

Review Form 3

Journal Name:	International Journal of Environment and Climate Change
Manuscript Number:	Ms_IJECC_124617
Title of the Manuscript:	Effects of daily weather on Aedes genus (Culicidae: Diptera) arthropod mosquito vectors profusion and dengue epidemics transmission: A systematic review
Type of the Article	

Review Form 3

PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<p>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</p>	<p>This abstract provides a comprehensive overview of dengue as a vector-borne disease, touching upon its global epidemiology, the role of climate in transmission, and the relationship between environmental factors and vector survival. However, the text could benefit from several refinements to improve clarity and precision. Here are some suggestions for improvement:</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>		
<p>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</p>	<p>1. Chronological Inaccuracy:</p> <ul style="list-style-type: none"> ○ You mention that dengue was first confirmed in Japan in 1943, but then refer to simultaneous records in Asia, Africa, and North America in the 1780s. This needs clarification, as it appears contradictory. Likely, the reference to the 1780s refers to earlier records of dengue-like illness, not clinical confirmation. 	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>2. Epidemiology Data:</p> <ul style="list-style-type: none"> ○ The epidemiological figures provided, such as the "30-40% increase in global incidence" and "450 million people at risk," should cite recent sources or studies to lend credibility to these statistics. The 25,000 annual deaths figure is widely accepted, but it's important to ensure consistency with up-to-date data. 	
<p>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</p>	<p>3. Scientific Detail:</p> <ul style="list-style-type: none"> ○ The description of the climatic factors influencing vector biology is valuable, but it could be more concise. The explanation of how temperature, humidity, and rainfall affect Aedes mosquito survival, fecundity, and longevity is accurate but somewhat repetitive. The focus should be on how these factors directly relate to the transmission cycles of dengue. ○ Terms such as "saturation deficiency" are very technical and may require a brief explanation or more accessible language for broader audiences. 	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</p> <p>=</p>	<p>4. Clarity on Dengue Virus Types:</p> <ul style="list-style-type: none"> ○ You mention DENV1, DENV2, DENV3, and DENV4, but it might be helpful to clarify that dengue is caused by four serotypes of the virus, and immunity to one does not protect against the others, which complicates control efforts. 	

Review Form 3

<p>Minor REVISION comments</p> <p>Is the language/English quality of the article suitable for scholarly communications?</p>	<p>5. Grammar and Structure:</p> <ul style="list-style-type: none">○ The flow of the sentences is somewhat fragmented, which makes it harder to follow. Breaking down long sentences into shorter, clearer statements would improve readability.○ For example, the sentence "The symptoms of dengue were first clinically confirmed in Japan during 1943, and later, it was recorded simultaneously in the Asia, Africa, and North America during the 1780." contains a chronological inconsistency (1943 vs. 1780) and could be split into multiple sentences for clarity.	
<p><u>Optional/General</u> comments</p>	<p>1. Specific Study Focus:</p> <ul style="list-style-type: none">○ The abstract ends with "the present study is addressed on the echelon of daily weather and seasonal change," but it does not explicitly describe what the study entails. A brief mention of the study's methodology (e.g., is it a review, observational study, or a model?) and key findings would help provide more context. <p>2. Suggested Revision for Conclusion:</p> <ul style="list-style-type: none">○ Rather than stating that climate factors "are playing an important role," it would be stronger to say "play a critical role," giving emphasis to the undeniable influence of climate on dengue outbreaks. <p>Revised Sample of First Few Sentences:</p> <p>"Dengue is a mosquito-borne viral infection primarily caused by the DENV1 virus, with cases also reported from DENV2, DENV3, and DENV4 serotypes. It is transmitted by Aedes aegypti and Aedes albopictus mosquitoes, predominantly in tropical and subtropical regions. First clinically confirmed in Japan in 1943, dengue outbreaks have since been documented globally, particularly in Asia, Africa, and North America as early as the 1780s. The disease has shown a significant rise in incidence, with approximately 450 million people at risk and 500,000 severe cases reported annually, resulting in 25,000 deaths."</p> <p>These adjustments would make the abstract clearer, more consistent, and academically rigorous.</p> <p>The passage provided is a comprehensive overview of the dengue epidemic trend, including factors like vector breeding ecology, climate influences, and geographical distribution of dengue cases. Here's a comment on the availability of methodology, results, and discussion sections:</p> <p>Methodology:</p> <p>The methodology is not explicitly structured in the passage but is implied through the description of studies and statistical models. For example, references to geo-spatial modeling, Linear Discriminant Analysis (LDA), and Quadratic Discriminant Analysis (QDA) indicate statistical methods used in epidemiological studies to predict dengue risk.</p> <p>The passage also suggests the use of climate models and predictive studies to assess the impact of climate change on the spatial and temporal distribution of dengue vectors (e.g., the model that predicted increased dengue risk in China).</p>	

Review Form 3

	<p>There is no clear step-by-step explanation of data collection, sampling methods, or tools used, which could have been elaborated for a more structured methodology section.</p> <p>Results:</p> <p>The results are embedded within the discussion of trends and observations across various regions and timeframes. For instance:</p> <p>The increase in dengue cases from 2.4 million to over 3 million in South-East Asia, the Americas, and Western Pacific regions.</p> <p>Prediction of dengue risk expansion in 142 counties in China and a fourfold increase in high-risk areas by the year 2100.</p> <p>Detailed statistics on dengue-affected demographics (e.g., 54.7% of cases in males under 34 years of age).</p> <p>The results also highlight the geographical spread of dengue to previously unaffected regions like Europe, with a 30-fold increase in dengue cases globally over the past five decades.</p> <p>However, the results section could benefit from more clearly structured presentation, such as tables or figures to display trends, outbreak patterns, or model predictions.</p> <p>Discussion:</p> <p>The discussion is integrated into the text, analyzing the implications of the findings in terms of public health threats and future risks. The text discusses:</p> <p>The role of climate change in altering the distribution and prevalence of dengue vectors.</p> <p>The relationship between environmental determinants, such as rainfall, temperature, and land-use patterns, with the transmission dynamics of dengue.</p> <p>The need for public health interventions, such as vaccination programs, and the challenges related to ethical clearance and mass production for widespread use.</p> <p>The passage also touches on the long-term outlook for dengue transmission, considering the potential impact of a 2°C to 6°C increase in global temperature and how this would affect vector populations and disease spread.</p> <p>Improvements for clarity:</p> <p>Methodology should be more clearly defined, outlining the tools, data sources, and processes used in the studies.</p> <p>Results could be better organized with numerical data presented in tabular form or supported by visual aids (charts, graphs).</p> <p>Discussion is fairly comprehensive but could be expanded with deeper analysis of specific case studies, such as dengue outbreaks in particular countries or regions (e.g., South-East Asia, Europe).</p> <p>If you are planning to expand this into a research paper or report, focusing on distinguishing these sections with clear headings and adding structured analysis will enhance the scientific rigor and readability.</p> <p>Result and Discussion not been Titel and I think its missed</p> <p>It looks like you're referencing a comprehensive list of studies on dengue, climate change, and vector-</p>	
--	---	--

Review Form 3

	borne diseases. Is there a specific project or paper you're working on that these references are related to, or do you need help with organizing or discussing certain themes from these sources? Let me know how I c	
--	---	--

PART 2:

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

Reviewer Details:

Name:	Yonas Assefa Tufa
Department, University & Country	Ethiopian Public Health Institute, Ethiopia