Review Form 1.6

Journal Name:	**International Journal of Plant & Soil Science**
Manuscript Number:	**Ms_IJPSS_83978**
Title of the Manuscript:	**Technologies for enhancing water productivity through remote sensing and GIS**
Type of the Article	**Review Article**

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty'**, provided the manuscript is scientifically robust and technically sound.
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PART 1: Review Comments

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Compulsory REVISION comments	The Conclusion is too short: only 50 words. Conclusion should normally be about 500 words and contain a thorough closing remarks regarding your study. Increase it at least to 300-350 words. Provide more reflection regarding the role of water for vegetation growth in India and irrigation system. The Conclusion section would benefit from the inclusion of additional closing and summarising information on water management in agricultural systems (plant growth, regional cases in India, use of RS/GIS for irrigation monitoring, data visualization and mapping), to help establish the main findings of the article. References are not standardised according to the journal standard. Correct the whole list. I helped you with Reference item No. 4. Continue with the rest of the list. There are some occasional typographical errors in the current state of the manuscript. Therefore, the authors are advised to recheck the whole paper for improving the language, typesetting and structure of the selected sentences and paragraphs carefully. My notes and remarks are coloured yellow. The paper was generally written quite well and reflects actual application of the use of RS/GIS for water management and irrigation in India. However, in the most detailed sections, particularly the "*Water Resources Management issues through Space Technology*" and its subsections (*A. Rainfall, B. Irrigation management; C. Reservoir capacity monitoring; D. Groundwater prospecting; E. Natural calamities*), the narrative was sometimes hard to follow. In particular, the ideas regarding the RS/GIS were introduced separately from the water irrigation and agricultural system in India, without their relevance to the surrounding text on GIS/RS and satellite sensors. It is important to add a few sentences regarding the RS/GIS to clarify your logical argumentation. Insert some more sentences and text regarding application of RS/GIS. Now the whole article contains 4,445 words while the normal acceptable paper length is around 6,000 words. Increase the text by providing more links between the agriculture and RS/GIS. This especially concerns the Conclusion section. The Conclusion section is unacceptably short in its current state: only 50 words with 2 broken and unlogical sentences. Please do correct and increase it.	
Minor REVISION comments	In general, a paper communicates the scientific results on agricultural monitoring and water management in India in three stages: it raises a question and existing approaches, it discusses it with some cases in various regions of India, and it makes a point on using satellite sensors for irrigation management. This applies to the paper as a whole: the central issue is established in the introduction (as well as title and abstract), the discussion is presented in the results and discussion sections, and the point is made in the discussion and conclusion paragraphs. However, the conclusion section is now too short in the present state and definitely requires improvements and enlargement. It also applies to individual paragraphs: there are some occasional issues with logic (I suggested to break up some paragraph and to continue the flow of the text in other cases. Besides, there are some grammar and sentence flow that I corrected and coloured by	

	yellow highlighted for the convenience of track changes. The sentences and their order should be carefully crafted to better establish logic of the text and to create a coherent flow of the research. Another crucial means of helping text to flow is to make use of suitable transitions, to link sentences regarding water management and irrigation and RS/GIS and satellite sensors to each other, particularly between paragraphs and regional application in various states of India. Annotations to figures should be centred and typeset as a plain text (not bold). I corrected it where necessary.	
Optional/General comments	In this work, the topic of water management and applications of RS/GIS for agriculture monitoring in India was evaluated through review of available resources on spatial data and GIS approaches in order to determine the actuality of satellite sensors for water management studies in India, and to highlight the importance of these technologies for the sustainable agriculture. The research presents summarising data and a review. The main topic concerns environment and sustainable management in agriculture using spatial technologies in India. The manuscript meets general criteria of the significance and scientific soundness in GIS and sustainable management in agriculture and geospatial studies, which can be published in *International Journal of Plant & Soil Science* after corrections. The Introduction section provided a clear statement of the problem of using RS/GIS technologies in agricultural and water management sectors of India, reviewed some literature regarding the subject and the existing cases of remote sensing for plants. It is understandable to the colleagues from a broad range of disciplines in geosciences, agriculture and GIS. The structure of the manuscript is well adjusted for a thorough understanding of the presented study and has the following structure: *Introduction* *Water Resources (Concept of watershed and Ganga Basin as 2 subsections)* *Water Resources Management issues through Space Technology (A. Rainfall, B. Irrigation management; C. Reservoir capacity monitoring; D. Groundwater prospecting; E. Natural calamities)* *Future perspective* *Application areas of Remote Sensing in Agriculture* *Water Resources Project Planning in Remote Sensing and GIS in Water productivity* *Conclusions* The tables and figures regarding Land Use/ Land Cover (2005-2006), Average annual rainfall (1971-2005), Elevation Zones (topographic DEM) are provided. Tables include Watershed Statistics, Water Resource assets and general data regarding Basin Extent of the Gang river. In such a way, the manuscript summarises existing applications of RS/GIS for land use and water management systems in India with selected statistical and geospatial data. Research highlights state the major achievements of this study compiling the data and information on RS data application in the domains of environmental water management in India. Descriptive section regarding the water resources in India are provided and briefly compare cases of RS/GIS applications with some maps and tables.	

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PART 2:

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Are there ethical issues in this manuscript?	*(If yes, Kindly please write down the ethical issues here in details)*	

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