



Correction

# Correction: Jin et al. Influence of the Nocturnal Effect on the Estimated Global CO<sub>2</sub> Flux. *Remote Sens.* 2022, 14, 3192

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## Text Correction

We believe that several sentences in the description of the source (sink) changes of CO<sub>2</sub> are prone to ambiguity and are not particularly well presented. There were errors in the original publication [1].

1. The original sentence was located in **Abstract**, **Paragraph 1**, **Penultimate sentence of the abstract**:

**The mean global daily CO<sub>2</sub> flux estimated based on the nocturnal effect and the sub-regional  $p\text{CO}_{2w}$  algorithm ( $cor\_F_{com}$ ) was  $-6.86 \text{ mol m}^{-2} \text{ y}^{-1}$  (September 2020–August 2021), which was smaller by  $0.75 \text{ mol m}^{-2} \text{ y}^{-1}$  than that based solely on the sub-regional  $p\text{CO}_{2w}$  algorithm ( $day\_F_{com}$ )**.

A correction has been made to **Abstract**, **Paragraph 1**, **Penultimate sentence of the abstract**:

**The mean global daily CO<sub>2</sub> flux estimated based on the nocturnal effect and the sub-regional  $p\text{CO}_{2w}$  algorithm ( $cor\_F_{com}$ ) was  $-6.86 \text{ mol m}^{-2} \text{ y}^{-1}$  (September 2020–August 2021), which was greater by  $0.75 \text{ mol m}^{-2} \text{ y}^{-1}$  than that based solely on the sub-regional  $p\text{CO}_{2w}$  algorithm ( $day\_F_{com} = -7.61 \text{ mol m}^{-2} \text{ y}^{-1}$ )**.

2. The original sentence was located in **Abstract**, **Paragraph 1**, **Last sentence of the abstract**:

**That is, compared with  $day\_F_{com}$ , the global  $cor\_F_{com}$  value overestimated the CO<sub>2</sub> sink of the global ocean by 10.89%**.

A correction has been made to **Abstract**, **Paragraph 1**, **Last sentence of the abstract**:

**That is, compared with  $cor\_F_{com}$ , the global  $day\_F_{com}$  value overestimated the CO<sub>2</sub> sink of the global ocean by 10.89%**.

3. The original sentence was located in **Results and Discussion**, **3.5.2. Estimation of the CO<sub>2</sub> Flux Using the Nocturnal Effect**, **Paragraph 3**, **Last three sentences of the paragraph**:

**Specifically, compared with  $day\_F_{com}$ , the global  $cor\_F_{com}$  value increased by  $4.90 \times 10^{-4} \text{ mmol m}^{-2} \text{ d}^{-1}$ , thereby overestimating the oceanic CO<sub>2</sub> sink by 10.21%. The mean monthly increase was  $2.50 \text{ mmol m}^{-2} \text{ month}^{-1}$ , thus overestimating the mean oceanic CO<sub>2</sub> sink by 10.68%. The mean annual increase was  $0.75 \text{ mol m}^{-2} \text{ y}^{-1}$ , thereby overestimating the mean oceanic CO<sub>2</sub> sink by 10.89%**.

A correction has been made to **Results and Discussion**, **3.5.2. Estimation of the CO<sub>2</sub> Flux Using the Nocturnal Effect**, **Paragraph 3**, **Last three sentences of the paragraph**:



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\*\*Specifically, compared with  $day_{F_{com}}$ , the global  $cor_{F_{com}}$  value increased by  $0.18 \text{ mmol m}^{-2} \text{ d}^{-1}$ , thereby  $day_{F_{com}}$  overestimating the oceanic  $\text{CO}_2$  sink by 10.21%. The mean monthly increase was  $2.50 \text{ mmol m}^{-2} \text{ month}^{-1}$ , thus  $day_{F_{com}}$  overestimating the mean oceanic  $\text{CO}_2$  sink by 10.68%. The mean annual increase was  $0.75 \text{ mol m}^{-2} \text{ y}^{-1}$ , thereby  $day_{F_{com}}$  overestimating the mean oceanic  $\text{CO}_2$  sink by 10.89%\*\*.

4. The original sentence was located in \*\*Conclusions\*\*, \*\*Paragraph 5\*\*, \*\*Last three sentences of the paragraph\*\*:

\*\*Compared with  $day_{F_{com}}$ , the global  $cor_{F_{com}}$  value was greater by  $4.90 \times 10^{-4} \text{ mmol m}^{-2} \text{ d}^{-1}$ , thereby overestimating the oceanic  $\text{CO}_2$  sink by 10.21%. The mean monthly increase was  $2.50 \text{ mmol m}^{-2} \text{ month}^{-1}$ , thus overestimating the mean oceanic  $\text{CO}_2$  sink by 10.68%. The mean annual increase was  $0.75 \text{ mol m}^{-2} \text{ y}^{-1}$ , thus overestimating the mean oceanic  $\text{CO}_2$  sink by 10.89%\*\*.

A correction has been made to \*\*Conclusions\*\*, \*\*Paragraph 5\*\*, \*\*Last three sentences of the paragraph\*\*:

\*\*Compared with  $day_{F_{com}}$ , the global  $cor_{F_{com}}$  value was greater by  $0.18 \text{ mmol m}^{-2} \text{ d}^{-1}$ , thereby  $day_{F_{com}}$  overestimated the oceanic  $\text{CO}_2$  sink by 10.21%. The mean monthly increase of  $cor_{F_{com}}$  was  $2.50 \text{ mmol m}^{-2} \text{ month}^{-1}$ , thus  $day_{F_{com}}$  overestimated the mean oceanic  $\text{CO}_2$  sink by 10.68%. The mean annual increase of  $cor_{F_{com}}$  was  $0.75 \text{ mol m}^{-2} \text{ y}^{-1}$ , thus  $day_{F_{com}}$  overestimated the mean oceanic  $\text{CO}_2$  sink by 10.89%\*\*.

5. We want to add the following two sentences on  $\text{CO}_2$  source and sink to \*\*Introduction\*\*, \*\*Paragraph 2\*\*, after the phrase:

\*\*At present, the sea–air  $\text{CO}_2$  flux can be measured directly using the eddy correlation method. Alternatively, the  $\text{CO}_2$  flux is often calculated by the block method formula [4], as follows: sea–air  $\text{CO}_2$  flux = sea–air gas transfer velocity  $\times$  solubility of  $\text{CO}_2$  in seawater  $\times$  ( $p\text{CO}_2$  in seawater– $p\text{CO}_2$  in air)\*\*.

The added sentence is:

\*\*If the  $\text{CO}_2$  flux is positive, it means that  $\text{CO}_2$  enters the atmosphere from the ocean, i.e., the ocean is the source of  $\text{CO}_2$ . If the  $\text{CO}_2$  flux is negative, it means that  $\text{CO}_2$  enters the ocean from the atmosphere, i.e., the ocean is the sink of  $\text{CO}_2$ \*\*.

The authors apologize for any inconvenience caused and state that the scientific conclusions are unaffected. This correction was approved by the Academic Editor. The original publication has also been updated.

## Reference

1. Jin, R.; Yu, T.; Tao, B.; Shao, W.; Hu, S.; Wei, Y. Influence of the Nocturnal Effect on the Estimated Global  $\text{CO}_2$  Flux. *Remote Sens.* **2022**, *14*, 3192. [[CrossRef](#)]