**Climate
of the Past
Discussions**

Interactive
Comment

Interactive comment on "Present and LGM permafrost from climate simulations: contribution of statistical downscaling" *by* G. Levavasseur et al.

Anonymous Referee #2

Received and published: 4 August 2011

The paper compares the agreement between permafrost distributions from different PMIP2 climate models and assessments of permafrost distribution for present-day and LGM conditions. As such, it is clearly suited for publication in Climate of the Past. However, the text is, at times, hard to read and confuses the reader with lots of details. It can be clearly seen that the manuscript was compiled by several authors with different fluency of the English language; a more uniform layout of the text is desirable.

I suggest to publish the manuscript provided the authors adequately address the following comments.

General remark: There are lots of abbreviations in the text, many of them with nearly

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

identical names. This makes it hard to follow the authors' considerations. It would be helpful to provide a list of abbreviations.

Page 1649, line 12: Apparently an "is" is missing prior to "currently". But even then, the sentence does not make sense to me.

Page 1649, line 25: There are several publications by Vladimir Romanovsky from UAF and coauthors which should be mentioned here.

Page 1650, line 11: I do not agree that EMICs are computationally expensive (not "intensive"), at least not compared to GCMs. That is the reason EMICs exist.

Page 1650, line 17: Delete "the".

Page 1652, line 18: Replace "on" with "for the".

Page 1652, line 18 and following and several other occurrences in the manuscript: It is confusing that the authors deal with two different data sets the model results are compared to (present-day and LGM), but use the word "data" to refer to any of them. It is not always clear from the context what is meant.

Page 1653, line 12: 65W, not 65E!

Page 1654, line 2: Add "a" after "calibrate".

Page 1654, lines 2-6: This is not the original resolution of the CRU data, which hardly can be described as "local".

Page 1654, line 10: How large is the error of your assumption?

Page 1654, line 22: ...but above -8 deg C.

Page 1655, line 1: What do you mean by "type of permafrost"?

Page 1655, line 2: "Criterion".

Page 1655, lines 18-20: Unclear what you mean. Also, "has" instead of "have" in line

19.

Page 1656, line 13 and following: This is strongly simplified. What, for example, is the effect of snow cover?

Page 1657, line 22: How remote is "remote"?

Page 1657, line 25 and following: Why do you need the DCO index at all? All relevant information is in the ACO index.

Page 1658, lines 19/20: Replace "a lot" with "several".

Page 1659: The argumentation is hard to follow. Is this a resolution issue?

Page 1659, line 4: "the Himalayas".

Page 1659, line 8: Replace "whose results" by "the results of which".

Page 1659, line 10 (and elsewhere): Hard to follow. IPA/FGDC are essentially observations and should for the sake of legibility be called observations. The word "data" is misleading in this context.

Page 1659, line 18: Replace "discontinuous permafrost area" with "the area of discontinuous permafrost".

Page 1659, line 21: A ratio is always the quotient of something and something else. You cannot talk about a ratio of blue area.

Page 1659, line 23: "summing up".

Page 1660, paragraph 1: I have no idea what you are talking about.

Page 1660, line 3 and line 6: What does "inter-variation" mean?

Page 1660, line 8: "extent".

Page 1660, line 10: Replace "chance agreement" with "agreement by chance". Delete "achieved". Even then, the whole paragraph is hardly understandable.

Page 1660, line 11: "This index can take values between 0 and 1...".

Page 1660, line 13: What is a "confusion matrix"?

Page 1661, line 7: "ECHAM5 has a kappa of 0.64, while the value is 0.68 for IPSL-CM4."

Page 1664, line 12: "As discussed in section 3.1, ...".

Page 1665, line 6: I do not understand the argumentation.

Page 1665, line 21: "the Himalayas".

Page 1665, line 23: "mountains", not "mounts".

Page 1666, line 2: "In Fig. 5a...".

Page 1666, line 21: "...who showed...".

Page 1666, line 29: Probably "model" is missing here.

Page 1667, paragraph 1: What are you talking about?

Page 1669, line 1: Confusing text.

Page 1669, line 12: Do you mean "present-day data" here?

Page 1669, line 26: Which data do you mean here?

Page 1670, line 19: Bad English.

Page 1671, line 23: What do you mean here?

Page 1671, line 27 and page 1672, line 1: "None..." ... "whatever the method used" means the same.

Page 1672, line 3: Which data do you refer to here?

Page 1679, line 8: The author's name is Bäuml, not Bauml.

Figures 3, 4, 7 and 8 are too small.

Interactive
Comment

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper