conferenceseries.com

7th **International Conference on**

Biodiversity Conservation and Ecosystem Management

July 26-27, 2018   Melbourne, Australia

Exploration of land-cover changes using GlobeLand30 (2000-2010) at the national level in Mexico

Rafael Moreno-Sanchez[1], Juan Manuel Torres Rojo[2], Francisco Moreno Sanchez[3], Daniel Carver[1], Lily Niknami[1] and Elizabeth Clay[1]
[1]University of Colorado Denver, USA
[2]Centro Investigación y Docencia Económicas, México
[3]Instituto Nacional de Investigaciones Forestales y Agropecuarias, Mexico

This study explored the Land Cover (LC) and LC transitions at national level in Mexico using the GlobeLand30 (GL30) land cover 30 meter resolution data sets for the years 2000 and 2010. This information was contrasted against the results of previous national level Land Cover (LC)/LC Change (LCC) studies and land cover/use digital data sets. According to GL30, wetlands and barelands have had the largest decreases in their areas during the 2000-2010 period (-13.33% and -9.26%, respectively), while artificial surface and grasslands have had the largest increases (7.38% and 4.00%, respectively). Cultivated (1.88%), forest (-0.47%), shrublands (-1.04%) and water bodies (-1.21%) show low changes during the 2000-2010 period. From the GL30 estimates of LC extent and percent change, those for the forest and cultivated classes were the most similar to those estimates reported in previous studies. The estimates for other LC classes show low agreement with previous studies and with a set of aggregated LC classes created from official digital LC maps. Worth noticing is the small decreased found for the GL30 Forest land cover class during the 2000-2010 period. This suggests a change in processes that in previous decades were reducing the extent of the forest cover in Mexico. The general reduction in LC transitions observed in the 2000-2010 GL30 data supports reports that allocations for some land covers/uses in Mexico have reached maturity and are tending to stabilize. The results of this study points to several needs for further research, such as carrying out assessments of the locational and classification accuracy of the GL30 data sets for Mexico. More specifically, there is a need to closely analyze the extent and changes in the GL30 artificial surface and wetlands LC classes.

Biography

Rafael Moreno-Sanchez has received his Bachelor's degree in Forestry from the Chapingo Autonomous University in Mexico. He has received his PhD in Natural Resources Management from Colorado State University in the USA. He has research, teaching and administrative experience including: Researcher for the National Institute for Forest, Livestock and Agriculture Research (INIFAP) in Mexico, the Director of the National Center for Disciplinary Research in Conservation and Improvement of Forest Ecosystems INIFAP (Mexico), Post-Doctoral Fellow with the Organization of American States-SEMARNAP in collaboration with the University of Western Ontario, Canada. He has been teaching full time since 1996 in the areas of natural resources management, sustainable development and geographic information science and technology. He is currently an Associate Professor in the Department of Geography and Environmental Sciences at the University of Colorado Denver.

Rafael.Moreno@ucdenver.edu