UNIVERSITY INTERNSHIPS 2021
BUSHFIRE MAPPING INTERN

Primary location
Singapore and working from home

Duration
3-6 months

Number of positions
1

Organisation description
PEOPLE NEED NATURE — Conservation International works to spotlight and secure the critical benefits that nature provides to humanity. Since our inception in 1987, we’ve helped to protect more than 6 million square kilometres of land and sea across more than 70 countries. Currently with offices in 29 countries and 2,000 partners worldwide, our reach is truly global. Building upon a strong foundation of science, partnership and field demonstration, Conservation International empowers societies to responsibly and sustainably care for nature, our global biodiversity, for the well-being of humanity.

About the project
Bushfire is widely and traditionally used for maintaining grasslands and pastures, crop fields, as well as hunting. Exacerbated by invasive species, climate change, and societal changes, bushfires are burning large areas of forests beyond human needs, with disastrous impacts on forest resilience/regeneration, water quality due to erosion, and the health of corals reef further down. At times, uncontrolled fires also threaten the houses, belongings and even lives of local communities.

Uncontrolled bushfire and its associated risks and impacts are not unique to New Caledonia and are also prevalent in other Asia-Pacific geographies. In order to reduce the scale and impact of future bushfires—both natural and anthropogenic—Conservation International has the unique opportunity to:

I. Plan culturally sensitive bushfire management projects.
II. Monitor the effectiveness and impact of these projects.

It is important to have a reliable understanding of historical fire regimes (fire occurrences, extent of burnt areas, likely origin of fires, etc) in relation to weather conditions. This project will require intensive delineation of burnt areas on pilot sites, with consideration of potential machine learning applications at a larger scale.

More information on CI New Caledonia’s terrestrial work:
https://www.conservation.org/projects/mount-panie
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About the role

The intern will report to the Terrestrial Conservation Officer, CI New Caledonia and support CI's work in the sustainable management of natural landscapes through a ridge-to-reef approach. S/he will focus primarily on bushfire management through the following activities:

I. Review best practices for fire regime (2000-2020) characterisation and suggest relevant methodology, based on available imagery.
II. Delineate burnt areas over pilot sites and fill attributes tables using available imagery using QGIS.
III. Characterise fire regimes over pilot sites.
IV. Identify the most impactful fires that need to be discussed with local communities and create maps to support discussions with local communities.
V. Identify needs and opportunities to use machine learning to run similar analyses on a larger scale.

Qualifications

- Pursuing a degree in Geography, Life Sciences, Environmental Studies, or related fields
- Applicant must demonstrate experience with GIS and mapping software (e.g. QGIS)
- Experience with Artificial Intelligence tools

Desirable skills/traits

- Independent thinker and worker
- Interest in adaptive ecosystem management, land management

Benefits

The intern will be provided with a monthly stipend of SGD 800-1,000 for 5 workdays per week.

If the internship requires travel, the intern can expect to receive a modest travel grant. However, all travel will be highly dependent on prevailing COVID-19 restrictions, programmatic needs, and available funding.

Application

To be considered for this internship, please apply to singapore@conservation.org with the subject line “Application: Bushfire Mapping Intern – [full name]” and the following documents:

1. Curriculum vitae.
2. Cover letter, which should include the applicant’s dates of availability, interest in working with Conservation International’s field programmes in the Asia-Pacific, and any relevant experience working in an NGO or environmental conservation setting.