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REMOTE SENSING AND EARTH OBSERVATION TO TRACK CHILD TRAFFICKING AND
GIRL-CHILD SLAVERY

Abstract

The vitality of space application research is to find solutions for society developing on the earth. Through the ground breaking work of identifying 'Brick Kilns' by Doreen S boyd, we recognise the current hot spots of slavery and human trafficking. However, to narrow down on child , particularly girls and minorities we look towards a combinational analysis of remote sensing data for scalable observation , social index evidence of gender motivated crimes, education and literacy indexes and the changing narrative of a woman in society. Through the overlapping of multiple sources of data , a localized algorithm is developed to map specific areas within the Brick Kiln. We then use Earth observation data to narrow down these hot spots to provide evidential support for authorities to take action. Through the applications of space, it is not only trafficking that can be identified by also poverty, its causes and the extent of human suffering as a result of poverty. The paper works on interpretation of the visual imagery post hot spot identification, classifies and segments the images and a ML algorithm is developed to identify these images with minimal delay. We then look at the probability of child trafficking within these images currently manually but a ML algorithm is in development for automated identification. The current study builds on the Brick belt, but will extend to various poverty clusters as the research develops.