

Comments to the Author:

Dear authors

I appreciate the effort you put in revising the manuscript.

Yet, some more work has to be done before I can accept the manuscript.

My line numbers refer to the highlighted manuscript version attached to the author response.

Especially, point 1 is a bit cumbersome.

Authors response to Editor

Dr. Simon Unterstrasser,

Thank you for your recent review and decision to publish, subject to a minor revision. Please refer to responses and updates outlined below.

The page and line numbers, shown in brackets refer to those in the revised manuscript.

Best regards,

The Authors

editors comment – units of measure

1. The most irritating issue is still the use of the units. Units appear together with a value, not with a variable name. Follow this guideline to not end up with poor formalism!

The following items are examples, please check the whole document.

a) you often add units in brackets like in p.9, l.5-6, p.11, l.10. Readers cannot know if a variable name or units are provided in the brackets. So please write e.g. "(in units of length⁻¹)" in p.11, l.10.

However, in most cases it is anyway not necessary to provide the units at these locations.

For example p.9, l.5-6: It does not matter, whether length and breadth are given in km, m or some other measure of length.

So please remove units there and on further occasions (p.12, l.4; p.14, l.26; p.14, l.8; p.15, l.8; p.16, l.31; p.12, l.14 and so on).

p.14, l.9: remove m⁻¹ and add it to 17.1 and 8.4 (units appear together with a value, not with a variable name)

Authors response 1a:

Corrected in the given examples and made consistent throughout manuscript.

Done

p.9, l.5-6 (p.8, l.10-11) - units removed

p.11, l.10 (p.9, l.27) - 'in units of ...' added

Done - units removed

p.12, l.4 (p.10, l.13)

p.14, l.26 (p.12, l.25)

p.14, l.8 (p.12, l.9)

p.15, l.8 (p.13, l.6)

p.16, l.31 (p.14, l.17)

p.12, l.14 (p.10, l.13)

Done – 'in units of ...' added

p.14, l.9 (p.12, l.8)

b) Keep in mind that it is possible to calculate with units. Just be consistent in your formulations. If you sum up several terms, their units must be convertible into the same units.

Eq.1 p.9, l.17 is still not consistent and a correct formulation is:

$$\text{fetch} = 39.9 \text{ km} + 0.00781 * \text{area} * \text{km}^{-1}$$

OR (just to show you that units can be converted!)

$$\text{fetch} = 39900 \text{ m} + 0.00781 * \text{area} * \text{km}^{-1}$$

$$\text{fetch} = 39.9 \text{ km} + 0.00000781 * \text{area} * \text{m}^{-1}$$

Authors response 1b:

Eq.1 (p.8, l.19):

replaced by - $\text{fetch} = 39.9 \text{ km} + 0.00781 * \text{area} * \text{km}^{-1}$

c) units are missing:

Authors response 1c:

p.19, l.23-24: add °C after each term.

Done (p.16, l.29-30)

p.24, l.10: add K² to 0.65 and 0.12

Done (p.20, l.18-19)

p.33, l.21

Done (p.28, l.13-14)

for clarity, expression like "mean value +/- sigma" could have units after mean value and sigma

abstract: 3.07°C +/- 2.25°C

p.19, l.23-24; p.26, l.12

Done (p.16, l.29-30) and (p.22, l.12)

editors comment 2

check for "it's" = "its"

Author response 2:

(p.8, l.16 and p.12, l.3)

it's changed to "its"

editors comment 3

3. p.23. l.5: comparability = agreement?

Author response 3:

(p.25, l.16 and l.26)

Now reads 'The good agreement between the' replaces 'the good comparability between the'

(p.19, l.21)

Now reads 'The good agreement between the observed and modelled LSWTs for two high altitude lakes is shown in Fig. 14'

Replaces 'The good comparability of the observed and modelled LSWTs for two high altitude lakes is shown in Fig. 14'

editors comment 4

Even though LWST is defined in the abstract, define it again at p.2.,l.3

Author response 4:

Defined (p.3, l.1)

editors comment 5

p.5,l4: isn't "for" missing now in front of "Lake"?

Author response 5:

(p. 4, l.30)

now reads 'An example of the preliminary trial work is shown in Fig. 1a, for Lake Athabasca'
replacing 'An example of the preliminary trial work is shown in Fig. 1a, Lake Athabasca'

editors comment 6

Is equation (8) defined as a ratio? Then r^2 should be vertically adjusted.

Author response 6:

(p.15, l.8-9)

Equation 8 is now reformatted

editors comment 7

p.26, l.12: a day cannot be delayed by days. It's the warming that is delayed.

Author response 7:

(p.22, l. 12)

Now reads 'results in a delay to LSWT warming to 1 °C by 27 days ± 12.6 days'
Replacing 'results in a delay in the 1 °C warming day by 27 days ± 12.6 days'

editors comment 8

p. 21, l. 29: lake is not physical quantity, so what does 340g L^{-1} refer to?

Author response 8:

(p.18, l. 21)

Now reads 'highly saline (340 g L^{-1}) lake located in Asia'
replacing 'highly saline lake (340 g L^{-1}) located in Asia'