

Review Form 1.7

Journal Name:	International Journal of Environment and Climate Change
Manuscript Number:	Ms_IJECC_109309
Title of the Manuscript:	APPLICATIONS OF SMART TECHNOLOGIES IN SUSTAINABLE AGRICULTURE DEVELOPMENT: A COMPREHENSIVE REVIEW ON PRESENT STATUS AND FUTURE ADVANCEMENTS
Type of the Article	Review Article

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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)
<p>Compulsory REVISION comments</p> <p>1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)</p> <p>2. Is the title of the article suitable? (If not please suggest an alternative title)</p> <p>3. Is the abstract of the article comprehensive?</p> <p>4. Are subsections and structure of the manuscript appropriate?</p> <p>5. Do you think the manuscript is scientifically correct?</p> <p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>1. The manuscript is of significance in the scientific community. It provides pertinent information that may be used to enhance agricultural systems and procedures and increase output and takes into consideration the safety and environmental conservation.</p> <p>2. The title is suitable.</p> <p>3. The abstract should contain an overview of the different smart technologies covered in the article's content such as GIS and GPS, automatic forecasting, data analytics, smart decision and support system, and SAAS-based agriculture, the necessity for them and potential benefits.</p> <p>4. The manuscript is structured appropriately. However, to further improve the paper, the author should take into account the following suggestions:</p> <p>*An opening discussion is suggested for a more thorough explanation and to direct the readers to the substance of each subtopic (e.g. under Need for Smart Farming: Make it in the first paragraph that the arguments that follow are the reasons why smart farming is necessary.)</p> <p>*It is suggested to provide a discussion on how each smart technology works prior discussion of its specific applications. In light of this, Figure 2 shall be discussed under the process on remote sensing then, its applications shall follow. The same shall be done to other technologies discussed in the paper.</p> <p>* It is suggested to about the particular use of smart technologies in the various domains of agriculture as follows in order to provide a clearer understanding and observe coherence: a. crops, b. livestock, c. fisheries and aquaculture, d. forestry; or as appropriate. This should be done in a way that presents the discussions in a logical and consistent manner. The subsequent technologies covered in the article shall use the manner of presentation.</p> <p>*Label the two illustrations as (a) and (b). Figure 3: A graphic representation of (a) GIS and (b) GPS.</p> <p>*Clarification: Kishan or Kisan drone.</p> <p>* Suggested title for Figure 4: The benefits of drone technology.</p> <p>*Under Section 3.4:</p> <ul style="list-style-type: none"> - The driverless tractors will do the planting automatically and with high accuracy, resulting in seed conservation and this could aid in the alleviation of farm labour shortages and this tractor can work with high efficiency thus reduce the diesel need hence reduce the CO2 level indirectly. Can be stated as: <p>With their high level of accuracy and autonomous planting, driverless tractors can help conserve seeds and alleviate the labor constraint on farms. Additionally, because of their great efficiency, they require less diesel, which indirectly lowers CO2 levels.</p> <ul style="list-style-type: none"> - The technology is operational and currently in use. It is important to state that the tractor is capable of carrying out the specified applications being discussed, such as in the statement below. This also observes coherence in the discussion. -The tractors' sensors collect data on soil conditions, crop maintenance for already planted crops, and harvest data before and after cultivation. - With variable rate technology embedded in the tractor, the chemical load in environment is reduced, and the farmers are protected from health risks associated with chemical spraying as well. <p>*Suggested title for Figure 5: The tractor's automated steering system and embedded variable rate</p>	

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	<p>technology.</p> <p>* Under Section 3.6: ...“our proposed solution is able...” This is to make clear whether the term in the statement is necessary since it implies that the paper is making a proposal that warrants action.</p> <p>*Spell out acronym like IoT and SAAS in its first use in the paper. In one case, SAAS was written as SaaS.</p> <p>*Under Section 4. Increased Efficiency: “They are quickly inspected, anticipate.” Consider elaborating on this to refer that smart farming technologies help farmers to quickly inspect the condition of the crop and anticipate concerns for immediate decision-making.</p> <p>5. The article is scientifically correct and relevant.</p> <p>6. The references are impressively up to date and comprehensive.</p>	
<p>Minor REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>*The manuscript uses language/English suitable for scholarly communications. Nonetheless, a few corrections require changes, including:</p> <p>a) Use proper preposition (e.g. “from” to “for”, “of” to “to”). Prepositions are missing in certain instances such as: “application knowledge” to “application of knowledge”.</p> <p>b) The document has a few typographical errors. To effectively convey the author's point, please utilize punctuation correctly to join ideas and begin new sentences. A space should also be included before a new sentence. Additionally, depending on the thought each phrase communicates, certain statements should be combined into one. (The manuscript's annotations provide specific remarks.) Some of these are as follows:</p> <p>- Need for Smart Farming – Labour shortage: ...rapid urbanization, the farming....</p> <p>The statement is confusing. Can be changes as – “As a result, modern agriculture should be adopted using smart farming since the approach has less labour requirement.”</p> <p>- 3.2. GIS & GPS: There should only be one statement made. Be mindful of the punctuation is used, such as omit the period (.) between “...including. The water content....” and use of capital and small letters for proper and improper noun, respectively.</p> <p>Same shall be done to “...implementing action plans. Attempting to....”</p> <p>- Under Section 3.3: “Drone technology, which was formerly linked with film production or the military, is now being employed in creative ways to tackle man-made climate change [15], which include. “ The statement is incomplete as the phrase “which include..” suggests other idea/s will be presented.</p> <p>* Be able to review the date of publication in the references written as (2021, 0 0) for proper referencing.</p>	
<p>Optional/General comments</p>	<p>The article is relevant and provides substantial information about the subject matter it addresses, sustainable agriculture development. Nonetheless, minor remarks and suggestions are made that needs revision, as identified.</p>	

Comment [Ma1]: *This is to make clear whether the term in the statement is necessary since it implies that the paper is making a proposal that warrants action.

Comment [Ma2]: *The statement is incomplete as the phrase “which include..” suggests other idea/s will be presented.

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)
<p>Are there ethical issues in this manuscript?</p>	<p><i>(If yes, Kindly please write down the ethical issues here in details)</i></p>	

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Reviewer Details:

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