

Correction

Correction: Isaev et al. Accounting for Dissolved Organic Nutrients in an SPBEM-2 Model: Validation and Verification. *Water* 2020, 12, 1307

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Error in Figure 11

In the original article [1], there was a mistake in Figure 11 as published. Modelling result was calculated with the erroneous conversion C:N factor. The corrected Figure 11 appears below. The authors apologize for any inconvenience caused and state that the scientific conclusions are unaffected. The original article has been updated.



Citation: Isaev, A.; Vladimirova, O.; Eremina, T.; Ryabchenko, V.; Savchuk, O. Correction: Isaev et al. Accounting for Dissolved Organic Nutrients in an SPBEM-2 Model: Validation and Verification. *Water* 2020, 12, 1307. *Water* 2021, 13, 1466. <https://doi.org/10.3390/w13111466>

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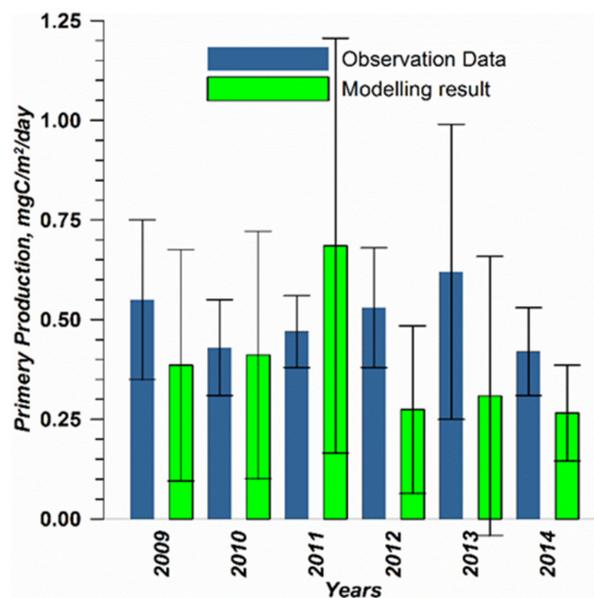


Figure 11. Statistical comparison of the primary production, simulated as the phytoplankton growth rate, including the nitrogen fixation, and measured by the bulk light–dark oxygen method at the end of July until the beginning of August in the Eastern Gulf of Finland.

Error in Table 3

In the original article [1], there were two mistakes in Table 3 as published. (1) Model mean and Std were calculated with the erroneous conversion C:N factor. (2) The order of columns (from left to right) was inconsistent. The corrected Table 3 appears below. The authors apologize for any inconvenience caused and state that the scientific conclusions are unaffected. The original article has been updated.

Table 3. Comparison of the simulated primary production ($\text{g C m}^{-2} \text{ day}^{-1}$) with estimates obtained using the bulk light–dark oxygen method at the end of July until the beginning of August in the Eastern Gulf of Finland (positions of the stations with measurements are indicated in Figure 2).

Primary Production, $\text{g C m}^{-2} \text{ day}^{-1}$					
Model			Observations		
Year	Mean	Std	Mean	Std	N
2009	0.39	0.29	0.55	0.20	17
2010	0.41	0.31	0.43	0.12	12
2011	0.69	0.52	0.47	0.09	10
2012	0.27	0.21	0.53	0.15	9
2013	0.31	0.35	0.62	0.37	12
2014	0.27	0.12	0.42	0.11	15
Mean	0.39	0.39	0.50	0.21	

Text Correction

There was an error in the original article [1]. On page 9, a wrong conversion C:N factor of 6.625 was used instead of the correct one of 5.7.

A correction has been made to 2. Materials and Methods, 2.4. Model performance, 9.

The capability of the model in simulating the biotic part of the ecosystem is demonstrated through a comparison with the measurements of phytoplankton primary production (PP) performed for years by the Russian State Hydrometeorological University in the Eastern Gulf of Finland. Measurements were carried out by the light–dark (or bulk) oxygen evolution method, which has been used for almost a century [44–46]. The method consists of the registration of changes in oxygen concentration using the high-precision Winkler method, with a 0.1% precision in oxygen determinations [47,48], following the 24 h incubation of natural communities in clear and dark bottles. The primary production is calculated as the sum of the rate of change in the oxygen concentration in clear bottles (equal to the primary production minus respiration) and that in dark bottles, i.e., the respiration. The measurements were conducted at a network of stations (Figure 2) from the end of July to the beginning of August. The selection of simulated values for comparison was conducted as follows. First, for every experimental estimate of PP, simulated values were compiled from a quadrat of 3×3 grid cells surrounding the station of measurements and for three days in a row, enveloping the time of measurements. Then, the simulated phytoplankton growth rates in nitrogen units, as well as the nitrogen fixation by cyanobacteria, were summed up and converted into carbon units, with a factor of 5.7. Finally, this dataset was averaged and used in a statistical model–data comparison for all the measurements in every simulated year. At the same time, we did not consider the routine chlorophyll observations as a good measure for comparison with the simulated phytoplankton biomass, expressed in nitrogen units, when such a comparison is conducted with quota coefficients that are fixed relative to carbon and chlorophyll [49,50]. A large intrinsic seasonal and interspecies variation in these quotas [51–53] makes this type of model–data comparison too uncertain and unconvincing [2].

Reference

1. Isaev, A.; Vladimirova, O.; Eremina, T.; Ryabchenko, V.; Savchuk, O. Accounting for Dissolved Organic Nutrients in an SPBEM-2 Model: Validation and Verification. *Water* **2020**, *12*, 1307. [[CrossRef](#)]