

Review of: "Sustainable Agriculture and Climate Resilience in Türkiye: A Comprehensive Analysis"

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Potential competing interests: No potential competing interests to declare.

Thank you for the opportunity to review this article, which aims to explore the concept of 'green solutions' in agriculture to enhance food security for a growing world population while minimising environmental impacts. This paper specifically targets sustainable farming techniques in Turkey, which is highly impacted by the effects of climate change. It is an interesting topic that addresses the urgent need to improve the resilience and sustainability of the agricultural sector.

However, I consider this paper to be marginally publishable. It requires major revision to meet the scientific requirements of a paper. I will now present my main criticisms and comments below.

Introduction:

The introduction lacks scientific sources to support the statements made. Some aspects are only sketched out superficially, without any evidence in the form of figures, data or scientific sources, and the aspect of Turkey, which is the case study in this paper, is often missing. The statement "many people living below the poverty line, the agricultural sector is their main source of income" is an example of the superficiality of some aspects. Are there exact figures on how many people live below the poverty line? Or to which region, country or continent does this statement refer?

The introduction begins with a characterisation of green agriculture. The aspects and advantages are presented, e.g. the reduction of transport costs. This raises the question of how green agriculture can contribute to this. Further explanation is needed here. Can green agriculture be seen as part of urban agriculture? The description and objectives of both concepts are very similar.

The fifth paragraph correctly states that fluctuations in energy prices directly affect food prices. However, the connection between rising energy prices and reduced costs for producers, which could contribute to enhanced food security (sentence 3), is not clear for me.

Paragraph 7 states that agriculture makes a major contribution to GHG emissions. How high is the contribution exactly? It would be useful to have data to back up this statement. It would also be good to show how high the proportion of GHG emissions from Turkish agriculture is. Figures showing the proportion of the population in Turkey suffering from food insecurity would also be useful (section 13).

In my opinion, sections 11 and 12 are too long and should be shortened. The relevance of the facts and figures presented for the paper is not apparent.

To summarise, the introduction does not meet the requirements of a scientific publication. Central aspects that should definitely be addressed are missing. These include:

1. What is the aim of the paper?
2. What are the research gaps in the subject area?
3. What is the research question that the paper addresses?
4. What contribution is the paper trying to make and for whom?

Chapter 2:

Chapter 2 is very repetitive in itself and with the introduction? The aspects should definitely be presented in a more condensed form. It would also be appropriate to include sub-chapters. In addition, Chapter 2 reads more like a detailed summary of Türkiye's National Climate Change Adaptation Strategy and Action Plan 2011-2023. The chapter should be urgently revised. Türkiye's National Climate Change Adaptation Strategy and Action Plan 2011-2023 should only be the basis of the paper and should be critically scrutinised:

1. What are the clear objectives of the plan?
2. Which aspects are presented and are they still relevant?
3. Have more urgent aspects been added in recent years?

The source quoted in this chapter is also over 10 years old. It is essential to include other, more up-to-date scientific sources here. It is also unclear why the plan is referred to as a book, essay or paper within this chapter. It is Türkiye's National Climate Change Adaptation Strategy and Action Plan and should be consistently referred to as such in the paper.

Furthermore, it is not entirely clear whether this chapter is part of the analysis and results? Why is it presented in such detail? Even if it is part of the results, the chapter should be shorter and more specific.

General aspects:

The structure of the entire paper is a mystery to me:

- Where is the methodology described?
- When does the presentation of the results chapter begin?
- What data do the results refer to?
- Where is the discussion chapter?
- Where is the conclusion chapter?

The author also states that the data presented in this paper is too old? Why were no more recent data included? Why was this data included at all if it is no longer up to date? Here I question the scientific quality of the statements made. Can these policy recommendations be made at all if they are based on outdated data?

To summarise, I can only say that the paper needs a fundamental revision to make it worthy of publication in my eyes. I

hope the comments and criticisms will help the author to improve his paper, which can make an important contribution to the current debate on the transformation of the food sector.