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*Scientific Methods and Writing*  
Assignment 3

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## **1 Reverse outline**

### **Introduction part**

**Topic of paragraph 1:** The definition, causation, and impact of climate change and how it relates to spatial concepts.

This paragraph introduces climate change as the alteration in meteorological patterns due to human-induced greenhouse gas emissions and emphasizes the global threat of climate change and its undeniable current impact across continents. Consequently, the author considers spatial aspects at individual and policy-making levels, prompting inquiry into the relevance of spatial concepts in addressing climate change.

### **Method part**

**Topic of paragraph 2:** Using literature review as the main research methodology.

This paragraph details the chosen methodology involving a literature review to explore the relevance of spatial concepts in climate change. The author highlights the importance of literature review in understanding current spatial concepts' status within the context of climate change. Generally, this paragraph draws parallels with other studies, like the United Nations Environment Programme's desk study, to underscore the validity of this method.

### **Result part**

**Topic of paragraph 3:** Global inequalities in greenhouse gas emissions and their effects, especially between developed and developing nations.

This paragraph shows the result of exploring the stark contrast in greenhouse gas emissions between the industrialized countries (Global North) and developing countries (Global South), illustrating the spatial injustice between emission sources, and affected regions. Obviously, this paragraph covers the detailed information about the first result in this research.

**Topic of paragraph 4:** The dilemma between visualizing emissions by total volume and by the per capita.

This paragraph discusses the limitations of maps in portraying comparative emissions impact due to the overlook of population numbers. It emphasizes

the necessity for more precise representations, such as per capita emissions, and stresses their inadequacy for statistical analysis purposes. So, this paragraph act as a supplementary content for the previous paragraph, which makes the logical argumentation more coherent.

**Topic of paragraph 5:** Assessing climate change impacts from environmental conditions and adaptation strategies.

This paragraph examines the varying effects of climate change across different regions worldwide, considering environmental conditions and socio-demographic differences. Emphasizes the necessity of adapting to climate change alongside efforts to mitigate its effects. The second result reveals how countries in different parts of the world can adapt to the climate change.

### **Discussion part**

**Topic of paragraph 6:** The role and limitation of spatial concepts in addressing climate change.

This paragraph firstly reflects on the significance of spatial concepts in understanding climate change but challenges the predominance of spatial information. The author acknowledges the limitations of this study in fully describing the importance of spatial concepts in climate change, advocating for further research in this area.

## **2 Review**

In this paper, the author tried to explore the intricate relationship between spatial concepts and climate change, aiming to highlight the relevance of spatial perspectives in addressing the global challenge of climate change. The process was conducted by reviewing existing literatures related to various regions worldwide. And the result falls into two categories, mainly focusing on spatial injustice of emitters and location-dependent adaptation strategies, which seems innovative to some extent. However, I believe a major revision needs to be considered in the current manuscript.

1. In the introduction, the paper writing seems lengthy and lack of conciseness. The section of background introduction containing the definition, causation, and impact of climate change needs to be

compressed by removing some duplicates of description.

2. In the introduction, the citation content “Whether on an individual level....” does not appear to be consistent with the scientific problem, this citation could be replaced with an example of the differences in climatic conditions in different regions on a global scale, which would be more consistent with the topic. Please revise it.
3. The methods have deviated from the topic and lack specificity. I don't see a detailed description of how the analysis of the relationship between spatial concepts and climate change was conducted in the Method section. Regarding climate change, there are already numerous spatial factors associated with it, such as the varying impacts on regional climates due to different latitudes. Therefore, I suggest the author to specify the research content in Introduction or Method section. That is, exploring the spatial causes or influencing factors of climate change, and relevant literature in specific domains to establish correspondences between research content and outcomes.
4. The first result is not presented match the method. The study examines the significance of spatial concepts in relation to climate change. However, the content of this result merely illustrates the spatial differentiation of emissions without delving into an exploration of the underlying causes of this phenomenon. Consequently, it is recommended to investigate this argument, examining how spatial differentiation triggers changes in factors influencing emissions. To enhance the coherence between this result and the research question, I suggest revising the title of the result.
5. Please check the logical coherence between the second result and the topic of the article. The first issue to address is the title of this section. It is evident that the focus of this paper is the study of the impact of spatial concepts on climate change. However, this result investigates the effect of climate change on different spatial aspects. Does this align logically?

6. The result is not presented clearly and accurately. To be explicit, the logical relationship between “The status quo of initial ....” and the context does not seem to be correct. In addition, what does socio-demographic stands for in this paragraph? It is recommended to reorganize the structure of this paragraph, modify, or delete certain sentences that would impair the consistency of the entire passage.

**Some specific comments are below:**

7. In the method, “investigate to” in the first sentence needs to be revised to “investigate”. While in the 6<sup>th</sup> line of the same paragraph, it is better to take “United Nations Environment” out of the brackets.
8. In figure 1, despite the description of map symbol in the paper, it would better to provide a clear legend or a comparative set of images to avoid misinterpretation that the emission identification is solely based on color.
9. In the 4<sup>th</sup> paragraph, the comparison between the total emissions and the per capita emissions requires citation of references to make it reasonable.