Monitoring of Native Forest Regeneration Impacted by Fire Using Unmanned Aerial Vehicle

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INTRODUCTION

Brazil has registered several fire outbreaks events recently, and 236,371 hot spots were registered by National Institute for Space Research in 2015. To minimize impacts, new technologies must be developed for fighting and monitoring fires. Thus use of unmanned aerial vehicles (UAV) is new tool to be applied for monitoring fire outbreaks and assessing regeneration of native vegetation fire impact. Thus, the objective of this work was to monitor the regeneration of native forest in the environmental preservation area of the Universidade Federal de Alfenas, south of Minas Gerais State, Brazil.

MATERIAL AND METHODS

Study area comprises the environmental preservation area of the Universidade Federal de Alfenas, with 280 ha.

Subsequently, the images were processed in Agisoft Photoscan software to make georeferenced mosaic, Digital Surface Model and reflectance maps.

RESULTS AND DISCUSSION

Monthly flights were run between August and November with a DJI Phantom 4 - Advanced UAV, loaded with Sony EXMOR ½.3 ”RGB sensor and Near Mapir Survey 2 Infrared sensor, at 100 m height.

CONCLUSIONS

This work made it possible to monitor the regeneration of native forest impacted by fire, collaborating with the elaboration of possible conservation management plans.

ACKNOWLEDGEMENTS

To the “Coordenação de Aperfeiçoamento de Pessoal de Nível Superior” (CAPES), for the financing of the study - Financial Code 001.