

## **ENVIRONMENTAL CHANGES BROUGHT ABOUT BY BURNING IN SOUTH AMERICA**

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The arrival of the first indigenous groups to South America brought the extensive use of burning for the purpose of making clearings and paths, as well as facilitating hunting. The original vegetation of the savannas was very sensitive to fire during the high point of the yearly dry season. Through the use of satellite images of the Amazon region, neat correlations between the burning practiced by indigenous populations and the expansion of the savanna over perennial forests have been detected. Of course, factors such as the length of the dry season, the geological substrate, soil type and landforms acted upon this process. Burning carried out during the winter and early spring - the dry season – was affected by the trade winds. Thus, the savannas expanded out over their western borders, while sometimes retreating simultaneously along their eastern boundaries. The evidence gathered here shows the incorporation of large land expanses in this process, including sub-tropical zones such as the Pantanal-Chaco and the pampas, where hydromorphic depressions covered by grasses made the burning easy to initiate, progressing from there to the edges of the forests. In this fashion, the destruction of large areas that had been densely covered by vegetation which protected hydrographic basins against accelerated erosion increased torrential floods, thus promoting the formation of coarse sand and gravel sedimentation during the mid-holocene period in the tropical and semi-arid regions of South America.