



**SDI Review Form 1.6**

Journal Name:	<a href="#">Journal of Geography, Environment and Earth Science International</a>
Manuscript Number:	Ms_JGEESI_47479
Title of the Manuscript:	Mass Balance of the Himalayan Glaciers and their Regional Variations
Type of the Article	Original Research 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. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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**PART 1: Review Comments**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (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)
<b>Compulsory</b> REVISION comments	<ul style="list-style-type: none"> <li>➤ Table 3: Mass balance: Please explain/show the basic data, which all the Mass balance data have been compared for mentioned year.</li> <li>➤ Table 3: All the four Glaciers showing the negative trend from studied time period it is not matching the data presented in table 2, please modify.</li> <li>➤ Point no 4.3: Only one-year precipitation &amp; melting data has been discussed, which is not sufficient to conclude any result. Needs to add more data.</li> </ul>	<ul style="list-style-type: none"> <li>➤ What is actually meant by the reviewer? Available mass balance figures for reference?</li> <li>➤ Table 3 is showing mass balance of the glaciers and table 2 is showing altitude of the snowline. Altitude of the snowline cannot be negative and mass balance shows the loss or gain of the mass to the glacier. The negative mass balance means mass loss and positive means mass is added to the glacier in a particular balance year.</li> <li>➤ Precipitation and melting are not discussed here. Cloud cover pattern over the glacial catchment area is studied to understand major season of precipitation. The study is majorly concentrated on the mass balance estimation of the Himalayan glaciers using SAR data. The suitability of the SAR data has been studied for estimation of annual mass balance of the each glacier individually.</li> </ul>
<b>Minor</b> REVISION comments	<ul style="list-style-type: none"> <li>➤ Please explain the meaning of negative &amp; positive Mass balance value as mentioned in fig 6.</li> </ul>	<ul style="list-style-type: none"> <li>➤ The negative mass balance means mass loss and positive means mass is added to the glacier in a particular balance year.</li> </ul>
<b>Optional/General</b> comments	<ul style="list-style-type: none"> <li>➤ For this study long term data will provide the better result, used four-year data 2012 to 2015 is not sufficient. Try to add at least 10-year data.</li> <li>➤ Used remote sensing data have high resolution (min 25 m), chances of data interpretation error are high apart from using the advance software.</li> <li>➤ Please add the altitude difference in studied glacier.</li> <li>➤ Field verification data will show the variation in output result by software. Please add field verification/compared data for better conclusion.</li> </ul>	<ul style="list-style-type: none"> <li>➤ The authors have grants to buy only RISAT-1 data for the research work from 2012 to 2015. The project was to develop a methodology using dual-polarized SAR data to identify the glacial facies which can be further used for mass balance estimation. Data of RISAT-1 was available from 2012 onwards only. User can use the methodology for estimating mass balance over longer period of time for getting better result.</li> <li>➤ Resolution of which data, SAR or optical? The result is based on the SAR data. Optical data is used for comparison only. Spatial resolution of the SAR data is 18 m. Spatial resolution of the optical data is 56 – 30 m.</li> <li>➤ Altitudes ranges are added in the manuscript.</li> <li>➤ The whole methodology was discussed in details by Das and Chakraborty, 2019. The mass balance data of the Chhota Shigri glacier was crossed checked with published literatures which are based on field observation. Field based mass balance study is time consuming and not possible to repeat annually. This is the reason the method is proposed that can substitute the is-situ observation and generate a complete glacial inventory for the Himalayan glaciers.</li> </ul>

**PART 2:**

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

As per the guideline of editorial office we have followed VANCOUVER reference style for our paper.

Kindly see the following link:

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