MAPHSA: Mapping the Archaeological Pre-Columbian Heritage of South America



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The archaeological heritage of South America is facing increasing threats due to the expansion of agricultural activities, such as cattle ranching and industrial scale soy cultivation, infrastructure expansion, illegal wood harvesting in the main forests, and the current fire emergency plaguing the Amazon and other biomes of the continent.

It is clear that the threat to the natural environment goes hand in hand with the damage to

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the archaeological heritage – with biomes such as the Amazon facing accelerated deforestation over the last years, as documented by remote sensing real-time monitoring. Inevitably, this leads to significant heritage loss, including archaeological sites that have never been properly recorded. Documenting such pre-Columbian sites, in addition to finding new sites and increasing knowledge about their distribution and significance, are critical steps in preserving the cultural heritage and in changing attitudes towards its destruction, which are core aims of the Arcadia Fund.

In MAPHSA, we will work among seven institutions from four different countries to document the archaeological heritage of about 3.5 million km2 of endangered forest and savanna biomes across Brazil and Colombia. This will be accomplished by a combination of archival work, remote sensing, machine learning, and ground survey.

GIAP (ICAC)'s partnership, led by Prof. Hèctor A. Orengo, will include the development of the algorithms that will allow the remote detection of archaeological features under the rainforest cover, mainly through satellite imagery, machine learning and artificial intelligence.

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