

Interactive comment on “Modeling postfire water erosion mitigation strategies” by M. C. Rulli et al.

Anonymous Referee #1

Received and published: 9 November 2012

The manuscript describes an application of RUSLE model in order to evaluate the impact of wildfire and mitigation strategies on soil losses.

The topic is particularly interesting and manuscript is well organized and pleasant to read.

Following the interesting Cerdà's comment I would invite the author to give more emphasis on the model application and parameter calibration respect to the results discussion. Indeed general conclusion, as already underlined by the authors, are not possible due to the limited available observations.

In the following specific comments are listed.

Abstracts

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lines 17-19. This sentence can be clearer.

Section 1 - Introduction

page 10880 line 15. In the text I found many discrepancies in the references. I will list what I found but I invite the authors to carefully double check it. Myronidis et al. 2009 - in the reference list is 2010.

page 10880 line 24. Robichaud, 2009 is not present in the reference list

page 10880 line 25. Wagenbrenner et al. 2007 - in the reference list is 2006

page 10882 lines 1-5. These lines could be included before, at the end of page 10879.

page 10882 line 14. Elliot et al. 2001. - in the reference list is 2009.

page 10882 line 21. Ranzi et al., 2011 - in the reference list is 2012.

Section 2 - Study Area

I would suggest to the authors to include in this Section the text about the available observations described at the beginning of the Discussion section.

page 10883 line 19. Regione Autonoma della Sardegna 2000 - in the reference list is 2006 or 2009

page 10884 line 2. Regione Sardegna 2010 as before.

Section 3 - Materials and methods

page 10884 line 6. Renard et al., 1997 - this reference is missing in the final list.

page 10884 line 12. Solorio and Mac Donald, 2005 - this reference is missing in the final list

page 10884 line 13. Mac Donald, 2007 - this reference is missing in the final list

page 10884 line 15. Here Authors could emphasize that it could be important to ap-

C5213

appropriately preprocess DEM since the LS factor depends on the contributing area and cell slope. This is probably why the authors chose to use the PEM4PIT approach for flat area issue.

page 10884 line 16. the sentence “to subdivide the study area in square cells of 25 by 25 m” can be removed.

page 10885 line 7. APAT, 2009 is not present in the reference list.

page 10885 line 13. Renard et al., 1997 is not present in the reference list.

page 10886 lines 3-13 I would invert the order following the same order of the RUSLE equation. So I would described LS factor before C factor.

page 10886 line 11. Probably more details on the Moore and Burch (1986) equation (that is missed in the reference list) could help the reader to understand the role of the topography in the RUSLE equation.

Section 4 - Study scenarios

In my opinion this is the most important section and authors should be careful to well justify the parameter choice (i.e. Scenario 3 is too vague).

page 10888 line 27. Myronidis et al. 2009 - in the reference list is 2010.

page 10889 line 3 - same

Section 5 - Results

In general, if authors decide to move the “observation” in “Case Study” Section, they could also merge Results and Discussion. Reading these Sections it seems that some information are repeated several times.

page 10890 line 2. I lost the mean on which data are estimated

Section 6 - Discussion

C5214

page 10891 line 21. Van Rompaey et al., 2003 - it is 2005 in the reference list.

page 10893 line 15. Vacca et al., 2001 it is 2000 in the reference list.

page 10894 line 10. Vafeidis et al., 2006 - it is 2007 in the reference list.

Figures

FIGURE 1. I would use a picture of Italy without geographical names and instead of “Precipitation measurements” I would use “raingauges”.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 10877, 2012.

C5215