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SUPPLEMENTARY MATERIAL 1

Exploiting high frequency monitoring and satellite imagery for assessing chlorophyll-a dynamics in a shallow eutrophic lake

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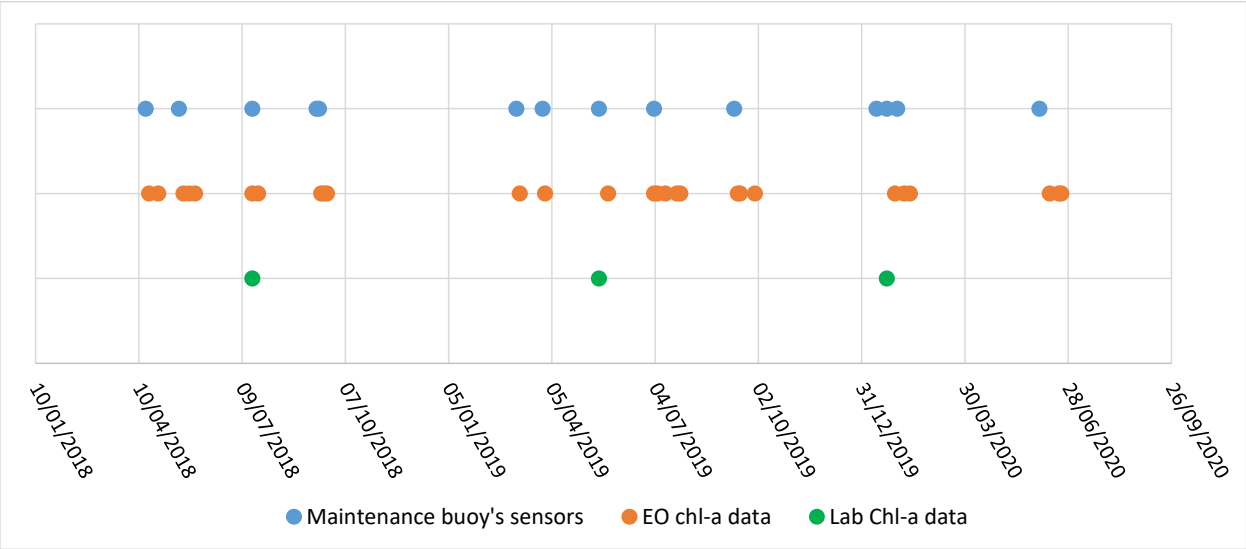

Fig. 1. Timetable of the dates of maintenance of the buoys' sensors (blue dots), of Sentinel-2 images acquisition for Chl-a products (orange dots; EO Chl-a data), and *in situ* sampling for Chl-a detection by spectrophotometer (green dots; Lab Chl-a data) in the Mantua Lakes from 16/04/2018 to 30/06/2020.

Tab. 1. Sentinel-2 satellite images acquisition dates.

Spring	Summer	Autumn	Winter
19/4/2018	18/07/2018	19/09/2018	08/3/2019
27/04/2018	23/07/2018	21/09/2019	29/01/2020
19/05/2018	16/09/2018	29/09/2019	06/2/2020
24/05/2018	3/07/2019		11/02/2020
29/5/2018	06/07/2019		
30/03/2019	13/07/2019		
24/05/2019	23/07/2019		
12/06/2020	26/07/2019		
	14/09/2019		
	16/09/2019		
	20/06/2020		
	22/06/2020		

Tab. 2. Characteristics of the sensors of the multi-parameter probes mounted on the buoys

Parameter	Range	Accuracy	Resolution
Chlorophyll-a (fluorimetry)	0-500 µg L^{-1}	±3%	0.01 µg L^{-1}
Water temperature	-5 to 50 °C	±0.1°C	0.01°C
Conductivity	0 to 100 µS/cm	±0.5% of reading + 0.001 µS/cm	0.001µS/cm

Tab. 3. Installation and maintenance data of the multi-parameter's probes located at Rivalta, Vasarina, Middle Lake, and Masetti dam sites.

	Rivalta	**Vasarina**	**Middle Lake**	**Masetti Dam**
Installation	16/04/2018	16/04/2018	16/04/2018	16/04/2018
Maintenance	15/05/2018	15/05/2018	15/05/2018	15/05/2018
Maintenance	18/07/2018	18/07/2018	18/07/2018	18/07/2018
Maintenance	12/09/2018	12/09/2018	14/09/2018	14/09/2018
Maintenance	05/03/2019	28/03/2019	05/03/2019	05/03/2019
Maintenance	16/05/2019	not working	16/05/2019	16/05/2019
Maintenance	03/07/2019	not working	03/07/2019	03/07/2019
Maintenance	11/09/2019	not working	11/09/2019	11/09/2019
Maintenance	22/01/2020	31/01/2020	22/01/2020	13-22/01/2020
Maintenance	03/06/2020	not working	03/06/2020	03/06/2020