Anar Samedi, J Geol Geophys 2016, 5:5 (Suppl)
http://dx.doi.org/10.4172/2381-8719.C1.005

Dynamics and conservation of Saskatchewan glacier

Anar Samedi
University of Calgary, Canada

The objectives of this research were to: 1) Visualize the retreat of Saskatchewan glacier over the temporal period of 1957 to 2016; 2) create a digital geo-database with GIS-ready data of Saskatchewan glacier; 3) measure the distance of glacial retreat between the years of 1957 and 2016; 4) visualize the temperature change of the study region from 1957 to 2016; 5) visualize the rate of rainfall, snowfall, total precipitation and temperature change rate; 6) find correlation between the temperature data and rate of retreat of the glacier and 7) develop a model that will allow predicting future trends of glacial retreat. Following questions were answered: What areas of the Saskatchewan glacier receives the highest amount of solar radiation; what are the future temperature/volume change of the Saskatchewan; what is the volume of ice preserved from the proposed methodology; and value of GIS use for analysis of glacial data. Project Scope: Determine the areas of high insolation on the glacier; estimate the change in volume over years; and project the future trends of the glacier. Correlation between the recession rate and change in temperature was proven by visually comparing the change of temperature and glacier retreat maps. The glacier reacts to the increase of temperature by retreating towards its origin. The mechanism by which the glacier is retreating is the increase in ablation zone, which disturbs the glacier mass balance.

Biography

Anar Samedi recently received his BSc in Geography from University of Calgary, and is completing BGIS from Southern Alberta Institute of Technology. He currently works as Research Assistant at University of Calgary. His research interests include glaciology and climate change, air quality and population respiratory health monitoring (last research was conducted in conjunction with Health Canada). He has 7 publications so far.

anarsamedi@hotmail.com

Notes: