Ecological Restoration and Conservation of
Praia da Vitória Coastal Wet Green Infrastructure

LIFE12 BIO/PT/000110

WATER QUALITY DATA (2013-2018)

Sampling methodology and data structure

Metadata for the files containing the data set of water quality parameters

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Abstract

This document describes the metadata for the files containing the dataset of water quality parameters sampled in the context of project LIFE CWR - Ecological Restoration and Conservation of Praia da Vitória Coastal Wet Green Infrastructure (LIFE12 BIO/PT/000110).

Sampling locations

1. Paul da Praia da Vitória (PPV), at points on the main body (point D, x = 494745, y = 4287497, all coordinates WGS 84 / UTM ZONA 26 N), and on the north (point A, x = 494960, y = 4287292) and the south (point J, x = 494889 y = 4287220) arms. Measurements started at 9:00 +/- 15 min on point J, them moved to points A and point D, taking about 10 minutes between each. Starting on October 2016 a new sampling point (N, x = 494781, y = 4287373) was added. Every 6 months samples were taken in the middle of the main water body for lab analysis (point I, approximately at x = 494711, y = 4287435).

2. Paul do Belo Jardim (PBJ), near the margin (x = 494615, y = 4285063). Measurements started at 10:00 +/- 15 min

3. Paul da Pedreira do Cabo da Praia (PPCP), near its western (point 1, x = 496088, y = 4283909) and eastern (point 2, x = 495917, y = 4283839) extremities, respectively closer and further from the sea. Measurements started at 10:30 +/- 15 min on point 1 them moved to point 2.

Parameters measured

With multiparameter probes (hourly and daily WTW Multi 3430; semiannual unknown)	In the lab (INOVA)
1. TMP- Temperature (ºC)	8. TP- Total Phosphorus (µg P/L)

2. pH 3. ORP (Oxidation Reduction Potential, mV) 4. CND- Conductivity (µs/cm) 5. SAL- Salinity (ppt) 6. TDS (Total Dissolved Solids, ppm) 7. OXG- Oxygen (mg/L)	9. BOD (Biochemical Oxygen Demand, mg/L) 10. COD (Chemical Oxygen Demand, mg/L)) 11. KN- Kjeldahl Nitrogen (mg N/L) 12. Heavy metals a. AS- Arsenic (mg As/L) b. CD- Cadmium (mg Cd/L) c. PB- Lead (mg Pb/L) d. CR- Chrome (mg Cr/L) e. CU- Copper (mg Cu/L) f. HG- Mercury (mg Hg/L) g. NI- Nickel (mg Ni/L) h. ZN- Zinc (mg Zn/L) 13. HC- Hidrocarbons (mg/L)

Analytical tools

1. Portable multiparametric probe (WTW Multi 3430) with the following sensors: Sentix 940, TetraCon 925, FDO 925.
2. Laboratory analysis (INOVA, http://www.inovacores.pt/)

Periodicity

1. Hourly recordings over a period of 12 hours of a single day, repeated at 3-month intervals, mostly using a multiparametric probe.
2. Daily recordings (on work days), using the same multiparametric probe.
3. Monthly analysis of phosphorus concentration (lab analysis).
4. Semiannual collections of water for lab analysis, various parameters.

Files provided

1. File “LifeCWRWaterQualityData.csv” containing the complete dataset with summary metadata.

Dataset	Date	Time	Place	Point	Paramete	Value	DetLim
DL	21/08/2013		PPV	J	pH	8.87	
DL	21/08/2013		PPV	A	pH	8.81	
DL	21/08/2013		PPV	D	pH	8.65	
DL	21/08/2013		PPV	N	pH	NA	
DL	21/08/2013		PPV	J	ORP	-112	
DL	21/08/2013		PPV	A	ORP	-102	
DL	21/08/2013		PPV	D	ORP	-93	
DL	21/08/2013		PPV	N	ORP	NA	
DL	21/08/2013		PPV	J	TMP	23.5	

2. File “Hourly.xlsx” with the original Excel sheets of 12h sampling routines.

3. Original Excel sheets of the daily sampling routines:
    a. Daily_PBJ.xlsx
    b. Daily_PPCP.xlsx
    c. Daily_PPV.xls

4. Original Excel file of dedicated phosphorus monthly sample routine
   Monthly.xlsx

5. Original Excel file of biannual INOVA lab analysis routine
   Semiannual.xlsx