

A Network Analysis to Identify the Procurement Zones Around Milling Facilities in Michigan

The forest has a significant contribution in providing critical ecosystem services, clean drinking water, fresh oxygen, carbon sequestration, preventing soil erosions and direct economic benefits to people. Various researches have shown that the health and productivity of the forest is enhanced by a timely harvest of the forest products. For accomplishing the goal of sustainable management and optimum utilization of natural resources, forest managers, land owners and policy makers need to understand the market coverage and competitiveness of harvested wood products. By utilizing the available road network and data on milling facilities of Michigan, I ran network analysis in ArcGIS to generate the procurement zoning of mills. These zones represent the economically feasible regions around the mills to collect wood products. The findings deliver the best available options for economically feasible supply regions and market extent for biomass merchantability in Michigan. Additionally, I compared how the procurement zoning of mills has been changed in last four decades (1980s, 1990s, 2000s and 2010s). The findings can be helpful for the policy-makers, business owners, and consumers in making evidence-based choices/decisions in managing Michigan's forests optimally.



Naresh Khanal

I am doing Masters in forestry at Michigan State University under the supervision of Dr Raju Pokharel. For my masters, I am studying how the mill dynamics has been changed in the last four decades in Michigan, In addition to this, I have planned to study on the feedstock availability, competition hotspots and industry feedback on the mass timber production in Michigan. After Masters, I have planned to do my PhD in some economic aspects of forestry and then want to serve as a forest economist after returning back to Nepal.