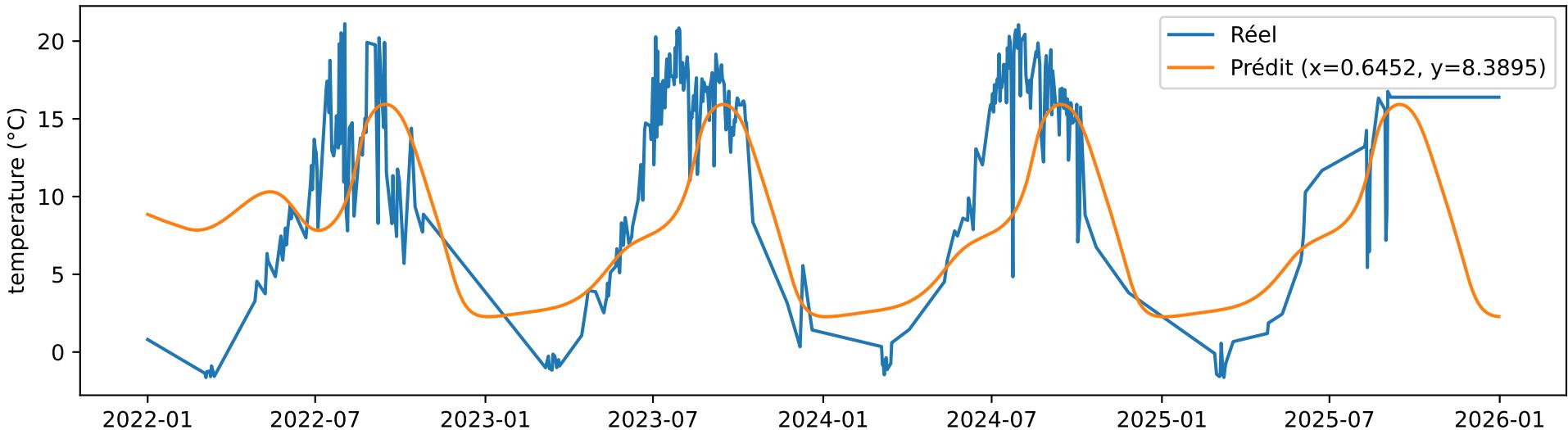
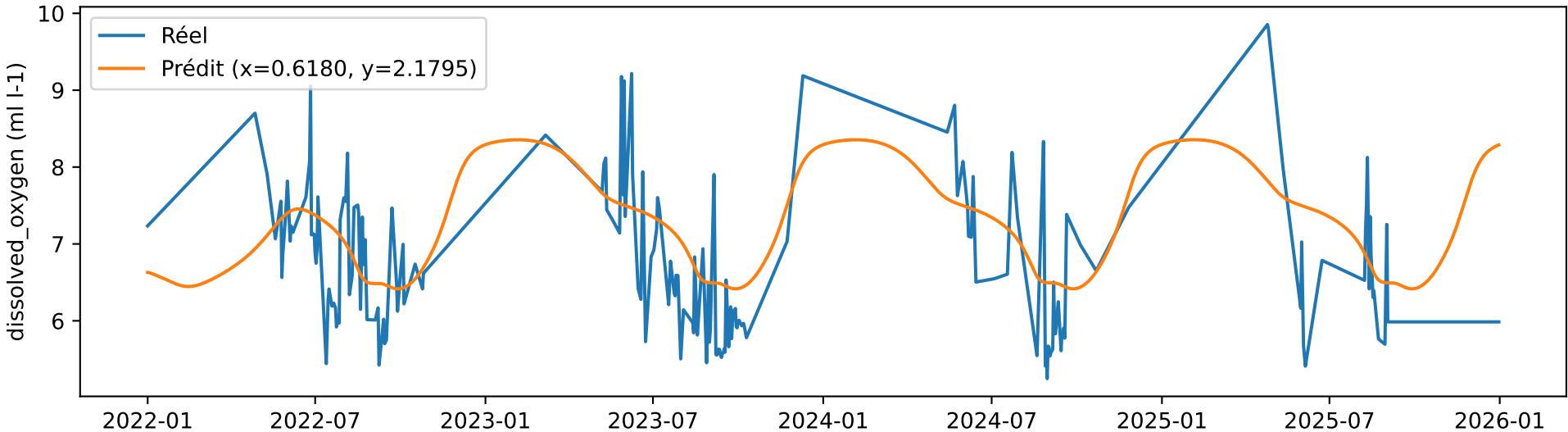


temperature (°C) — RMSE=4.888 R2=0.444



dissolved_oxygen (ml l⁻¹) — RMSE=0.837 R2=0.399



Résultats LSTM multivarié (après OLS)

Période entraînement : 2015-01-18 -> 2021-12-31

Période test : 2022-01-01 -> 2025-12-31

Metrics par variable (après transformation optimale) :

- temperature (°C): RMSE=4.8879, R2=0.4438 ($x=0.645198$, $y=8.389462$, $R2_{opt}=0.443753$)
- dissolved_oxygen (ml l⁻¹): RMSE=0.8374, R2=0.3988 ($x=0.617953$, $y=2.179481$, $R2_{opt}=0.398783$)