

Evaluation des produits CMEMS-HR

Produits CMEMS HR



[OC-HR-S2] New Ocean Colour Sentinel 2 High Resolution products

S2-MSI L3 100 m (2020-2021)

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Date: 30 April 2021

As part of the [4th May release](#), the very new and expected Ocean Colour Sentinel 2 High Resolution products are added in the catalogue:

[OCEANCOLOUR ARC BGC HR L3 NRT 009 201](#)
[OCEANCOLOUR BAL BGC HR L3 NRT 009 202](#)
[OCEANCOLOUR NWS BGC HR L3 NRT 009 203](#)
[OCEANCOLOUR IBI BGC HR L3 NRT 009 204](#)
[OCEANCOLOUR MED BGC HR L3 NRT 009 205](#)
[OCEANCOLOUR BLK BGC HR L3 NRT 009 206](#)
[OCEANCOLOUR ARC BGC HR L4 NRT 009 207](#)
[OCEANCOLOUR BAL BGC HR L4 NRT 009 208](#)
[OCEANCOLOUR NWS BGC HR L4 NRT 009 209](#)
[OCEANCOLOUR IBI BGC HR L4 NRT 009 210](#)
[OCEANCOLOUR MED BGC HR L4 NRT 009 211](#)
[OCEANCOLOUR BLK BGC HR L4 NRT 009 212](#)

- Arctique
- Baltique
- Mer du Nord
- Golfe de Gascogne
- Méditerranée
- Mer Noire

Produits CMEMS HR

S2A/B-MSI 100m L3

REFERENCES

- Lavigne, H., et al. (2021), Quality-control tests for OC4, OC5 and NIR-red satellite chlorophyll-a algorithms applied to coastal waters, Remote Sensing of Environment, in press.
- Lee, Z. P., et al. (2002), Deriving inherent optical properties from water color: A multi-band quasi-analytical algorithm for optically deep waters, Applied Optics, 41, 5755-5772.
- Novoa, S., et al. (2017), Atmospheric corrections and multi-conditional algorithm for multi-sensor remote sensing of suspended particulate matter in low-to-high turbidity levels coastal waters. Remote Sens., v. 9, 61.
- Gons, et al. (2005), Effect of a waveband shift on chlorophyll retrieval from MERIS imagery of inland and coastal waters, J. Plankton Res., v. 27, n. 1, p. 125-127.
- O'Reilly, et al. (2019), Chlorophyll algorithms for ocean color sensors-OC4, OC5 & OC6. Remote Sensing of Environment. 229, 32-47.

VARIABLES

mass_concentration_of_chlorophyll_a_in_sea_water (CHL)
surface_ratio_of_upwelling_radiance_emerging_from_sea_water_to_downwelling_radiative_flux_in_air (RRS)
sea_water_turbidity (TUR)
mass_concentration_of_suspended_matter_in_sea_water (SPM)
volume_backwards_scattering_coefficient_of_radiative_flux_in_sea_water_due_to_particles (BBP)

Rrs, Turbidité, SPM, Chla, bbp
100 m

Zone côtière (20 km)

Corrections atmosphériques :
C2RCC, ACOLITE, iCOR

BC, RBINS (FP7-HIGHROC)

Produits CMEMS HR

OCEANCOLOUR_MED_BGC_HR_L3_NRT_009_205

API - CSW METADATA

Dataset	SUBS ⓘ	OPENDAP ⓘ	ERDDAP ⓘ	FTP ⓘ	DGF ⓘ	WMS ⓘ
cmems_obs_oc_med_bgc_geophy_nrt_l3-hr_P1D-m	N/A	N/A	N/A		N/A	N/A
cmems_obs_oc_med_bgc_optics_nrt_l3-hr_P1D-m	N/A	N/A	N/A		N/A	N/A
cmems_obs_oc_med_bgc_transp_nrt_l3-hr_P1D-m	N/A	N/A	N/A		N/A	N/A
cmems_obs_oc_med_bgc_tur-spm-chl_nrt_l3-hr-mosaic_P1D-m	API	API	N/A		N/A	API

Geographical area

☒ Whole available region ☐ Sub-region extraction

N

45.999537037037037

W

-5.9993386243385

E

36.9993386243385

S

30.00046296296296

Geographical area

☐ Whole available region ☒ Sub-region extraction

N

43.60

W

3.5

E

6

S

42.80

Reset geographical selection

Produits CMEMS HR

Time range

(Default = Last date available)

☐ Select all dates

Start date

2022-02-15 00:00:00

End date

2022-02-15 00:00:00

Variables

(Default = All variables)

☒	Name	Description	Standard name	Units
☒	CHL	Chlorophyll-a concentration derived from MSI L2R using HR-OC L2W processor	mass_concentration_of_chlorophyll_a_in_sea_water	mg m-3
☒	SPM	Suspended Particulate Matter derived from MSI L2R using HR-OC L2W processor	mass_concentration_of_suspended_matter_in_sea_water	g m-3
☒	TUR	Turbidity derived from MSI L2R using HR-OC L2W processor	sea_water_turbidity	FNU



Your data are ready!



Download Data



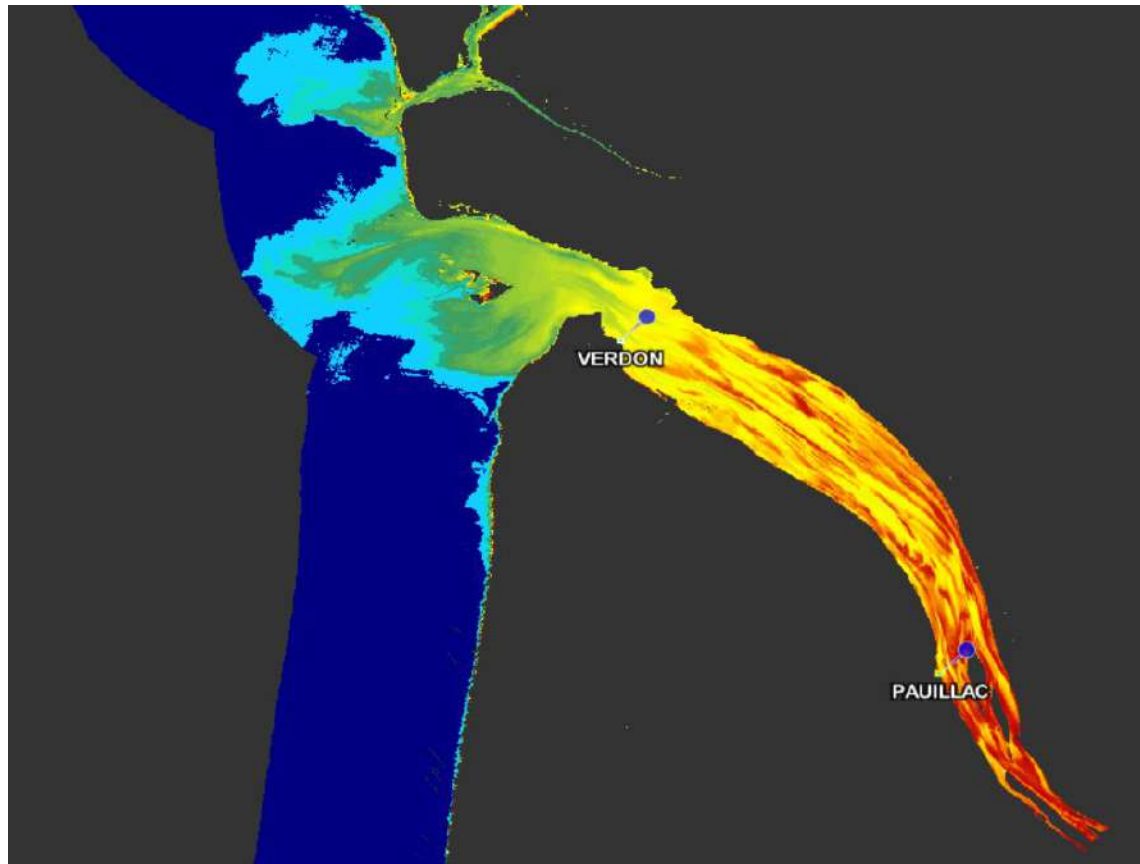
Download

➔ 1 fichier .nc

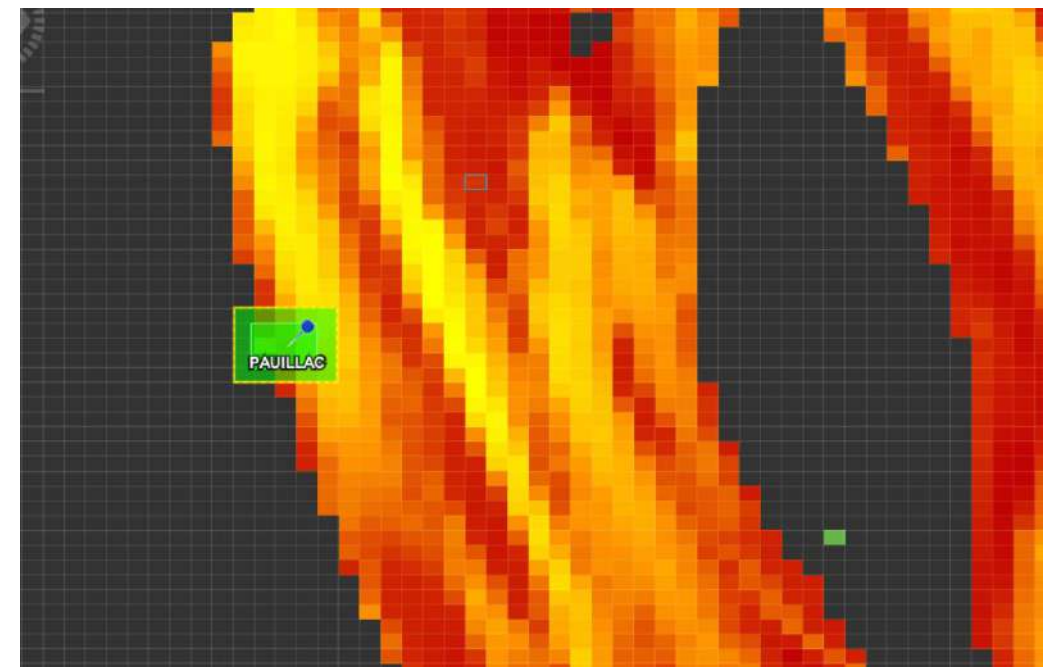
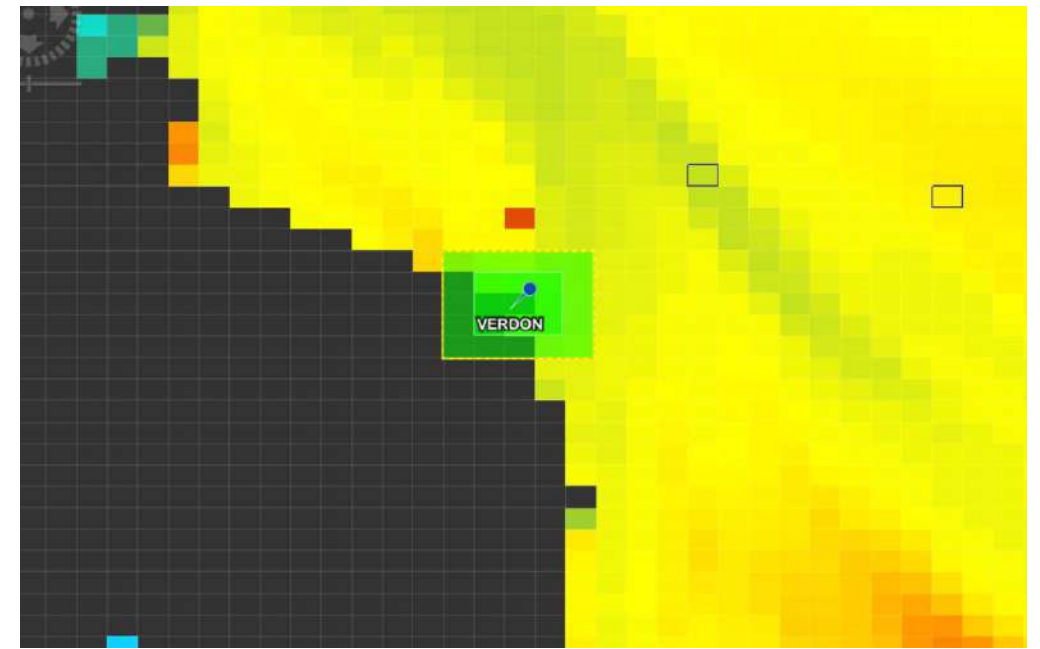
Comparaisons entre produits CMEMS-HR et
mesures in-situ autonomes dans l'estuaire de la
Gironde, à l'embouchure du Rhône et en Baie de
Seine

(I. Salah-Salah, stage M2 OSYNICO)

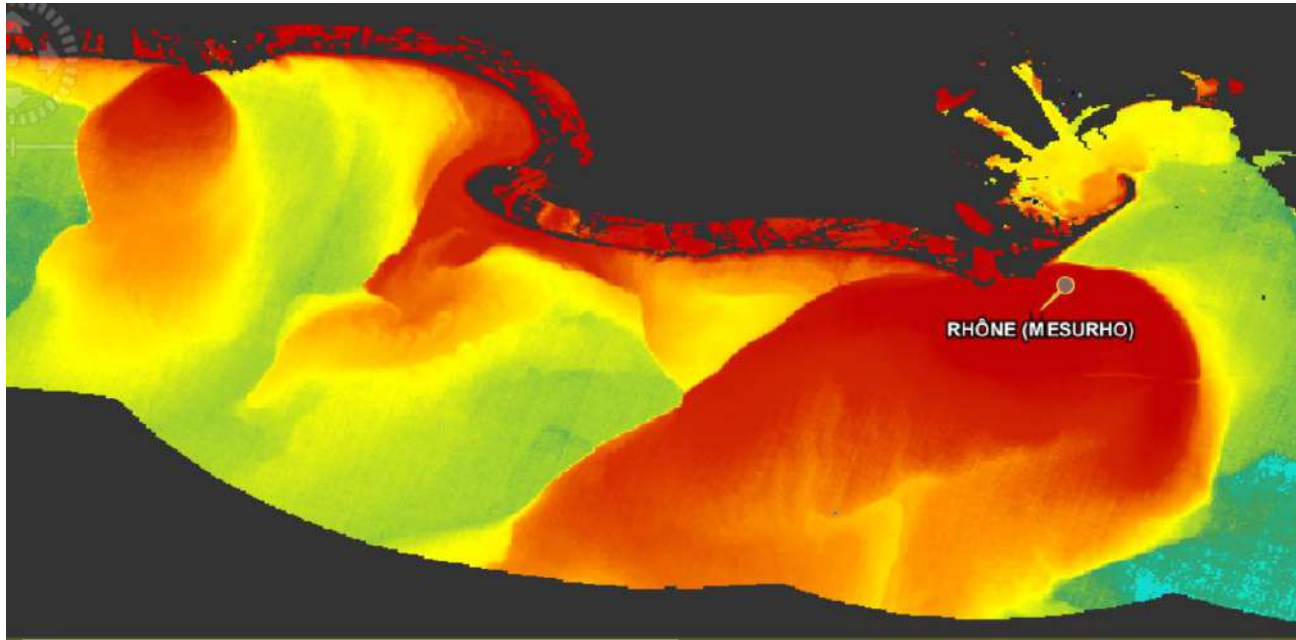
Estuaire de la Gironde



Turbidité (FNU) le 06/08/2020



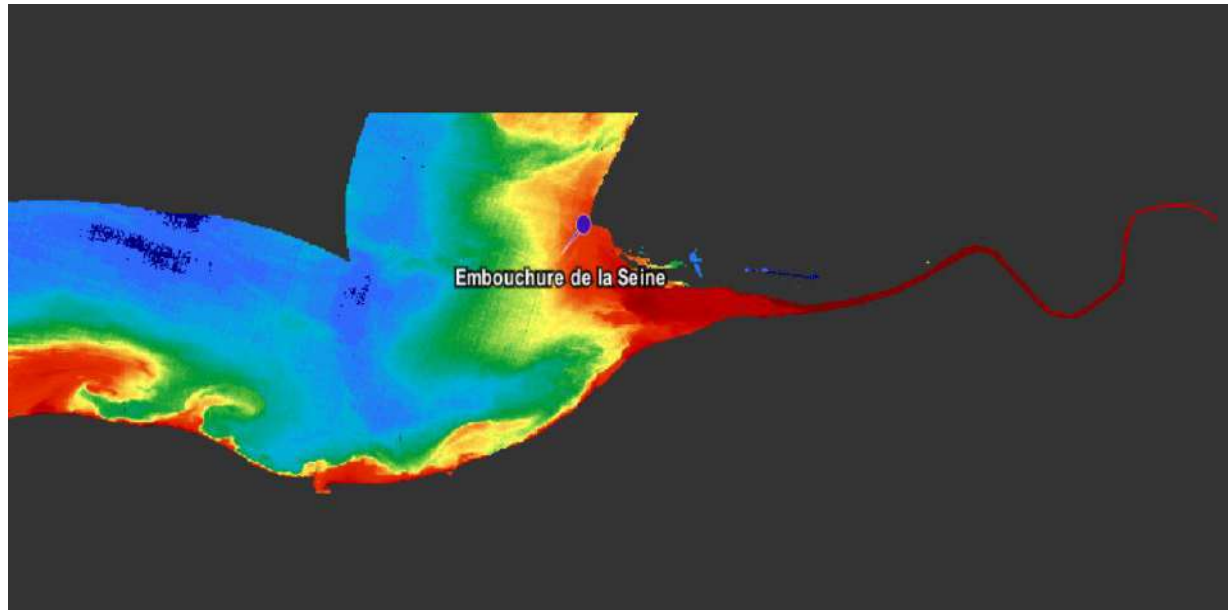
Embouchure du Rhône



Turbidité (FNU) le 08/03/2020



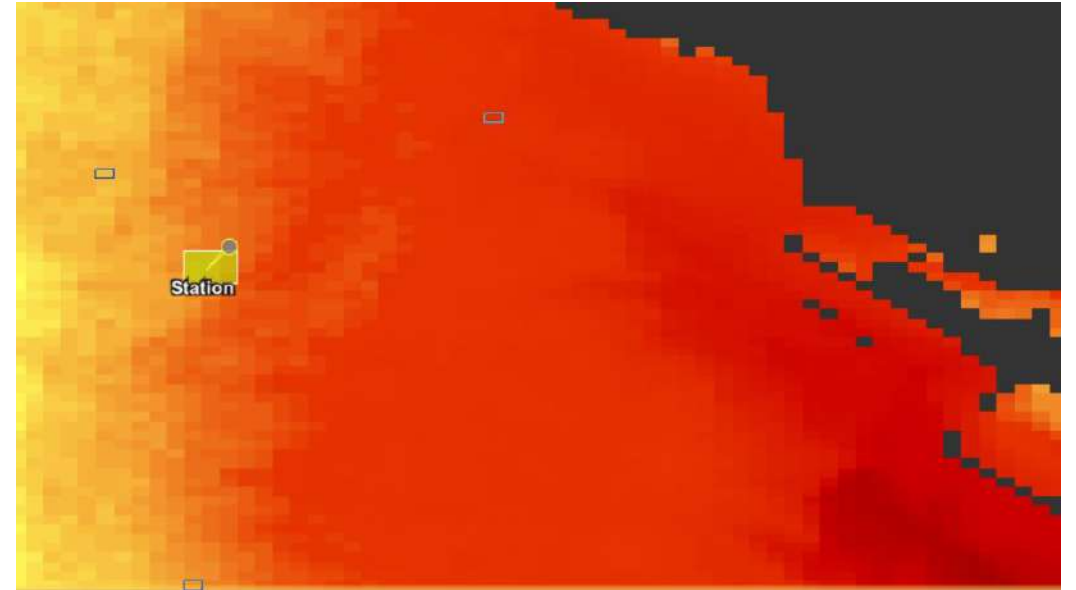
Embouchure de la Seine



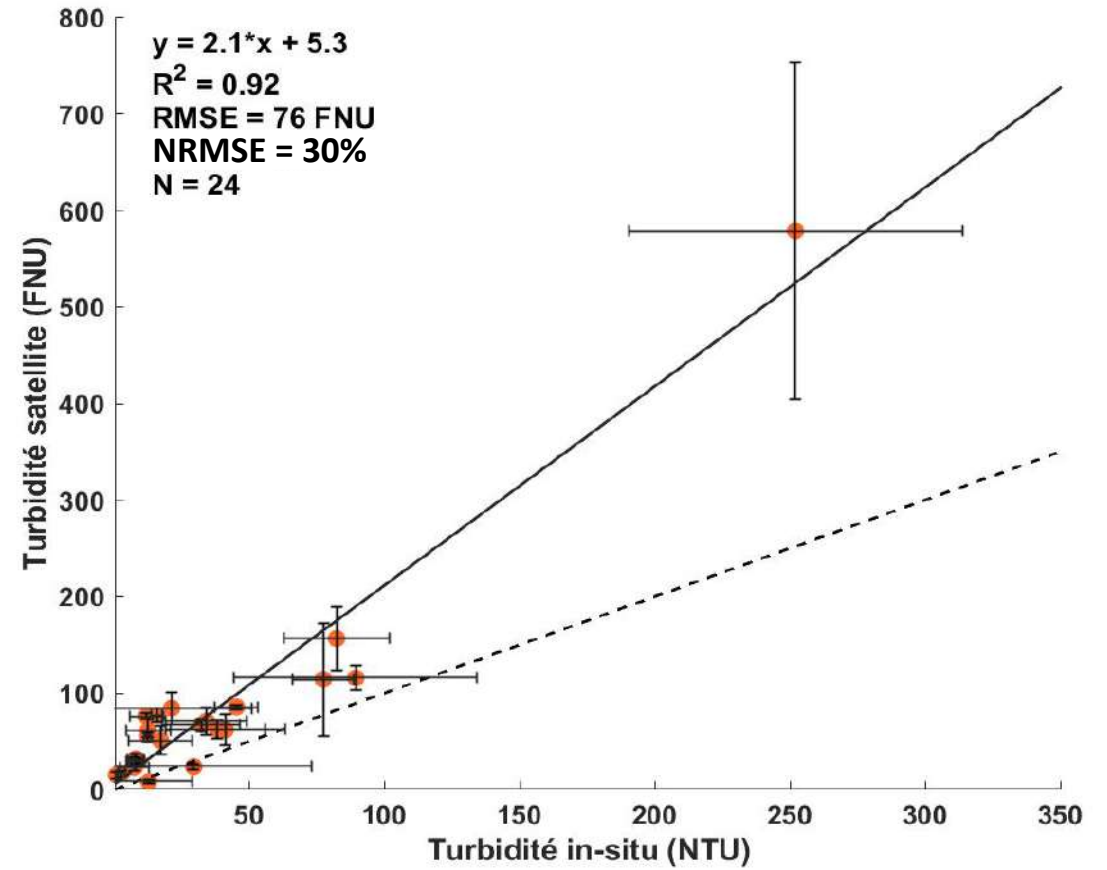
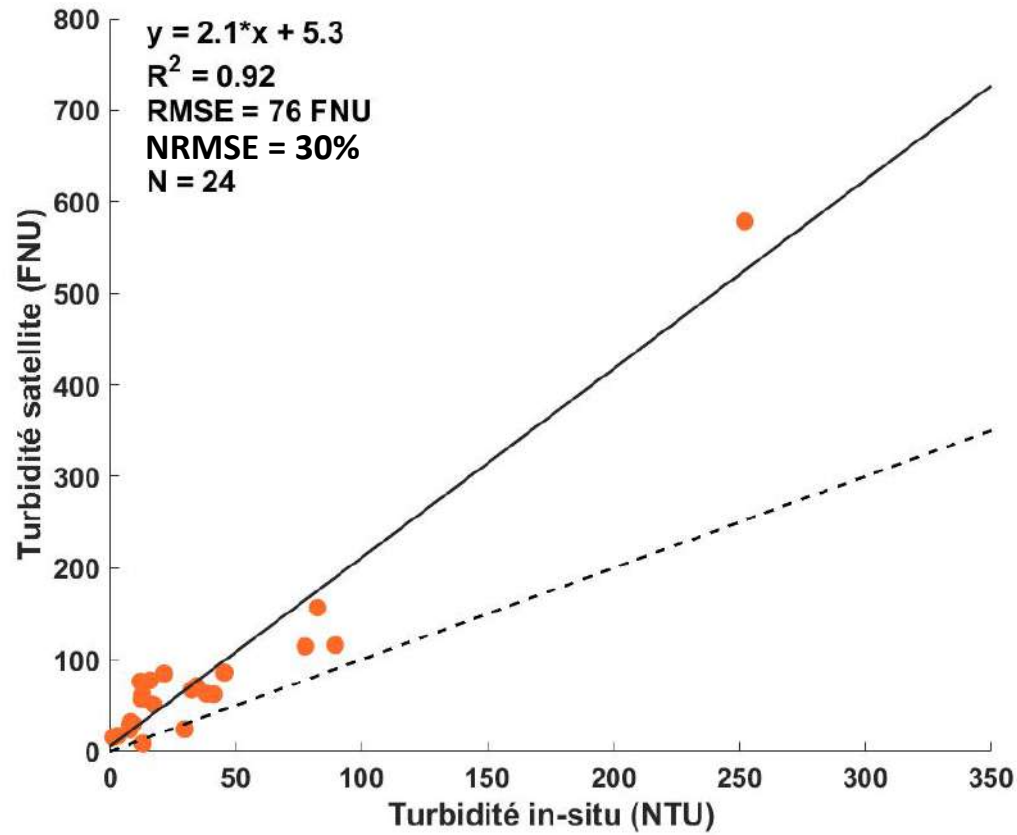
Turbidité (FNU) le 23/04/2020



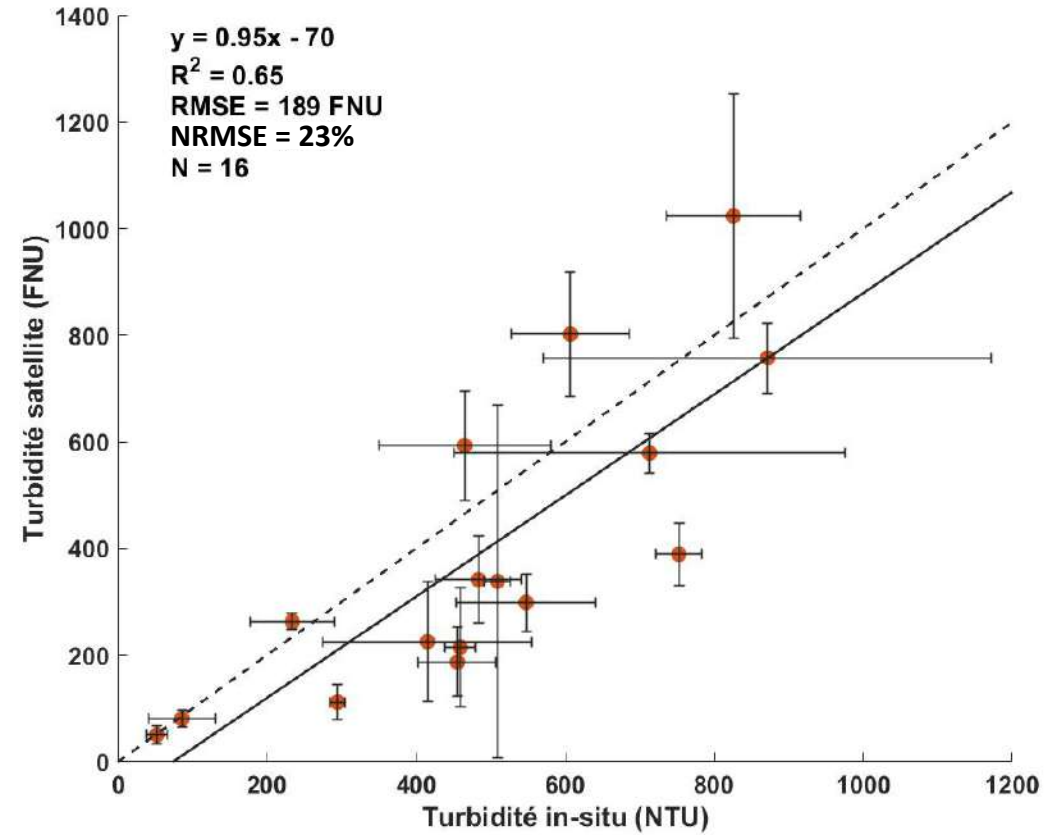
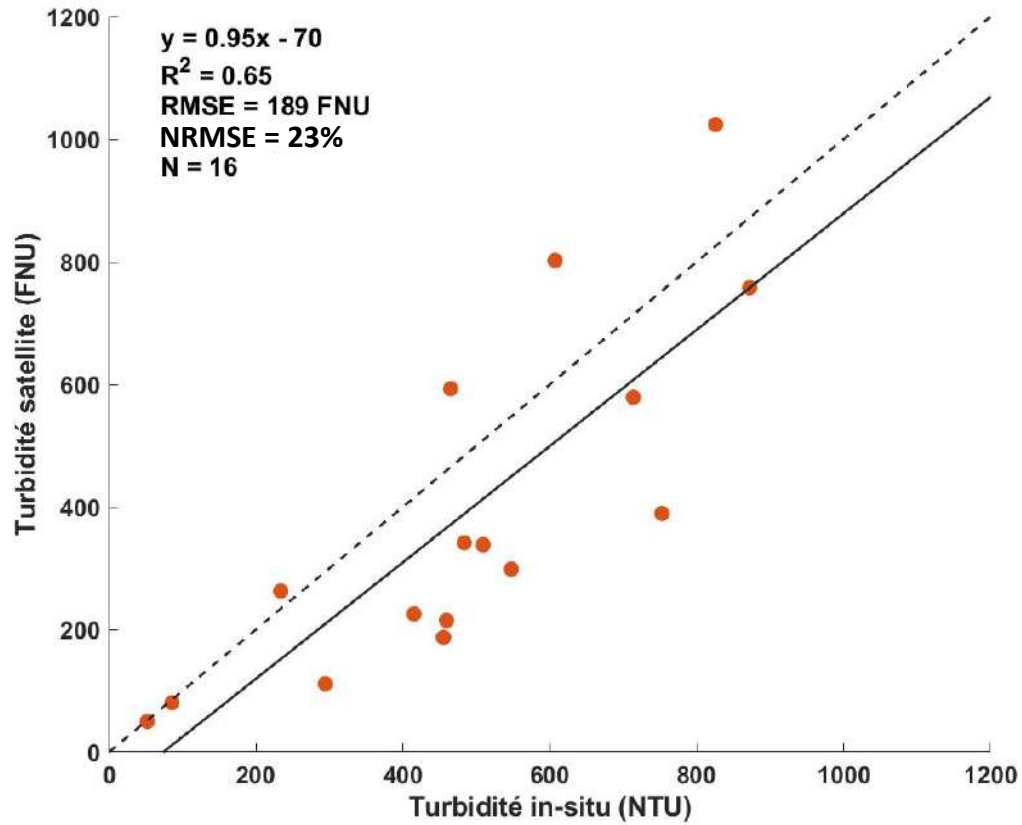
Fig: Visualisation de l'embouchure de la Seine à partir du produit CMEMS-HR en utilisant SNAP et en montrant la station de mesure in-situ



Turbidité au Verdon en 2020



Turbidité à Pauillac en 2020



Turbidité à l'embouchure de la seine en 2020 et en 2021

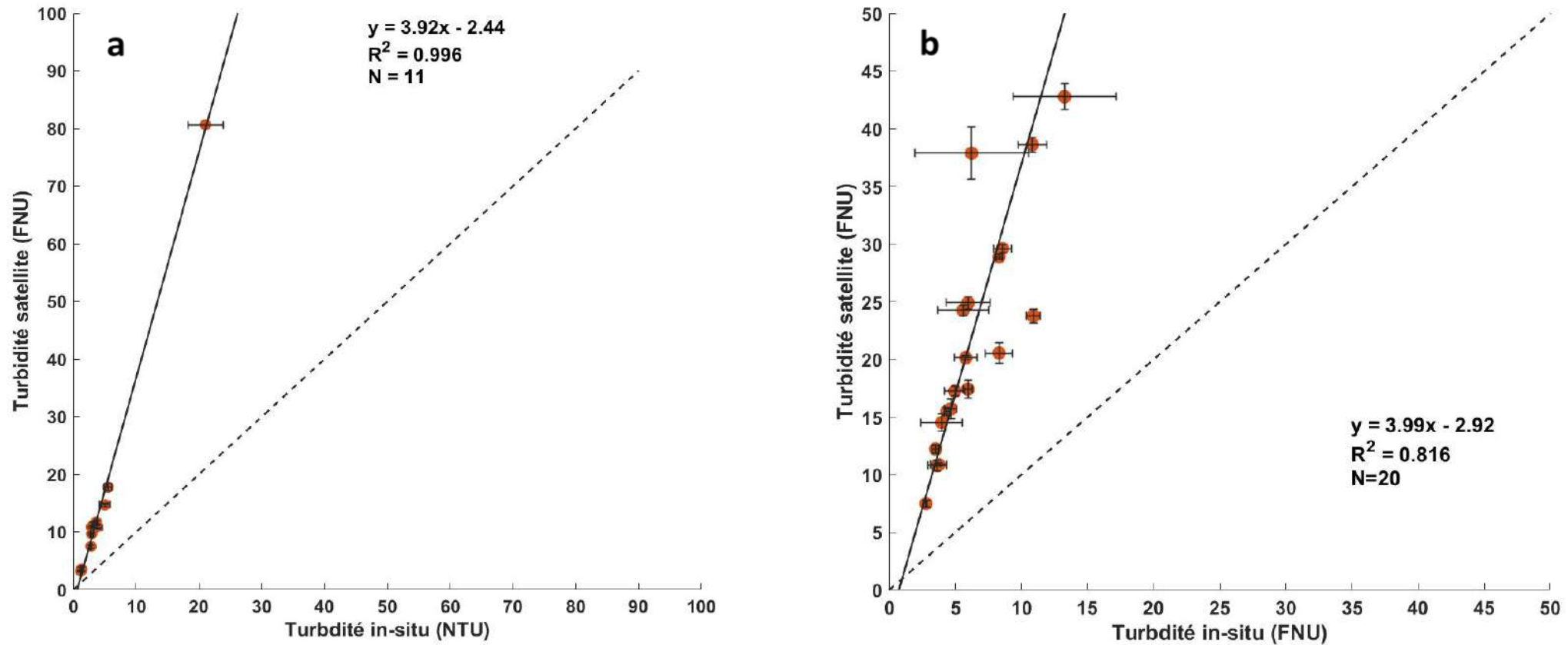
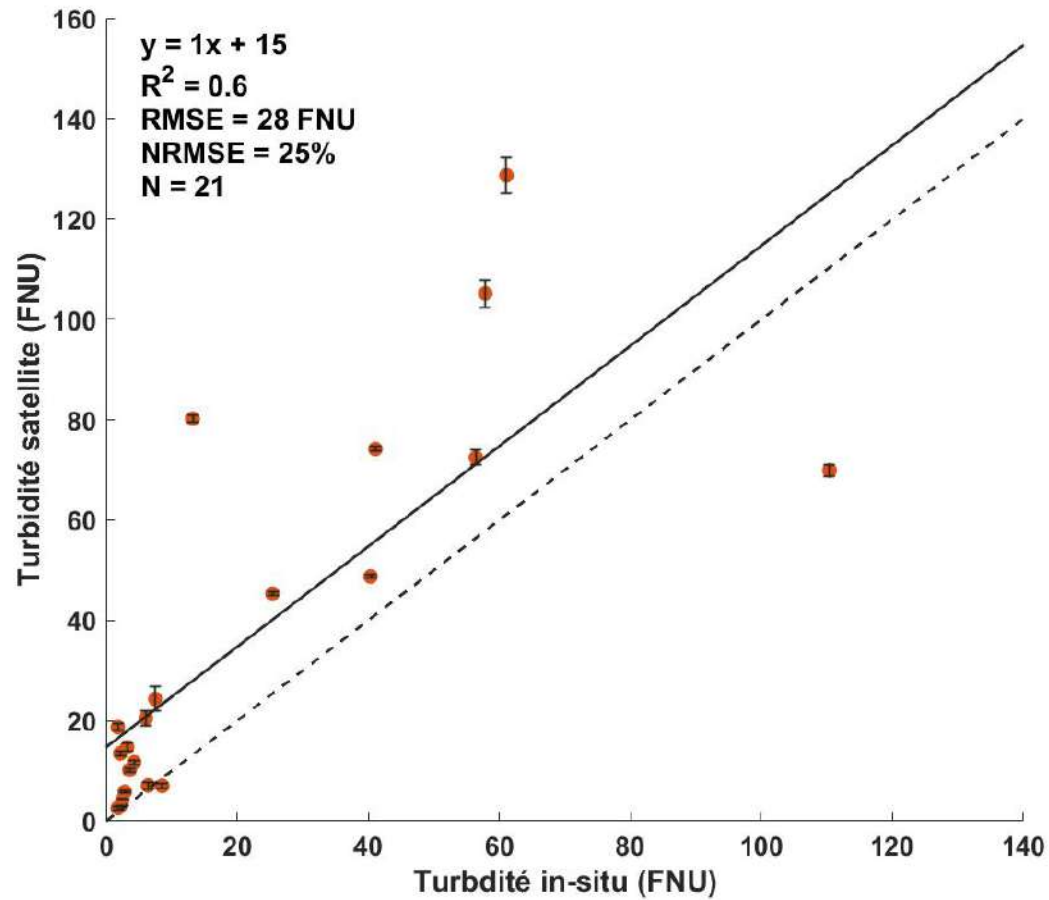
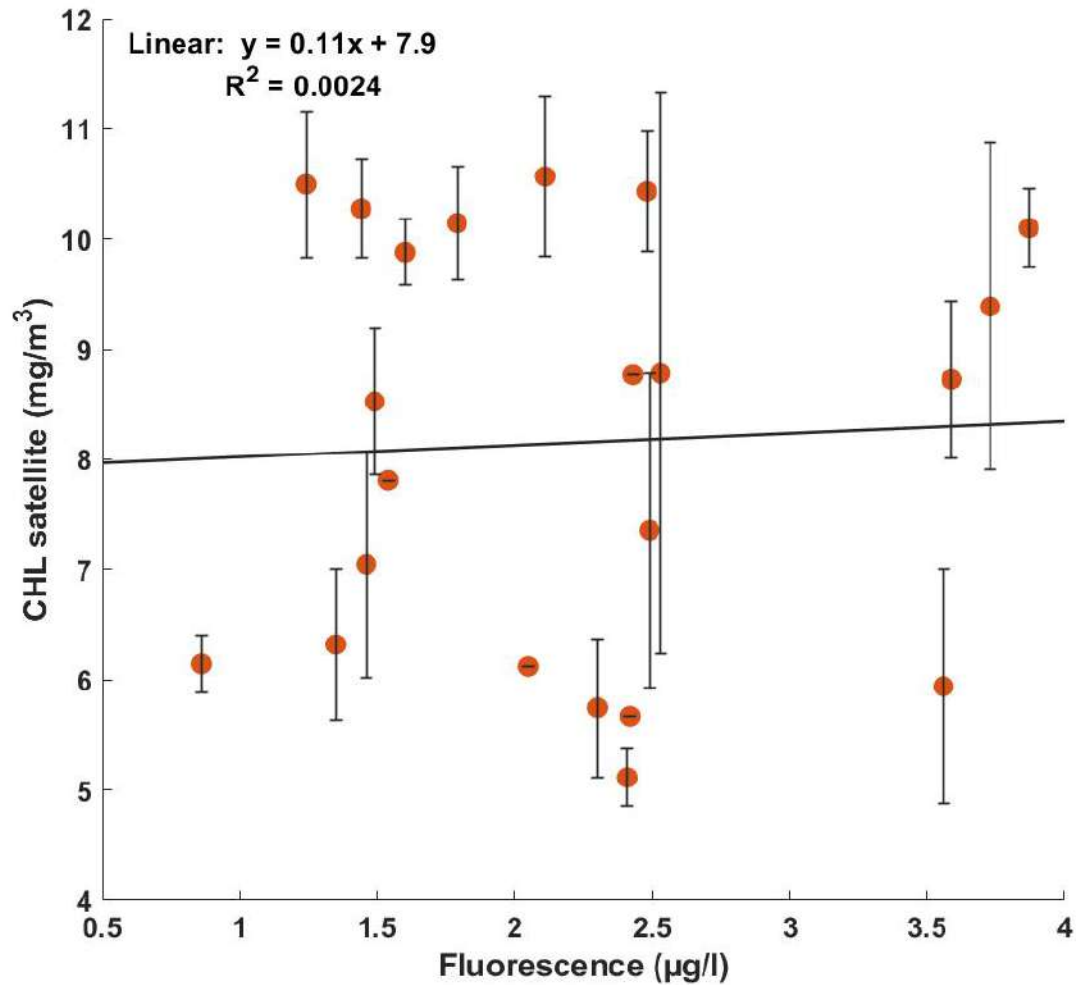


Fig: Comparaison entre la turbidité récupérée à partir des données CMEMS-HR (Satellite) et la turbidité mesurée in-situ à l'embouchure de la Seine **a)** en 2020 **b)** en 2021 ; la ligne en trait plein représente la régression linéaire , la ligne en trait discontinu représente la relation 1:1.

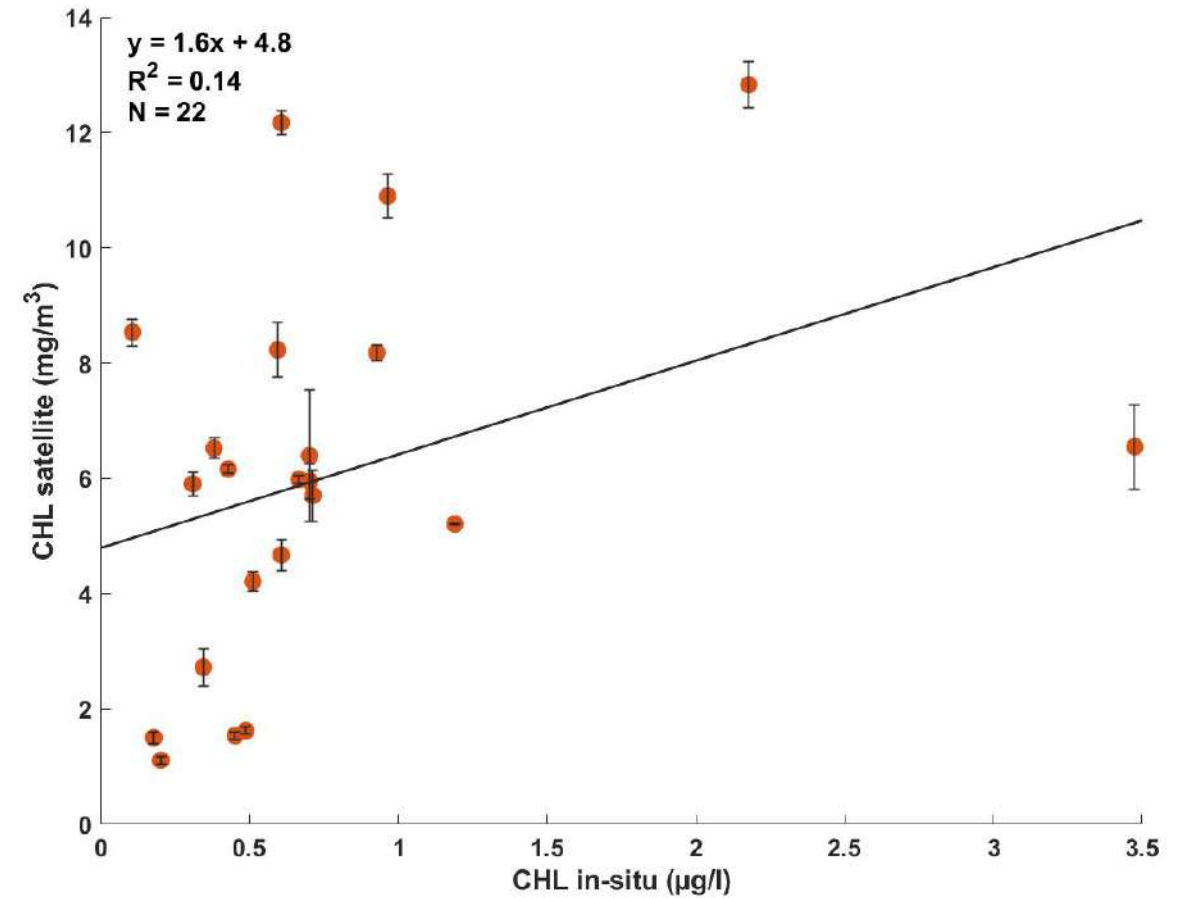
Turbidité à l'embouchure du Rhône en 2020



Chla, Gironde en 2020



Chla, Rhône en 2020



Concentration en chlorophylle à l'embouchure de la Seine en 2020 et en 2021

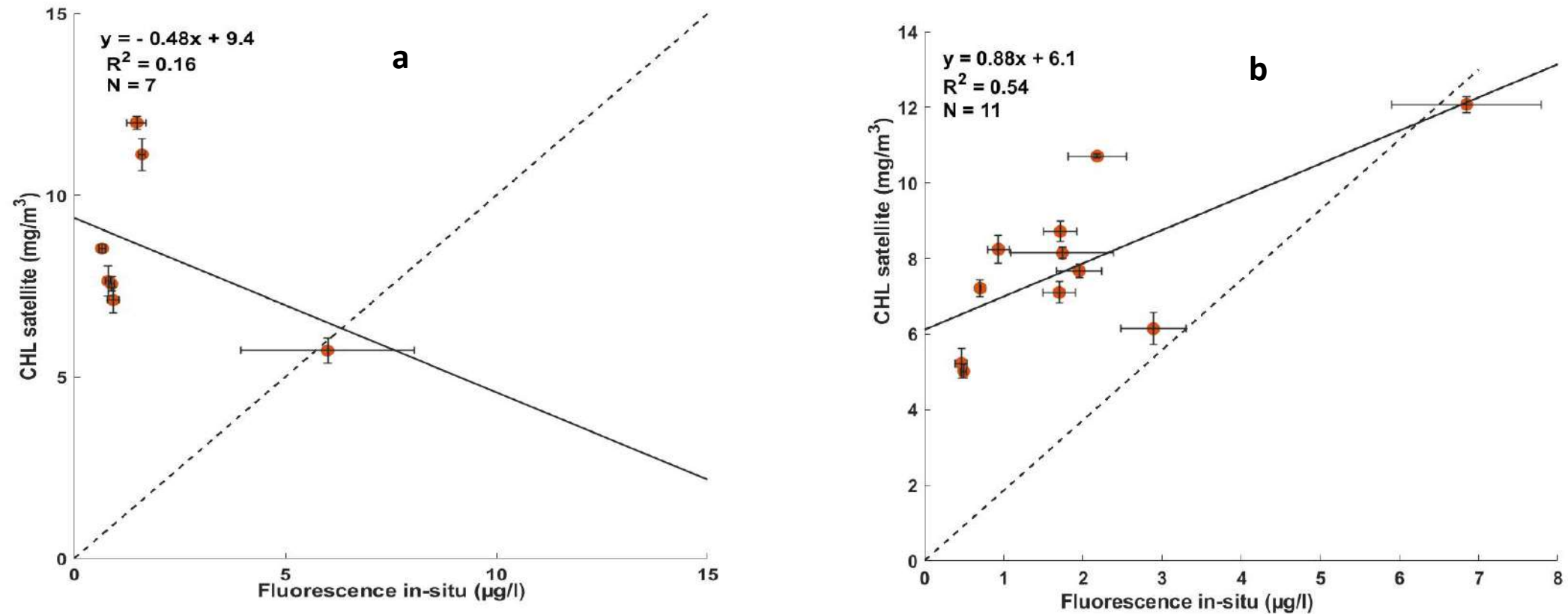


Fig: Comparaison entre la concentration en chlorophylle récupérée à partir des données CMEMS-HR (Satellite) et Fluorescence mesurée in-situ à l'embouchure de la Seine **a)** en 2020 **b)** en 2021 ; la ligne en trait plein représente la régression linéaire, la ligne en trait discontinu représente la relation 1:1.