

List of parameters subject to monitoring, as reported within TIP agreement

Parameter			Frequency	Institution	Remarks
Symbol	Name	Unit			
Al	Aluminum	µg/l	1/quarter	WIOS	A few points in close shoreline proximity
Ald	Aldrin		2/year	WIOS	A few points in close shoreline proximity
alk	Alkalinity		1/quarter	WIOS	A few points in close shoreline proximity
			sporadically	IM	Middle part of the Gulf of Gdańsk
As	Arsenic	µg/l	1/quarter	WIOS	A few points in close shoreline proximity
			sporadically	IM	Middle part of the Gulf of Gdańsk
B	Boron		1/quarter	WIOS	A few points in close shoreline proximity
Ba	Barium		1/quarter	WIOS	A few points in close shoreline proximity
batym	Bathymetry		sporadically	IBWPAN	
Bmbt	Macrozoobenthos biomass	g.m.m/m ²	sporadically	IM	Middle part of Gulf of Gdańsk
BOD5	Biological oxygen demand after 5 days	mgO/l	1/month sporadically; 1/week – 1/2weeks in summer 1/month 1/2weeks	UMGda	A few points in Gdańsk nearshore region
				UMSop	A few points in Sopot nearshore region
				WIOS	A few points in close shoreline proximity
				WSSE	Several tens of points along entire Pomeranian coast
				IM	1 point in Gulf of Gdańsk, several in Gdańsk nearshore region
				UMGdy	3 points in Gdynia nearshore region
B_Sml	Salmonella bacteria		1/month	UMGda	10 points or so in Gdańsk nearshore region
				WSSE	Several tens of points along entire Pomeranian coast
BTEX	Aromatic hydrocarbons			IM	Middle part of Gulf of Gdańsk
Ca	Calcium	µg/l	1/k, sporadically 2/m	WIOS	A few points in close shoreline proximity
Cd	Cadmium	µg/l	1/k	WIOS	A few points in close shoreline proximity
				IM	1 point in Gulf of Gdańsk, a few in Gdańsk nearshore region
Cdv	Conductivity		1/m, sporadically 2/m	WIOS	A few points in close shoreline proximity
			1/m	UMGda	1 point of shoreline in Gdańsk nearshore region
Chl_a	Apha chlorophyll	µg/l	1/k	WIOS	A few points in close shoreline proximity
				IMGW	1 point at Sea, several in Gulf of Gdańsk

clr	Colour		1/m	UMGda	10 points or so in Gdańsk nearshore region
			sporadically	UMSop	A few points in Sopot nearshore region
				WSSE	Several tens of points along entire Pomeranian coast
			1/2t	UMGdy	3 points in Gdynia nearshore region
COD	Chemical oxygen demand	mgO/l	1/m	UMGda	2 points in Gdańsk nearshore region
				IM	1 point in Gulf of Gdańsk, several in Gdańsk nearshore region
COD_Cr	Dichromate chemical oxygen demand		1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
COP	Organic carbon	mgC/l	1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
			1 time	IM	1 point in Gulf of Gdańsk
Cr	Chromium	µg/l	1/k	WIOS	A few points in close shoreline proximity
			1 time	IM	1 point in Gulf of Gdańsk
Cu	Copper	µg/l	1/k	WIOS	A few points in close shoreline proximity
			1 time	IM	1 point in Gulf of Gdańsk
cyano	Algae blooms			WSSE	Several tens of points along entire Pomeranian coast
depth	Depth of measurement from surface	m		MIR-ZO	Many points at Sea and Gulf of Gdańsk
Dld	Dieldrin		2/r	WIOS	A few points in close shoreline proximity
DO	Dissolved oxygen	mgO/l	1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
			1/m	UMGda	1 point in Gdańsk nearshore region
			Sporadically	IMGW	10 points or so at Sea, Gulf of Gdańsk and Vistula Lagoon
				MIR-ZO	Many points at Sea and Gulf of Gdańsk
				WSSE	Several tens of points along entire Pomeranian coast
				UMSop	A few points in Sopot nearshore region
drift_tar	Tar drift			WSSE	Several tens of points along entire Pomeranian coast
			1/2t	UMGdy	3 points in Gdynia nearshore region
DST	Total dissolved substances		1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
				IM	1 point in Gulf of Gdańsk, a few in Gdańsk nearshore region
extr	Petroleum benzine extract		1/m	UMGda	1 point in Gdańsk nearshore region
			1/m	UMSop	A few points in Sopot nearshore region
Faec_Col	Coliform bacterium	nr/100ml	1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
			1/m	UMGda	10 points or so in Gdańsk nearshore region
			2/m	UMSop	10 points or so in Sopot nearshore region
			1/2t	UMGdy	3 points in Gdynia nearshore region
				WSSE	Several tens of points along entire Pomeranian coast

Faec_p	Feces streptococcus		1/m	UMGda	10 points or so in Gdańsk nearshore region
				WSSE	Several tens of points along entire Pomeranian coast
Fe	Iron	µg/l	1/k	WIOS	A few points in close shoreline proximity
flu	Fluorides		1/k	WIOS	A few points in close shoreline proximity
fpl	Phytoplankton (general)			IMGW	1 point at Sea, a few in Gulf of Gdańsk, 1 in Vistula Lagoon
H2S	Hydrogen sulphide	µgS/l		IMGW	3 points at Sea
height	Water level	cm	6-8/day, sporadically 24/day	IMGW	Harbours: Gdańsk, Gdynia, Władysławowo, Hel
Hg	Mercury	µg/l	1/k	WIOS	A few points in close shoreline proximity
			1 time	IM	1 point in Gulf of Gdańsk
hrd	Hardness		1/k	WIOS	A few points in close shoreline proximity
K	Potassium	µg/l	1/k	WIOS	A few points in close shoreline proximity
Kjd_N	Kjedahl nitrogen	mgN/l	1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
mbt	Benthos invertebrates		1/r	WIOS	A few points in close shoreline proximity
Mg	Magnesium	µg/l	1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
microb	Microbiology (general)			IMGW	1 point in Gulf of Gdańsk
Mn	Manganese	µg/l	1/k	WIOS	A few points in close shoreline proximity
Na	Sodium	µg/l	1/k	WIOS	A few points in close shoreline proximity
NH4_N	Ammonia nitrogen	mgN/l	1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
				IMGW	Entire Gulf of Gdańsk and Vistula Lagoon
			1 time	IM	1 point in Gulf of Gdańsk
Ni	Nickel	µg/l	1/k	WIOS	A few points in close shoreline proximity
			1 time	IM	1 point in Gulf of Gdańsk
Nmbt	Macrobenthos number	1/m ²	1 time	IM	1 point in Gulf of Gdańsk
NO2_N	Nitrite nitrogen	mgN/l	1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
				IMGW	Entire Gulf of Gdańsk and Vistula Lagoon
			1 time	IM	1 point in Gulf of Gdańsk
NO3_N	Nitrate nitrogen	mgN/l	1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
				IMGW	Entire Gulf of Gdańsk and Vistula Lagoon
			1 time	IM	1 point in Gulf of Gdańsk

odr	Odour		1/m	UMGda	10 points or so in Gdańsk nearshore region
				UMSop	A few points in Sopot nearshore region
			1/2t	UMGdy	3 points in shoreline proximity in Gdynia
				WSSE	Several tens of points along entire Pomeranian coast
oil_m	Mineral oils			UMSop	A few points in Sopot nearshore region
			1/2t	UMGdy	3 points in shoreline proximity in Gdynia
				WSSE	Several tens of points along entire Pomeranian coast
oil_p	Oil spots			GUM	10 points or so in Gulf of Gdańsk and Vistula Lagoon + 2 deep water locations
Pb	Lead	µg/l	1/k	WIOS	A few points in close shoreline proximity
				IM	1 point in Gulf of Gdańsk, several in shoreline proximity in Gdańsk
PCBs	Polychlorinated biphenyls	µg/l	once	IM	1 point in Gulf of Gdańsk
pH	pH index (acidity)		1/m	UMGda	10 points or so in shoreline proximity in Gdańsk region
				UMSop	A few points in Sopot nearshore region
			1/2t	UMGdy	3 points in shoreline proximity in Gdynia
			1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
				IMGW	Entire Gulf of Gdańsk and Vistula Lagoon
				WSSE	Several tens of points along entire Pomeranian coast
		IM	1 point in Gulf of Gdańsk, several in shoreline proximity in Gdańsk		
phched	Physical-chemical parameters of benthic sediment			IM	1 point in Gulf of Gdańsk, 2 in shoreline proximity in Gdańsk
phen	Phenols			UMSop	A few points in Sopot nearshore region
			1/r	WIOS	A few points in close shoreline proximity
				WSSE	Several tens of points along entire Pomeranian coast
			1/2t	UMGdy	3 points in shoreline proximity in Gdynia
			1 time	IM	1 point in Gulf of Gdańsk
PO4	Dissolved non-organic phosphorus	mgP/l	1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
				IMGW	Entire Gulf of Gdańsk and Vistula Lagoon
			1 time	IM	1 point in Gulf of Gdańsk
Q	River discharge	m ³ /s	1/m	UMSop	10 points or so in Sopot nearshore region
S	Salinity	Per mille		MIR-ZO	Several tens of points at Sea and entire Gulf of Gdańsk
				IMGW	Entire Gulf of Gdańsk and Vistula Lagoon

Sapp	Peryphyton saprobility		1/k	WIOS	A few points in close shoreline proximity
Saps	Seston saprobility		1/k	WIOS	A few points in close shoreline proximity
SatO	Oxygen saturation	Per cent	1/m	UMGda	10 points or so in shoreline proximity in Gdańsk region
SCI	Chlorides	mgCl/l	1/k; sporadically 2/m	WIOS	A few points in close shoreline proximity
			1/m	UMGda	1 point in Gdańsk region
				IM	A few points in shoreline proximity in Gdańsk
Se	Selenium	µg/l	1/k	WIOS	A few points in close shoreline proximity
Secchi	Depth measured with Secchi disk	M	1/m	UMGda	10 points or so in shoreline proximity in Gdańsk region
shline	Shoreline position		1/m	IBW PAN	1/m nearby CRS Lubiatowo, sporadically in Vistula Lagoon
SiO4	Silica		mgSi/l	IMGW	Entire Gulf of Gdańsk and Vistula Lagoon
Smbt	Macrozoobenthos species		1 time	IM	1 point in Gulf of Gdańsk
SO4	Sulfates	µgS/l	1/k; sporadically 2/m	WIOS	A few points in close shoreline proximity
SS	Suspended sediment	mg/l	1/m	UMGda	2 points in shoreline proximity in Gdańsk
			1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
surf_act	Surfactants			UMSop	10 points or so in shoreline proximity in Sopot
				WSSE	Several tens of points along entire Pomeranian coast
			1/2t	UMGdy	3 points in shoreline proximity in Gdynia
SWA	Sum of aliphatic hydrocarbons			IM	1 point in Gulf of Gdańsk
temp	Water temperature	deg	1/m	UMGda	10 points or so in shoreline proximity in Gdańsk region
				MIR-ZO	Several tens of points at Sea and Gulf of Gdańsk
			1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
				IMGW	Entire Gulf of Gdańsk and Vistula Lagoon
Tot_Col	Total coliform bacteria number	nr/100ml	1/m	UMGda	10 points or so in shoreline proximity in Gdańsk region
			2/m: sporadically	UMSop	10 points or so in shoreline proximity in Sopot
				WSSE	Several tens of points along entire Pomeranian coast
Tot_N	Total nitrogen	mgN/l	1/m	UMGda	2 points in shoreline proximity in Gdańsk
			1/m; sporadically 2/m	WIOS	A few points in close shoreline proximity
				IMGW	Entire Gulf of Gdańsk and Vistula Lagoon

Tot_P	Total phosphorus	mgP/l	1/m	UMGda	2 points in shoreline proximity in Gdańsk
			2/m	WIOS	A few points in close shoreline proximity
				IMGW	Entire Gulf of Gdańsk and Vistula Lagoon
			1 time	IM	1 point in Gulf of Gdańsk
wind	Wind --- velocity and direction			IMGW	Harbours: Gdańsk, Gdynia, Władysławowo, Hel
				GUM	A few points at Sea and Gulf of Gdańsk
				IBWPAN	CRS Lubiawo
WQC	Water quality class		1/m	UMGda	2 points in shoreline proximity in Gdańsk
			2/m	UMSop	10 points or so in shoreline proximity in Sopot
WWA	Polycyclic hydrocarbons		1/r	WIOS	A few points in close shoreline proximity
				IM	1 point in Gulf of Gdańsk
WWR	Crude oil hydrocarbons		1/m	WIOS	A few points in close shoreline proximity
				IM	A few points in shoreline proximity in Gdańsk
Zn	µg/l		1/k	WIOS	A few points in close shoreline proximity
				IM	A few points in shoreline proximity in Gdańsk, 1 point in Gulf of Gdańsk
zpl	Zooplankton (general)			IMGW	A few points in Gulf of Gdańsk, 1 at Sea