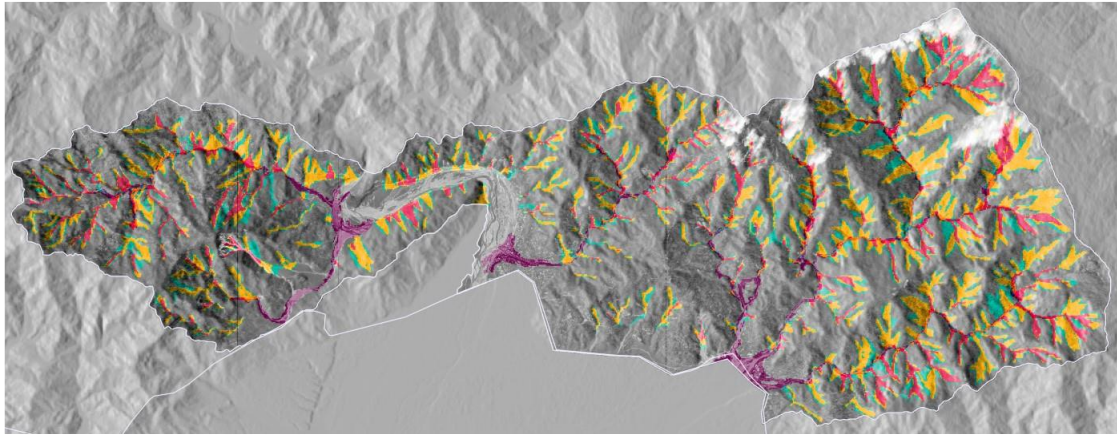


## CLIMATE INNOVATION CHALLENGE

### Monthly Progress Update

<b>Reporting Period (Month)</b>	May
<b>Grantee Name</b>	Geoneon
<b>Project Title</b>	Infrastructure Vulnerability to Slope Instabilities and Floods in Phuentsholing, Pasakha, and Gelephug (Bhutan)
<p>1. List the key activities in your workplan undertaken/completed during this month.</p> <ul style="list-style-type: none"> <li>• Sourcing information and data from stakeholders.</li> <li>• Sourcing publicly available information and data.</li> <li>• Completed debris flow source and runout susceptibility model.</li> <li>• Completed flood model.</li> <li>• Started working on vulnerability maps.</li> <li>• Started drafting report.</li> <li>• Started test to develop webmap.</li> </ul>	
<p>2. List additional activities (outside the workplan) undertaken during this month.</p> <ul style="list-style-type: none"> <li>• Started investigating options to develop a webmap with the results of the study.</li> </ul>	
<p>3. List the key beneficiaries /stakeholders consulted during this month</p> <ul style="list-style-type: none"> <li>• Department of Disaster Management, Bhutan.</li> <li>• ADPC</li> </ul>	
<p>4. Summarize key achievements and milestones of this month</p> <ul style="list-style-type: none"> <li>• Completed 30x30m resolution debris flow model covering a 400 km<sup>2</sup> area.</li> <li>• Completed 30x30m resolution flood model covering a 400km<sup>2</sup> area.</li> </ul>	
<p>5. List key challenges to be resolved</p> <ul style="list-style-type: none"> <li>• Nothing to report.</li> </ul>	
<p>6. Any additional challenges (observations/learning in terms of the applicability, scalability, and sustainability)</p> <ul style="list-style-type: none"> <li>• There was some challenges with the landslide inventory map for mainly two reasons: (1) low DEM resolution and the dense forest (that's covering the main part of the area of interest) both hampered our visual capabilities and (2) there was no big active DSGSD or sacking or big landslides in the AOI that even in that context would have been identified.</li> </ul> <p>Two conclusions: (1) if we would like to produce such maps for the entire country, we would have to consider only areas with high altitude, above the forest stage, or areas not in forests. (2) It also means that, within our current AOIs, main infrastructures in urbanized areas seems not to be exposed to such active permanent continuous deep-seated landslides.</p>	



- 1 - Specific large torrent source class
- 1 - Low mobilization susceptibility
- 2 - Medium mobilization susceptibility
- 3 - High mobilization susceptibility

Figure 1 Debris flow susceptibility map in the Phuentsholing area.

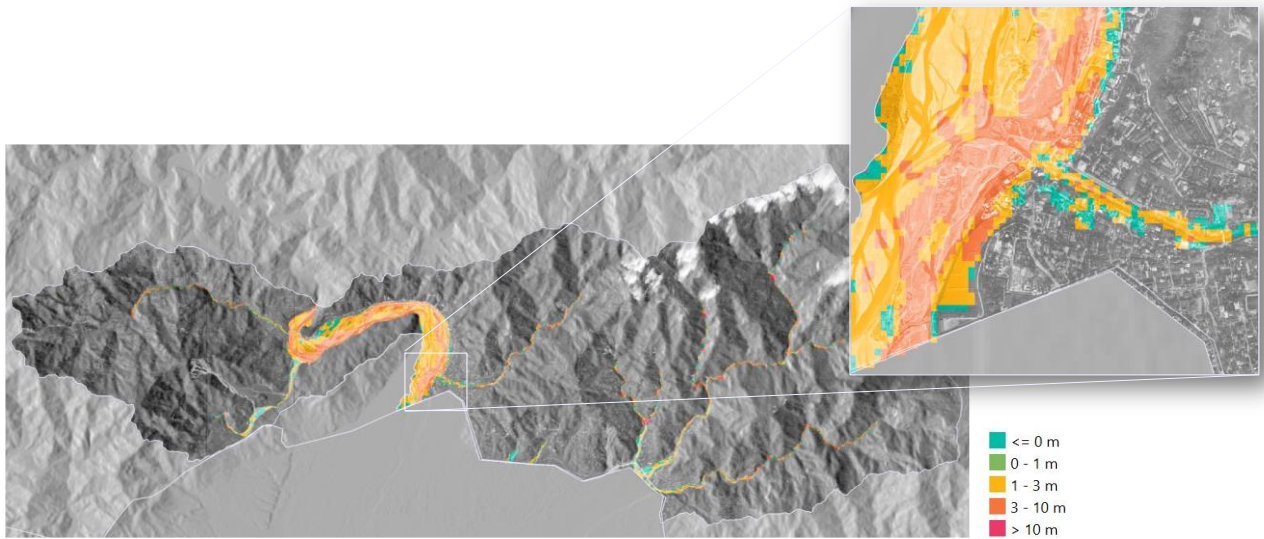


Figure 2 Flood model in the Phuentsholing area.