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Interactive comment on "Monitoring the geodynamic behaviour of earthquake using Landsat 8-OLI time series data: case of Gorkha and Imphal" *by* Biswajit Nath et al.

Anonymous Referee #1

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Authors face a quite important (even if not completely new) scientific issue in a frontier research field, i.e. the use of multi-temporal satellite images analysis for investigating lineaments changes in a possible relation with impending earthquakes. Despite several elements of interest the paper suffers of several elements of weakness that make it not acceptable in its present form. 1. Authors consider the "anomalous" change in lineaments length&distribution without whatever reference to a "normal" behaviour and whatever test in seismically unperturbed conditions devoted to characterize the considered indicators (and measuring procedures) in terms of expected values and normal variability. As just few image before and after earthquakes are considered no information we have to evaluate the stability of the measured indicators (and procedures) in

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absence of seismic event and to compare the intensity of observed fluctuations to the ones normally observable as a consequence (for instance) of image-to-image changes for observational conditions (atmospheric correction models, especially if performed in absence of appropriate information on local atmospheric conditions, can also amplify instead that reduce such variability). 2. For the same reason (no attempts to verify if similar “anomalies” are actually absent in absence of earthquakes) results actually achieved in just 2 cases do not support firm statements like the one given in the abstract: “The results obtained using the automated and geo-integrated methods compared cross validation with each other showed our method worked practically for earthquake monitoring and one can apply this new novel combined approach to predict the probable earthquake occurrence in advance just a few days before it strikes”. 3. Quality of figures is very poor (very often not supported by legends explaining their content as well as the use of colors, always with numbers too small to be readable) and their full understanding not always possible. 4. Important points of the analysis are not explained at all (for instance how authors manage the evident presence of clouds and snows in the images and how they avoid their variable presence affects also lineaments variability estimates). 5. English is generally very poor specially in the use of verbs and a close review by an English mother tongue reader is required to make the text not just grammatically correct but, at least, understandable in several points.

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