

5th International Conference on **GIS and Remote Sensing**

September 16-17, 2019 | Rome, Italy

Proximity analysis between agricultural production and existing structures from planning perspective in the state of Iowa

Mohammad Rafayet Hossain
Iowa State University, USA

Massive use of fertilizer and pesticides has become a major concern in recent days all over the world. Use of chemicals in agricultural fields are increasing total rate of production, but its a major health concern. Clear separation distances between residential and agricultural land use are mandatory to preserve safe and sound environment. This study has been conducted in three counties located in the middle of the state of Iowa, Warren County, Story County and Boone County to find out, whether clear separation distance between agricultural fields and residential uses have been maintained according to planning principles. Three main agricultural products of the state of Iowa corn; apple and grapes have been taken into consideration. Separation distance between residential use and agricultural fields must be minimum 500m. This value of clear separation distance varies based on the presence of appropriate barriers between agricultural fields and residential uses. Point feature data of agricultural fields and residential structures have been collected from Iowa Natural Resource Department website. Mainly Buffer tool has been utilized under this study to show impacted areas. Some spatial analysis have been also conducted in this study to find out percentage of structures within the threshold limit. Statistical tools have been also utilized in the end of the study to do proximity analysis between agricultural fields and existing structures . Maintenance of clear separation distance and presence of buffer barrier are the only solution under current situation.

Biography

Mohammad Rafayet Hossain has completed his Master of Community and Regional Planning degree from the Department of Community and Regional Planning at Iowa State University. He has also received a graduate certificate on Geographic Information System (GIS). His bachelor degree was on Urban and Regional Planning from Bangladesh University of Engineering and Technology. He has worked in both public and private sector in United States of Americana and Bangladesh. In his personal life he is higher interested in science, computer, sports etc related topics..

Notes: