Earth System
Dynamics
Discussions

Open Access

ESDD

Interactive
comment

Interactive comment on "Drought identification in the Eastern Baltic region using NDVI" *by* Egidijus Rimkus et al.

Egidijus Rimkus et al.

egidijus.rimkus@gf.vu.lt

Received and published: 8 May 2017

Several minor comments: 1. VCI analysis is a major part of the Result section. It is declared that it's better than NDVI. So abstract should include major results of VCI analysis. Methods of VCI assessment should be presented better.

We added some results of VCI analysis into abstract and extended the section of Data and methods with additional information about VCI.

2. Section describing study area is needed. The first reason is that authors use datasets with different spatial coverage. The second is that study area is large enough and that's why climatic regime is different over different sub-regions. Instead, authors often provide point estimates (e.g. L126)

C1

The description of spatial coverage of used data is added in text. The CORINE data with 100 m resolution was used to identify the dominant land use in NDVI cells ($0,144° \times 0,144°$). CORINE covers only Estonia, Latvia, Lithuania and northeastern Poland in the study area. CORINE does not cover the rest of the area which is indicated as "No vegetation or land use data" in Figure 1. The short climatic and geographical description of the study area added to the introduction.

3. Separate section of conclusion is needed

Conclusions were added.

Detail comments and minor edits:

P3L85 It's better to use calendar dates

The NOAA STAR–NESDIS NDVI data has weekly 7–day composite temporal resolution. We believe week numbers, as the original time format, is more appropriate to describe the missing values.

P4L100 Interval assessments seem to be more appropriate because the region is large enough and there is a certain time lag in dates of natural phenomena between southwest and north-east regions.

We have provided additional information in the text.

Figure 1 Maybe it's better to add some basic geographical information on the map: country names, main cities. We added the labels for countries and the Baltic Sea.

P5L115 Abbreviation should be inputted after first mention. CORINE land cover (CLC) P5L116 It should be checked if year 2012 is covered by CLC 2000. Maybe CLC 2012? http://land.copernicus.eu/pan-european/corineland-cover/clc-2012/view

We have provided abbreviation in the text and corrected CLC 2000 to CLC2012.

P5L120 Percentage of the joined types should be mentioned.

We added the description of the average composition of joined land use type in the text.

P5L125-129 Is it the temperature averaged over the study area or data from a certain station? Should be clarified

The answer is "averaged over the study area". We made clarification in the text.

P6L149 Maybe it's more useful to avoid weeks here and hereafter

We substituted the week numbers with dates or indicated the beginning or the end of month if indicating of the exact date is not feasible.

P8L184 Reference indicating that VCI is more suitable is needed

We added the reference (Jain et al., 2010)

P11L254 Shows, technical correction

We corrected the error.

P12L285 I see no reason to compare this region with arid and semiarid areas.

We try to examine the feasibility of NDVI to identify the drought effect on vegetation in the eastern part of the Baltic Sea region. We compare this region with arid and semiarid areas to describe the baseline for NDVI application. In dry areas vegetation is primarily related to precipitation patterns and NDVI is usually a good indicator of droughts. In the eastern Baltic Sea region there are at least several significant drivers for vegetation vigor.

Printer-friendly version

Discussion paper