Geoscientific
Model Development
Discussions

Interactive
Comment

Interactive comment on "ECOCLIMAP-II/Europe: a twofold database of ecosystems and surface parameters at 1-km resolution based on satellite information for use in land surface, meteorological and climate models" *by* S. Faroux et al.

Anonymous Referee #3

Received and published: 2 January 2013

The paper describes an approach to land cover mapping providing data suitable to be employed in SVAT models. It is an important contribution and within the scope of the journal. I had quite large problems understanding the mapping procedure and conclusions. I suggest a minor revision.

General comments: The first week point of the article is the description of the mapping procedure. The authors state that they use a large number of clusters in section 4.1, In section 4.2 they say the number is between 200 and 300 and mention 270 and finally they have 273 in section 4.3. The description of the mapping procedure at the

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beginning of chapter 4 should definitely be more understandable. What do we want to finally have, what is the input, and what are the particular steps and procedures, why they are required in this multi stage approach? Where unsupervised procedure is applicable and where supervised techniques are required in addition? The details and constraints are then described in 4.1 – 4.4.

The second problem is the presentation of the results in chapter 5. The validation of the data should be presented first (5.1) and the description, that is very long with lot of rather trivial statements, go to 5.2. Comparison with previous version of ECOCLIMAP would in my opinion be much more useful when included in the validation chapter 5.1 and described along with the new version. Consider putting emphasis on new findings.

I would suggest to add a small paragraph in section 3.5 describing a general procedure of the data verification/validation. Both thematical content (aggregation of data with different land cover categories) as well as geographical validation at regional and local scales should be addressed here.

Use arc second unit instead of 1/120 degree

Specific comments:

page 3575 line 10

In climate modeling . . . should perhaps be a new paragraph

page 3576

line 5, original CORINE resolution is 30 m

page 3577

line 1, some information and references on the application of ECOCLIMAP data in regional climate models, for example in COSMO CLM, could be added before " The rationale..."

page 3578

line 1, is the stratification an objective or rather method?

line 10, add for clarification some information on what the tile approach is. I would assume a geographical area

line 20, SVAT acronym was already explained before

page 3579

line 5, some information on the formulas used is need here

line 5, "legal calendar" could by more specific like Gregorian or is it Julian?

line 25, why only Europe?

page 3580

line 5, rewrite the first sentence , what means "divided up"?

line 15, you are introducing a "domain", do you mean the extent of the ECOCLIMAP-II data set?, what means "the reference"?

line 25, what do you mean with "proposes"?

page 3581

line 1, this is an important step, the input data employ different classifications, are the 14, categories the common categories? You should add a brief explanation

line 5, if you mean with that sentence that satellite image should have some priority, then this information should go into the introduction

line 15, repeats the calendar issue already given

line 20, explain what is "unsuitable", cloud elimination algorithms can introduce adverse artifacts

line 25, some details on the polynomial function cloud help the reader

page 3582

line 5, what is collection 5 of MODIS LAI?

lines10-15, what do you mean by smoothing and were is it described?

page 3583

line 1, does limits mean differences?

line 5, see general comment, give some information on the procedure first, address the general problems and describe the available data then.

page 3584

line 1, the procedure... This is not a nice start of a chapter. Describe the procedure first and then refer to the figure and details.

line 5, what does disentangle mean?

line 10, what samples ?

page 3585

line 1 and 5, the supervised steps need some justification, add the range used for the threshold value

page 3587

line 20, what do you mean with "density"

page 3588

line 1, you have a quite detailed figure 4 and let the reader with this figure somehow alone. Add the description of F and P in the caption and F and P at all appropriate occasions in lines 5 -16

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line 20, have a look to Noah LSM and WRF, are the values comparable ?

page 3589

line 1, what is the area considered in Table 2. Add some details in the caption. The caption of a table/figure should give all informations needed to understand the table/figure

page 3589

line 10, is the first sentence correct? we have less forests in Portugal than in Northern Russia

page 3593

line 20, you could add some quantitative information of the accuracy of the forest area here

page 3595

line 5, what are the results of the adjustment in France

page 3596

line 1, Figure 9 , yellow and cyan colors need explanation

pages 3597 – 3600

It is difficult to comment on that section. Put the relevant comparison into the evaluation section. The data users would like to see the evidence that the new version provides a more accurate description of the land surface. Only then the statements given in the Summary section (line 5) are justified

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Interactive comment on Geosci. Model Dev. Discuss., 5, 3573, 2012.