Mapping of Forest Cover Change in the Democratic Republic of the Congo

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Abstract : Introduction: Deforestation is a change in the structure and composition of flora and fauna, which leads to a loss of biodiversity, production of goods and services and an increase in fires. It concerns vast territories in tropical zones particularly; this is the case of the territory of Bolobo in the current province of Maï- Ndombe in the Democratic Republic of Congo. Indeed, through this study between 2001 and 2018, we believe that it was important to show and analyze quantitatively the important forests changes and analyze quantitatively. It's the overall objective of this study because, in this area, we are witnessing significant deforestation. Methodology: Mapping and quantification are the methodological approaches that we have put forward to assess the deforestation or forest changes through satellite images or raster layers. These satellites data from Global Forest Watch are integrated into the GIS software (GRASS GIS and Quantum GIS) to represent the loss of forest cover that has occurred and the various changes recorded (e.g., forest gain) in the territory of Bolobo. Results: The results obtained show, in terms of quantifying deforestation for the periods 2001-2006, 2007-2012 and 2013-2018, the loss of forest area in hectares each year. The different change maps produced during different study periods mentioned above show that the loss of forest areas is gradually increasing. Conclusion: With this study, knowledge of forest management and protection is a challenge to ensure good management of forest resources. To do this, it is wise to carry out more studies that would optimize the monitoring of forests to guarantee the ecological and economic functions they provide in the Congo Basin, particularly in the Democratic Republic of Congo. In addition, the cartographic approach, coupled with the geographic information system and remote sensing proposed by Global Forest Watch using raster layers, provides interesting information to explain the loss of forest areas.

Keywords : deforestation, loss year, forest change, remote sensing, drivers of deforestation

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