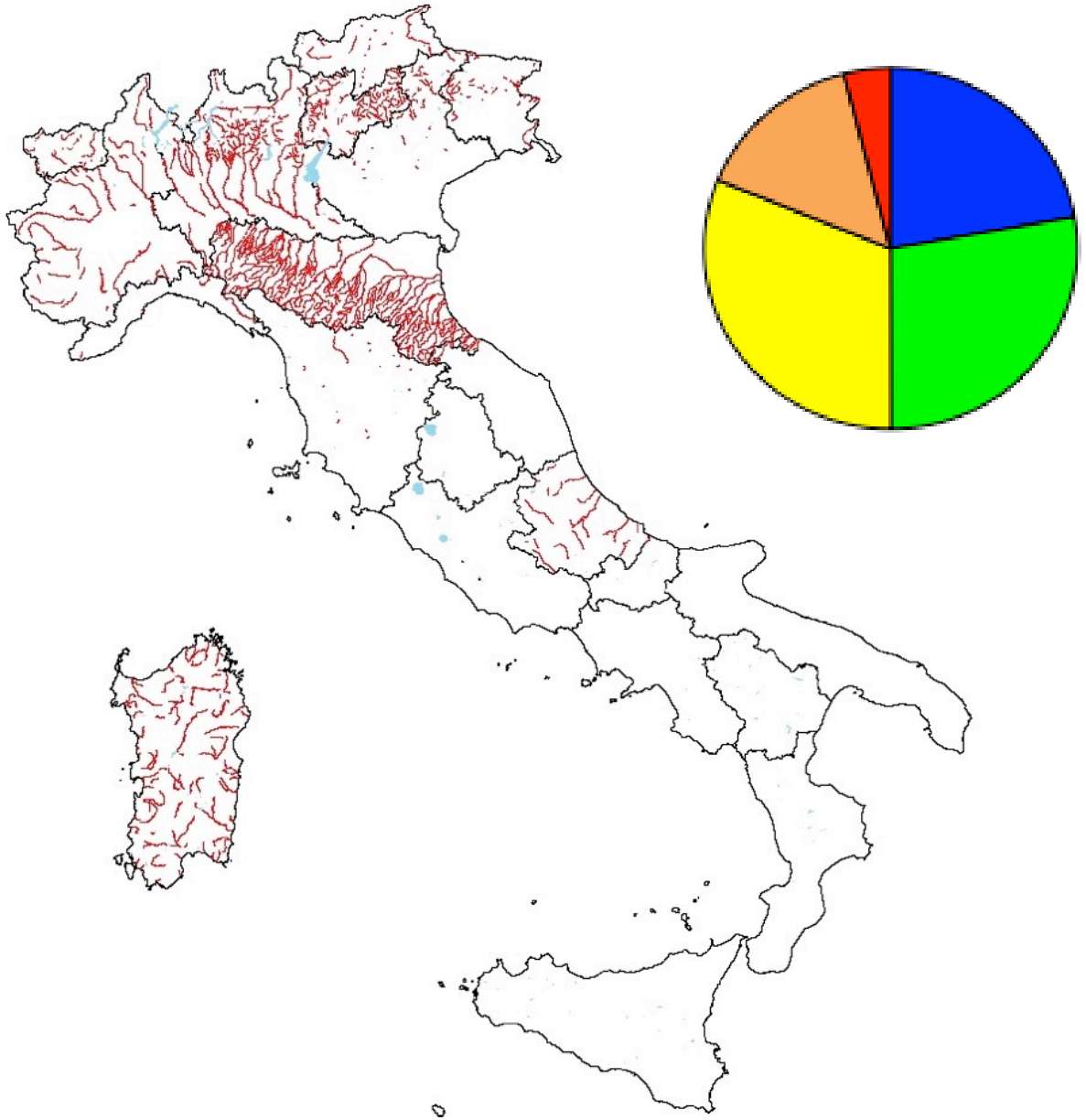
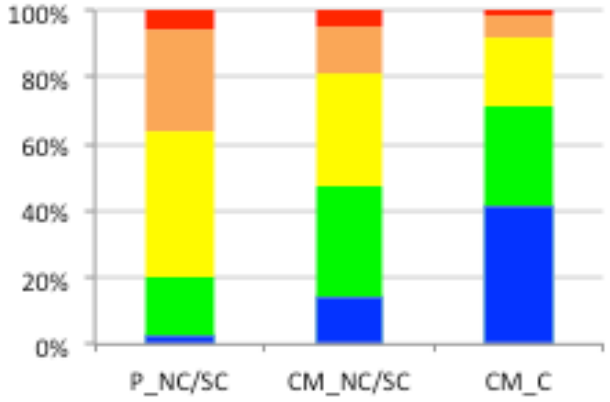
Hymo fiumi?

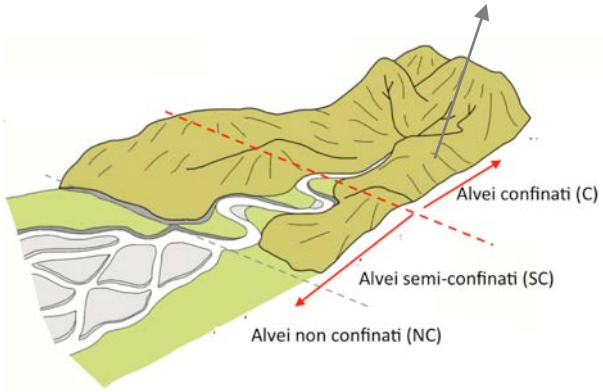


Reporting WISE:

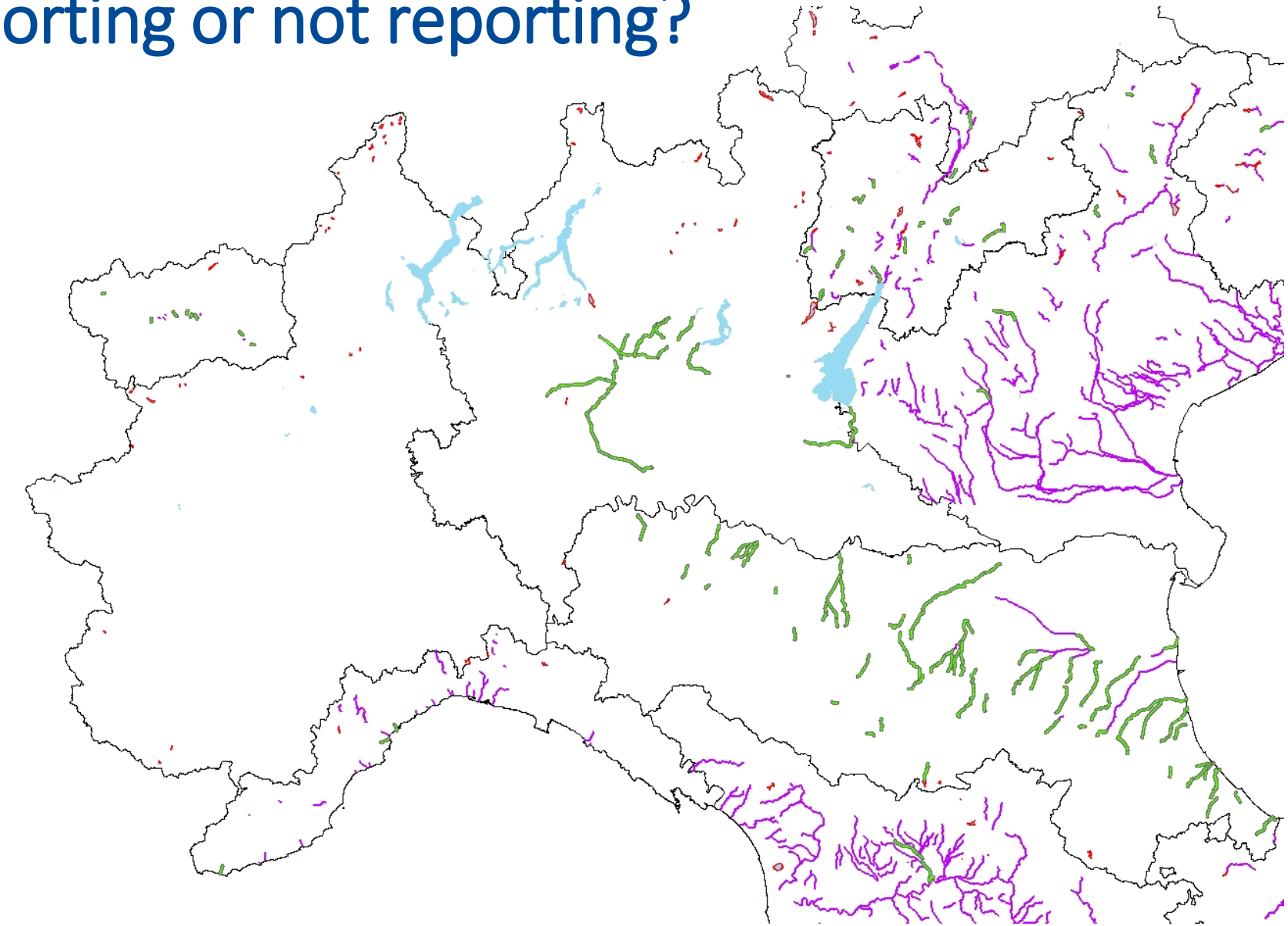
129 HMWB (RW) riportano stato monitoraggio hymo

1 solo hydro





Reporting or not reporting?



HMWB_WISE senza hymo

HMWB_WISE con IQM

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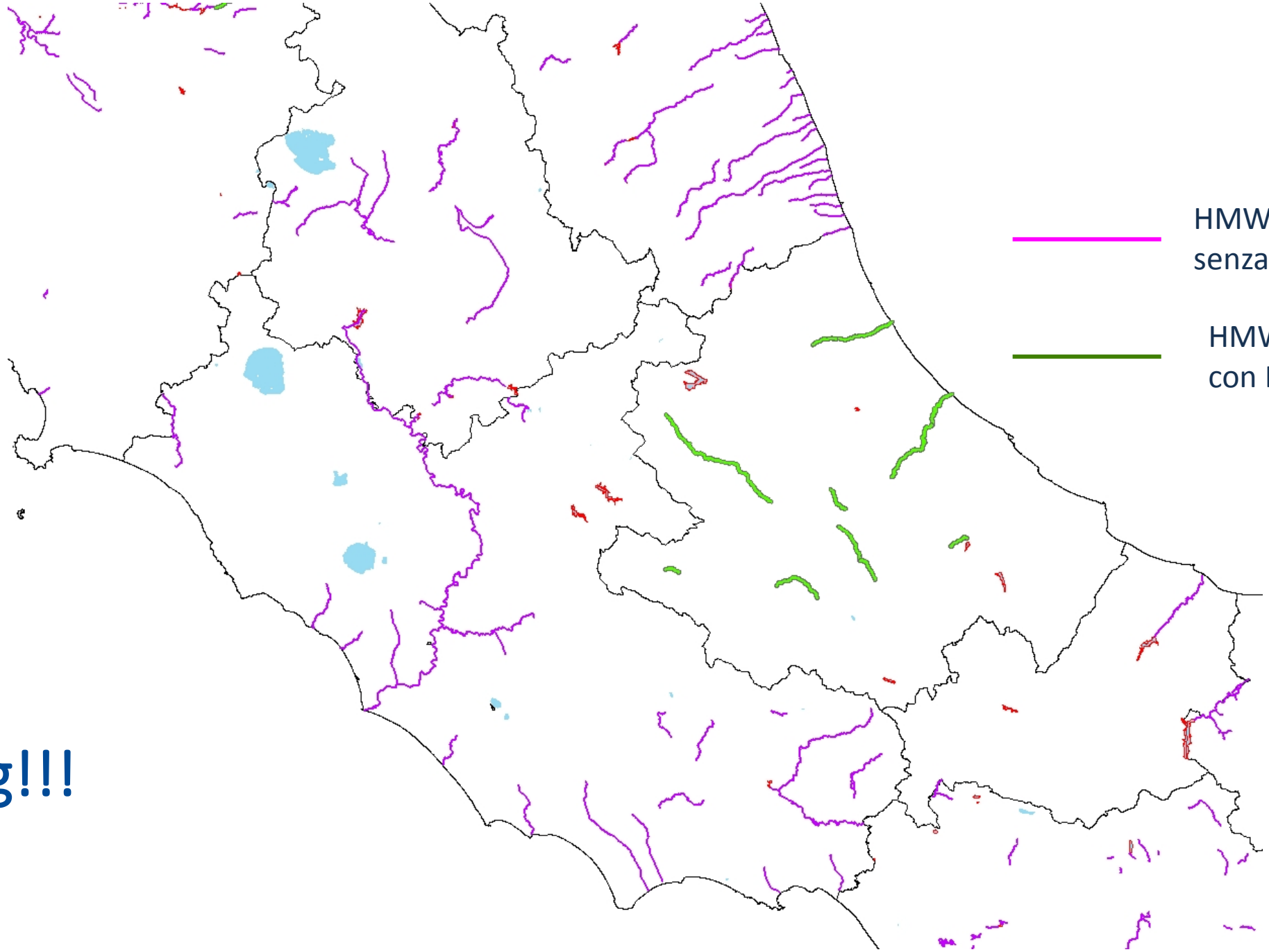

Reporting!!!

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E i non tipizzati?

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