**Paper Title: Using spatial metrics and remote sensing to characterize forest change in the North of Vietnam**

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**Abstract**

Forest fire, deforestation, and conversion of forest to other land use are happening seriously on a national scale. Change of forest’s areas covers in a large geographical extend, far from human settlements, and short of enough fund as well as experience have caused a lot of difficulties for the forest management. Therefore, the objective of this research is to develop a new methodology to improve the problems above from the current forest management.

Remote sensing is an effective method to implement the objective of this research. Satellite image, which has a spatial resolution from 15m to 30m, can cover a large of forest area. We use satellite image as a main data source for the input of the research.

Application of spatial metrics analysis for the purpose of forest monitoring is a new trend in Vietnam. The result from spatial metrics analysis is a series of map, in which we can monitor fragmentation of the forest in the research area. By this method, we not only estimate the current structure of the forest qualitatively, but also forest areas in high accuracy without doing field experiments. The methodology proposed in this research provides a good solution, save time and money for the forest management, especially for an annual forest inventory.