General Comments
The study presented a method for analysis of uncertainty in SWAT model parameters regionalization in Mediterranean catchments. An extensive analysis is done in the study. The study aimed to address very important issue in hydrological modelling. The study is recommended with the moderate revision.

1. Lines 10-12, Page 4954, Can you please add reference?

   statistical approaches were deeply criticized due to the assumption that most statistical models consider linearity between CAs and optimized Mps

2. Lines 4-8, page 4955. Can you please further look into these lines. First it is mentioned that similarity based regionalization approach outperformed the regression approach. Further, the best performance is obtained by the kriging method which is also a regression method.

   Parajka et al. (2005) showed also that similarity based regionalization approach outperformed as compared to the regression approach. But, they concluded that the best performing regionalization method was a kriging method based on nearest neighbour interpolation, followed by the similarity approach based on similarity of CAs between the donor and the receptor catchment

3. Lines 1-3, page 4955. PMD, GR4 and TOMPO are not defined anywhere nor any references are provided for these models. Please add what PMD…. Stands for and also provide the appropriate references of these models in the text.

   the statistical regression approach using a five parameters version of the PDM model, applied on 127 UK catchments. Similar conclusions were drawn by Oudin et al. (2008) using two conceptual rainfall-runoff models, GR4J and TOPMO, in 913 French catchments.

4. Lines 8-9, page 4955. Other studies reported……., but only one reference is given. Can you add some more reference?

   Other studies have reported that even nearby catchments can be hydrologically different (Beven, 2000).

5. Line 22-25, page 4957. The statement looks confusing. What is the total number of rain-gauges in the study area? S`ete rain gage is having only data of 2007-2009 or also having from 1990-1999? What Fig. 1 is referring for? Can you please include the location of rain-gauges in the Fig. 1? Further, the ten catchment boundaries are not clearly visible in Fig. 1

   Daily precipitation data (from 1990 to 1999) are provided by five rain gauge stations located within the study area but only the S`ete rain gage (French national meteorological station of M´ et ´eo France) has daily precipitation data that covers the 2007–2009 period (Fig. 1).

6. Lines 1-19, page 4958. The text is quite confusing to understand regarding the available data for each catchment. It is suggested to present this information in tabular form rather in text form.

7. Line 16, page 4959. Replace SW_t with SW_o.

8. Line 4, page 4960. Use "Manning's Kinematic Equation" instead of only "Manning's formula".

9. Lines 13-19, page 4960. It would be better to delete terms GW_DELAY, GWQMN, GW_REVAP as they may be not of interest for the readers.

10. Line 1-3, page 4961. Why 4 years out of total of 7 years data is selected as the warming up period?

    The SWAT simulations are conducted on the gauged catchments from 1990 to 1996 with 4 yr (1990–1993) as a warming-up period to minimize the effects of the initial state of SWAT variables on river flow

11. Lines 22, page 4961. It would be better to include all the 17 SWAT model parameters in Table 2. A rank of zero may be assigned to 7 model parameters which were found insignificant.

    SA is performed on 17 SWAT model parameters that may have a potential to influence the flow river.
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12. Line 20, page 4966. Define FDC before using it.

    Besides these CAs, others authors have used flow indices or characteristics using FDC (Masih et al., 2010),

13. Line 25, page 4966. It would be better to use "Occurring" instead of "accruing"

    on the objective of the regionalization procedure and on the knowledge about the key hydrological processes accruing within the catchment

14. Line 28, page 4966. Replace "theses" with "those".

    Model parameters, especially theses of physically based model such as SWAT,

15. Line 16-17, page 4972. Use "due to" instead of "due"

    In addition, this difference can also be due the subjectivity involved within the GLUE procedure for selecting the threshold value,

16. Section 5.2.1, pages 4975 & 4976. What is the impact of percentage of the transferred Mps on the performance? Further, why only 16.6% Mps are transferred for Negues-Vacques catchment. This small percentage is not coherent with the other 7 catchments in Table 3.

17. Lines 5-11, page 4981. NS values of -0.131, -0.144, 0.169 and 0.518 are obtained for the four un-gauged catchments. Out of these only 0.518 for Joncas catchment can be considered as the good performance, while others three are having poor performance. How these NS values can justify the results. Comment please.

18. The following two statements are contradicting.

Lines 24-27, page 4986
The assumptions behind the developed methodology were that similar catchments (similar in their physical attributes) are hydrologically similar and that model prediction uncertainty **increases as the dissimilarity between the donor and the receptor catchment decreases.**

Line 9-13, page 4988
We think also that the speculation behinds the developed methodology such as **model prediction uncertainty at the ungauged catchments increases as the dissimilarity between the donor and the receptor catchment increases is appealing**, reasonable and provides more reliable prediction uncertainty at the ungauged catchment than the traditional approach

19. There are many sentences in the paper which are unnecessarily long. It is suggested to revise the whole paper and use small sentences instead of long sentences.