



*Supplement of*

## **Brief communication: Bridging the data gap – a call to enhance the representation of global coastal flood protection**

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## Supplement

**Table S1 : COASTPROS-EU database**

Column description :

- NUTS2 NAME: Name of the administrative unit NUTS2 (Nomenclature of Territorial Units for Statistics).
- NUTS2 ID: Identification code of the NUTS2 administrative unit.
- GEOSPATIAL LAYER: Specify if georeferenced information on coastal defense was found, it also specifies the format of such information [Yes or No], [shapefile, geoportal or pdf].
- GEOSPATIAL RETURN PERIOD: Provides the return period for the georeferenced information on coastal defense. The column is empty if not found.
- POLICY LAYER: Specify if policy standards on coastal defense were found [Yes or No].
- POLICY RETURN PERIOD: Provides the return period of policy standards on coastal defense if found.
- MODELED LAYER: The column lists if the return period for the NUTS2 is available in Tiggeloven et al. (2020) (Yes or No)
- MODELED RETURN PERIOD: The column provides the value of the return period for the NUTS2 in Tiggeloven et al. (2020) If not modeled, the value is "NA".
- SUMMARY RETURN PERIOD: Provides the most detailed information collected on the coastal defense for each NUTS2 based on the previous columns. If available, it will list the georeferenced defense standards. If not, it will provide policy guidelines. If not, available we finally resort to the values modeled by Tiggeloven et., al. (2020).
- RELEVANT INFORMATION\* (available in the excel and shapefile of the COASTPROS-EU database): Provides link to relevant information such as downloadable geospatial data, pdf and sources for the policy design standards.

NUTS2 NAME	NUTS2 ID	GEOSPATIAL LAYER	GEOSPATIAL RETURN PERIOD	POLICY LAYER	POLICY RETURN PERIOD	MODELED LAYER	MODELED RETURN PERIOD	SUMMARY RETURN PERIOD
Jug	AL03	N		N		Y	27	27
Qender	AL02	N		N		Y	34	34
Veri	AL01	N		N		Y	56	56

<b>Prov.</b>	<b>West-</b>	BE25	Y:pdf		Y	1000	Y	150	1000
<b>Vlaanderen</b>									
<b>Bremen</b>		DE50	Y:shapefile		Y		Y	300	300
<b>Hamburg</b>		DE60	N		N		N	NA	NA
<b>Mecklenburg-Vorpommern</b>		DE80	Y:shapefile		Y	100 (or DL: protection height = height(1:200,2010) + SLR(2010-2020, observed) + SLR(2020-2030, computed) )	Y	76	100 (or DL: protection height = height(1:200,2010) + SLR(2010-2020, observed) + SLR(2020-2030, computed) )
<b>Lüneburg</b>		DE93	N		N		N	100	100
<b>Weser-Ems</b>		DE94	N		N		N	100	100
<b>Schleswig-Holstein</b>		DEF0	Y:shapefile		Y	100 (or DL: 1/200 + 0,5 m)	Y	60	100 (or DL: 1/200 + 0,5 m)
<b>Hovedstaden</b>		DK01	N		N		Y	175	175
<b>Sjælland</b>		DK02	N		N		Y	49	49
<b>Syddanmark</b>		DK03	Y:pdf		Y	50-200	Y	51	50-200
<b>Midtjylland</b>		DK04	N		N		Y	45	45
<b>Nordjylland</b>		DK05	N		N		Y	44	44
<b>Eesti</b>		EE00	Y:shapefile		N		Y	41	41
<b>Attiki</b>		EL30	N		N		N	NA	NA
<b>Voreio Aigaio</b>		EL41	N		N		Y	41	41
<b>Notio Aigaio</b>		EL42	N		N		Y	41	41
<b>Kriti</b>		EL43	N		N		Y	39	39
<b>Anatoliki Makedonia, Thraki</b>		EL51	N		N		Y	50	50
<b>Kentriki Makedonia</b>		EL52	N		N		Y	50	50
<b>Dytiki Makedonia</b>		EL53	N		N		Y	41	41

<b>Ipeiros</b>	EL54	N		N		Y	41	41
<b>Thessalia</b>	EL61	N		N		Y	40	40
<b>Ionia Nisia</b>	EL62	N		N		N	NA	NA
<b>Dytiki Elláda</b>	EL63	N		N		Y	41	41
<b>Stereia Elláda</b>	EL64	N		N		Y	40	40
<b>Peloponnisos</b>	EL65	N		N		Y	41	41
<b>Galicia</b>	ES11	N		Y	100-500	Y	64	100-500
<b>Principado de Asturias</b>	ES12	N		Y	100-500	Y	158	100-500
<b>Cantabria</b>	ES13	N		Y	100-500	Y	99	100-500
<b>País Vasco</b>	ES21	N		Y	100-500	Y	257	100-500
<b>Cataluña</b>	ES51	N		Y	100-500	Y	41	100-500
<b>Comunitat Valenciana</b>	ES52	N		Y	100-500	Y	50	100-500
<b>Illes Balears</b>	ES53	N		Y	100-500	Y	42	100-500
<b>Andalucía</b>	ES61	N		Y	100-500	Y	64	100-500
<b>Región de Murcia</b>	ES62	N		Y	100-500	Y	40	100-500
<b>Ciudad de Ceuta</b>	ES63	N		Y	100-500	N	NA	100-500
<b>Ciudad de Melilla</b>	ES64	N		Y	100-500	N	NA	100-500
<b>Canarias</b>	ES70	N		Y	100-500	Y	49	100-500
<b>Länsi-Suomi</b>	FI19	N		Y	20	N	NA	20
<b>Helsinki-Uusimaa</b>	FI1B	N		Y	20	Y	48	20
<b>Etelä-Suomi</b>	FI1C	N		Y	20	N	NA	20
<b>Pohjois- ja Itä-Suomi</b>	FI1D	N		Y	20	N	NA	20
<b>Åland</b>	FI20	N		Y	20	N	NA	20
<b>Basse-Normandie</b>	FRD1	Y:shapefile		Y	5-10: agricultural area, 20-100: populated areas	Y	51	5-10: agricultural area, 20-100: populated areas

<b>Haute-Normandie</b>	FRD2	Y:shapefile		Y	5-10: agricultural area, 20-100: populated areas	Y	80	5-10: agricultural area, 20-100: populated areas
<b>Nord-Pas de Calais</b>	FRE1	Y:shapefile		Y	5-10: agricultural area, 20-100: populated areas	Y	76	5-10: agricultural area, 20-100: populated areas
<b>Picardie</b>	FRE2	Y:shapefile		Y	5-10: agricultural area, 20-100: populated areas	Y	53	5-10: agricultural area, 20-100: populated areas
<b>Pays de la Loire</b>	FRG0	Y:shapefile		Y	5-10: agricultural area, 20-100: populated areas	Y	50	5-10: agricultural area, 20-100: populated areas
<b>Bretagne</b>	FRH0	Y:shapefile	The decree divides the structures into 4 classes: A,B,C,D, depending on the height of the structure and the protected population: A: protected population greater than 50,000 and height of the structure greater than 1m; B: protected population between 1,000 and 50,000 and height of the structure greater than 1m; C: protected population of between 10 and 1,000 and height of the structure greater than 1m; D: protected population less than 10 or/and height of the structure less than 1 m.	Y	5-10: agricultural area, 20-100: populated areas	Y	60	The decree divides the structures into 4 classes: A,B,C,D, depending on the height of the structure and the protected population: A: protected population greater than 50,000 and height of the structure greater than 1m; B: protected population between 1,000 and 50,000 and height of the structure greater than 1m; C: protected population of between 10 and 1,000 and height of the structure greater than 1m; D: protected population less than 10 or/and height of the structure less than 1 m.

			protected population of between 10 and 1,000 and height of the structure greater than 1m; D: protected population less than 10 or/and height of the structure less than 1 m.					
<b>Aquitaine</b>	FRI1	Y:shapefile		Y	5-10: agricultural area, 20-100: populated areas	Y	55	5-10: agricultural area, 20-100: populated areas
<b>Poitou-Charentes</b>	FRI3	Y:shapefile		Y	5-10: agricultural area, 20-100: populated areas	Y	51	5-10: agricultural area, 20-100: populated areas
<b>Languedoc-Roussillon</b>	FRJ1	Y:shapefile		Y	5-10: agricultural area, 20-100: populated areas	Y	68	5-10: agricultural area, 20-100: populated areas
<b>Provence-Alpes-Côte d'Azur</b>	FRL0	Y:shapefile		Y	5-10: agricultural area, 20-100: populated areas	Y	41	5-10: agricultural area, 20-100: populated areas
<b>Corse</b>	FRM0	Y:shapefile		Y	5-10: agricultural area, 20-100: populated areas	Y	51	5-10: agricultural area, 20-100: populated areas
<b>Panonska Hrvatska</b>	HR02	N		N		Y	46	46
<b>Jadranska Hrvatska</b>	HR03	N		N		Y	46	46
<b>Grad Zagreb</b>	HR05	N		N		Y	46	46
<b>Sjeverna Hrvatska</b>	HR06	N		N		Y	46	46

<b>Northern and Western</b>	IE04	Y:webportal		Y	100	Y	46	100
<b>Southern</b>	IE05	Y:webportal		Y	100	Y	46	100
<b>Eastern and Midland</b>	IE06	Y:webportal		Y	200	Y	46	200
<b>Liguria</b>	ITC3	N		Y	100-50	N	NA	100-50
<b>Abruzzo</b>	ITF1	N		Y	100-50	Y	66	100-50
<b>Molise</b>	ITF2	N		Y	100-50	Y	45	100-50
<b>Campania</b>	ITF3	N		Y	100-50	Y	63	100-50
<b>Puglia</b>	ITF4	N		Y	100-50	N	NA	100-50
<b>Basilicata</b>	ITF5	N		Y	100-50	N	NA	100-50
<b>Calabria</b>	ITF6	N		Y	100-50	Y	44	100-50
<b>Sicilia</b>	ITG1	N		Y	100-50	Y	52	100-50
<b>Sardegna</b>	ITG2	N		Y	100-50	Y	81	100-50
<b>Veneto</b>	ITH3	N		Y	100-50	Y	47	100-50
<b>Friuli-Venezia Giulia</b>	ITH4	N		Y	100-50	Y	54	100-50
<b>Emilia-Romagna</b>	ITH5	N		Y	100-50	Y	63	100-50
<b>Toscana</b>	ITI1	N		Y	100-50	Y	63	100-50
<b>Marche</b>	ITI3	N		Y	100-50	Y	57	100-50
<b>Lazio</b>	ITI4	N		Y	100-50	Y	65	100-50
<b>Sostinės regionas</b>	LT01	N		N		Y	41	41
<b>Vidurio ir vakarų Lietuvos regionas</b>	LT02	N		N		Y	41	41
<b>Latvija</b>	LV00	N		N		Y	41	41
<b>Црна Гора</b>	ME00	N		N		N	NA	NA
<b>Severna Makedonija</b>	MK00	N		N		N	NA	NA
<b>Malta</b>	MT00	N		M		N	NA	NA
<b>Groningen</b>	NL11	Y:webportal		Y	1000-3000	Y	1000	1000-3000

<b>Friesland (NL)</b>	NL12	Y:webportal		Y	1000-3000	Y	1000	1000-3000
<b>Noord-Holland</b>	NL32	Y:webportal		Y	1000-3000	Y	1000	1000-3000
<b>Zuid-Holland</b>	NL33	Y:webportal		Y	10000-30000	Y	1000	10000-30000
<b>Zeeland</b>	NL34	Y:webportal		Y	10000-30000	Y	1000	10000-30000
<b>Agder og Sør-Ostlandet</b>	NO09	N		N		Y	39	39
<b>Innlandet</b>	NO02	N		N		Y	40	40
<b>Jan Mayen and Svalbard</b>	NO0B	N		N		N	NA	NA
<b>Nord-Norge</b>	NO07	N		N		N	NA	NA
<b>Oslo og Viken</b>	NO08	N		N		N	NA	NA
<b>Trøndelag</b>	NO06	N		N		N	NA	NA
<b>Vestlandet</b>	NO0A	N		N		Y	39	39
<b>Zachodniopomorskie</b>	PL42	N		Y	20,50,100,200,500 Based on economic value of land cover, or ecological value	Y	48	20,50,100,200,500 Based on economic value of land cover, or ecological value
<b>Warmińsko-mazurskie</b>	PL62	N		Y	20,50,100,200,500 Based on economic value of land cover, or ecological value	Y	112	20,50,100,200,500 Based on economic value of land cover, or ecological value
<b>Pomorskie</b>	PL63	N		Y	20,50,100,200,500 Based on economic value of land cover, or ecological value	Y	44	20,50,100,200,500 Based on economic value of land cover, or ecological value
<b>Norte</b>	PT11	N		Y	20, 100 , 1000	Y	152	20, 100 , 1000
<b>Algarve</b>	PT15	N		Y	20, 100 , 1000	Y	58	20, 100 , 1000
<b>Centro (PT)</b>	PT16	Y:pdf		Y	20, 100 , 1000	Y	104	20, 100 , 1000
<b>Área Metropolitana de Lisboa</b>	PT17	N		Y	20, 100 , 1000	Y	275	20, 100 , 1000

<b>Alentejo</b>	PT18	N		Y	20, 100 , 1000	N	NA	20, 100 , 1000
<b>Região Autónoma dos Açores</b>	PT20	N		Y	20, 100 , 1000	N	NA	20, 100 , 1000
<b>Região Autónoma da Madeira</b>	PT30	N		Y	20, 100 , 1000	N	NA	20, 100 , 1000
<b>Stockholm</b>	SE11	N		N		Y	39	39
<b>Östra Mellansverige</b>	SE12	N		N		N	NA	NA
<b>Småland med öarna</b>	SE21	N		N		Y	40	40
<b>Sydsverige</b>	SE22	N		N		Y	58	58
<b>Västsverige</b>	SE23	N		N		Y	40	40
<b>Mellersta Norrland</b>	SE32	N		N		N	NA	NA
<b>Norra Mellansverige</b>	SE31	N		N		N	NA	NA
<b>Övre Norrland</b>	SE33	N		N		N	NA	NA
<b>Zahodna Slovenija</b>	SI04	N		N		Y	78	78
<b>Tees Valley and Durham</b>	UKC1	N		Y	50	Y	74	50
<b>Northumberland and Tyne and Wear</b>	UKC2	N		Y	50	Y	74	50
<b>Cumbria</b>	UKD1	N		Y	50	Y	74	50
<b>Lancashire</b>	UKD4	N		Y	50	Y	74	50
<b>Cheshire</b>	UKD6	N		Y	100	Y	74	100
<b>Merseyside</b>	UKD7	N		Y	150	Y	74	150
<b>East Yorkshire and Northern Lincolnshire</b>	UKE1	N		Y	50	Y	74	50
<b>North Yorkshire</b>	UKE2	N		Y	50	Y	74	50
<b>South Yorkshire</b>	UKE3	N		Y	100	Y	74	100
<b>Derbyshire and Nottinghamshire</b>	UKF1	N		Y	100	Y	74	100

<b>Lincolnshire</b>	UKF3	N		Y	200	Y	74	200
<b>East Anglia</b>	UKH1	N		Y	150	Y	74	150
<b>Essex</b>	UKH3	N		Y	500	Y	74	500
<b>Inner London — West</b>	UKI3	N		Y	1000	Y	74	1000
<b>Inner London — East</b>	UKI4	N		Y	1000	Y	74	1000
<b>Outer London — East and North East</b>	UKI5	N		Y	1000	Y	74	1000
<b>Outer London — West and North West</b>	UKI7	N		Y	1000	Y	74	1000
<b>Surrey, East and West Sussex</b>	UKJ2	N		Y	100	Y	74	100
<b>Hampshire and Isle of Wight</b>	UKJ3	N		Y	30	Y	74	30
<b>Kent</b>	UKJ4	N		Y	300	Y	74	300
<b>Gloucestershire, Wiltshire and Bristol/Bath area</b>	UKK1	N		Y	100	Y	74	100
<b>Dorset and Somerset</b>	UKK2	N		Y	100	Y	74	100
<b>Cornwall and Isles of Scilly</b>	UKK3	N		Y	50	Y	74	50
<b>Devon</b>	UKK4	N		Y	125	Y	74	125
<b>West Wales and The Valleys</b>	UKL1	N		Y	150	Y	74	150
<b>East Wales</b>	UKL2	N		Y	200	Y	74	200
<b>North Eastern Scotland</b>	UKM5	N		Y	50	Y	45	50
<b>Highlands and Islands</b>	UKM6	N		Y	25	Y	45	25

<b>Eastern Scotland</b>	UKM7	N		Y	50	Y	45	50
<b>West Central Scotland</b>	UKM8	N		Y	50	Y	45	50
<b>Southern Scotland</b>	UKM9	N		Y	50	Y	45	50
<b>Northern Ireland</b>	UKN0	N		Y	100	Y	65	100

**Table S2:** Datapoints included in the FLOPROS coastal design layer per country.

Country	Datapoints
Argentina	1
Belgium	1
Canada	1
China	30
Germany	1
United Kingdom	1
Ireland	1
Italy	1
Japan	1
Mozambique	1
Nigeria	1
Netherlands	12
Singapore	1
Thailand	1