Dear Coauthors,

Our manuscript has been accepted by Global Change Biology pending minor revisions (please see below and the attached PDF).

Please accept my apologies for the delayed report of this good news.

The reviewers suggest several interesting modifications, which I would summarise as follows:

1. Reconsider the title (Reviewer 1 did not understand the term 'third generation of data pooling').
2. Make the terms first, second and third generation of data-pooling more explicit in Introduction and Discussion.
3. Add a table with most frequently requested traits and compare them to the traits with best coverage.
4. Add a discussion of Figure 2.
5. Consider an analysis, e.g. like Figure 2, based on the descriptions in the TRY data requests.
6. Expand the aspect 'variation of traits in time' in the Discussion.
7. Consider a paragraph: Lessons learned from 12 years of data curation.
8. Reconsider if Table 5 (the list of datasets) is appropriate in the paper or should move to supplementary material.

Most suggestions are straight forward. However, I would be most interested in your comments and suggestions with respect to the title (point 1) and if Table 5 should remain part of the main paper (point 8). I added Table 5 to the manuscript, because this allows citing the references of the contributed datasets. Without the table, I think this will not be possible.

Point 5 is especially interesting. In the context of data requests, TRY has asked for information about the intended use of the data. Reviewer 2 suggests to analyse these descriptions with respect to the different research topics. Since TRY version 5 the data are released under an open access license (CC BY) and the description is no longer mandatory and often missing or extremely short. Therefore it would actually be a good timing now to present an analysis of the about 7000 descriptions received so far.

Unfortunately this analysis will most probably cause a substantial amount of work. I will therefore ask GCB for an extension of the deadline to 30.11.2019. This should provide sufficient time to make the suggested changes and iterate the updated manuscript.

With best wishes,

Jens

> On 12. Sep 2019, at 20:02, Global Change Biology <onbehalfof@manuscriptcentral.com> wrote:
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> Dear Dr. Kattge,
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> It is a pleasure to inform you that your manuscript has been accepted for publication in Global Change Biology pending minor revisions based on points raised by the referees.
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> You have 30 days to update the final versions of files for publication.
>
> Please follow the attached "Submission Checklist" to ensure that your article is formatted correctly for publication. Manuscripts that do not adhere to the guidelines will be returned to the corresponding author for corrections.
>
> You will be asked to submit a Graphical Abstract along with your final files. A Graphical Abstract should allow readers to quickly gain an understanding of the most important aspect of your paper. Authors must provide an image that clearly represents the work described in the paper (eg a diagram or illustration selected from the manuscript or an additional "eye-catching" figure) and a brief text description.
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> When the final manuscript files that you submit are found to be suitable for publication they will be forwarded to the publisher. Shortly afterwards, your article will appear on online as an “Accepted Article”. At that time, your article can be viewed, downloaded, and cited. For this reason, it is important that you ensure that your final manuscript files are error-free.
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> Once again, thank you for submitting your manuscript to Global Change Biology.
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> Sincerely,
> Global Change Biology Editorial Office
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> Reviewer(s)' Comments to Author:
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> Reviewer: 1
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> Comments to the Author
> TRY is a ground-breaking achievement in plant ecology and this is an important and suitable opportunity to review the past 12 years since inception. The paper is a well-written, informative overview and the inclusion of future steps is critical. I have made some minor comments inserted directly in the PDF file (attached). The two notable comments are:
> - Perhaps a change to the title as well as the running title (see comments).
> - Move Table 5 and references that support Table 5 to Appendix.
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> Reviewer: 2
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> Comments to the Author
> The paper "Twelve years of TRY – towards a third generation of plant trait data assimilation and sharing" by Kattge et al make a review of the trait database initiative after twelve year of existence. The TRY initiative is a very important effort from the scientific community to make available all the data on traits measurements that was, before, very difficult to collect on a large scale. It was a real limit to progress in understanding of ecophysiology and modeling of vegetation process. Then thanks to TRY initiative we have seen large progress especially in conceptual representation of vegetation modeling that was before based on static plant functional type to a more continuous representation of processes. The TRY initiative was then a real succes and a synthesis of the progress in the TRY database after twelve year of existence is then very useful, especially to show how the database improved during this period which can encourage more people to use it. The paper is well written with a good description of progress but also limits of the database and for all these reasons I think this paper should be published. I have however some suggestions and comment that I guess would improve the paper and then need some revisions.

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> My first and more important comment is that, if paper is well detailed to present the data from the database and its evolution between the first and current (V5) version, there is few details about how the database was used. for scientific papers. It appear partly in the introduction on the brief history but it would be interesting to have a mode detailed discussion in the discussion part of the paper. Considering that online request to the database allow to know which traits and species are requested and that in the query applicant should give a brief description of the scientific work, probably a lot of interesting information could be inferred. for instance how the traits in the database fit with the requested ? Are the traits with a good coverage (i.e continuous traits) correspond to traits requested ? Or on the opposite are some traits often requested are mot well represented which can in this case help experimentalist to see in return which kind of traits should be measured ?. Likewise which fraction of requested and oriented on specific traits for all the species or, on the opposite, oriented on some species for which all the available traits are requested ?
> Likewise it would be interesting to better understand how the TRY database stimulated the science. For instance which fraction of requested and published paper are dedicated to models improvement and which fraction are used to infer new ecological rules, traits distribution of traits trade-offs ? The cluster analysis of figure 2 is on this point very interesting but unfortunately largely under used in the discussion. So I this that a detailed discussion on the other side of the database (i.e how it is used) would be important
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> Another point that is briefly discussed in the paper is the problem of temporal versus spatial variation of the traits. indeed on important question in term of climate change is how trait are able to change to adapt to climate change and even is several studies mix spatial and temporal data to infer for instance the relationship between traits and climate, we know that in the really it can be very different. Obviously as point out we know that unfortunately there is only few sites monitoring the changes in traits. But it would be interesting to see if this number as increased from v1 to V5 of the database following the general increase of the data or not ?
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> In final, considering the large experience acquired by the authors on this long term initiative, I think that in the conclusion the paper could give stronger suggestions both to data providers and data users to improve the database for the future. For instance there is few informations about the technical difficulties to construct and maintain such database (which I am sure was numerous!) (e.g important information to provide, etc...) that are not necessarily trivial for data provider and could help a lot the management of the database.
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> some more specific comments:
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> page 42: even if I agree that the good coverage of plant form and woodiness given by the GIFT database is a good indicator that the bi modal distribution of plant height is not an artifact, But is it really sufficient ?, Are we are sure that there really an unbiased representation of shrub in the GIFT database ?
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> page 44 it is indeed important to take into account abundance of species and then how the data are bias among species considering there abundance and then there impact on CWM . But then, considering CWM another question is how data-set is bias among the trait space domain of variation (i.e how the TRY database sample the data in the total range of values for a given trait ?) how species with traits values very far from the CWM are represented ? How the increasing data in the database allow to improve the representation of the trait distribution in a given community ?
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> ligne 913: typo: "pnat trait" instead of "plant trait"
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> Global Change Biology is participating in the PEER project, which aims to monitor the effects of systematic self-archiving (author deposit in repositories) over time. PEER is supported by the EC eContentplus programme (http://ec.europa.eu/information_society/activities/econtentplus/index_en.htm).
> As your manuscript has been accepted for publication you may be eligible to participate in the PEER project. If you are based in the European Union, your manuscript will be archived by Wiley-Blackwell on your behalf, as part of this project. For further information please visit the PEER project website at http://www.peerproject.eu/.