# GEOSPATIAL ANALYSIS AND SYSTEM MONITORING INTERN

We are seeking a promising and self-motivated Geospatial Analysis and System Monitoring Intern to support the long-term growth and success of Conservation International's work in the Asia-Pacific Field Division for a period of 3-6 months. The intern will have the opportunity to work alongside Conservation International's team in Cambodia and the Philippines to support remote sensing monitoring programs and machine learning to generate forest disturbance alerts.

The Conservation International University Internship Program is open to Master's level students in local universities reading Geography, Earth Systems Science, Spatial Analysis, or related fields.

**About Conservation International**

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 kilometers 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.

In Singapore, Conservation International envisions a vibrant, resilient and sustainable city for generations to come and aims to empower the community to protect nature through individual and collective action. Conservation International Singapore's country program is focused on community engagement and education, capacity building through student internships, and exploring and supporting innovative solutions for conservation science and research.

**Conservation International Values**

We expect that all employees will embrace the values of our organization:

- Passion: Inspired by people and by nature, we are urgently compelled to drive change for a sustainable future.
- Integrity: We are honest, transparent and accountable for our actions.
- Teamwork: We work together as one CI, recognizing that inclusion, collaboration and cooperation are fundamental to achieving a healthy and prosperous world for all.
- Respect: We respect each other and work to earn trust, valuing our diversity of cultures, talents, and experiences.
- Courage: We pursue our vision, taking bold action, persevering and overcoming challenges.
- Optimism: We are optimistic about the capacity of people to be caring, generous and brilliant, and believe that with partners, we can inspire humanity to create a better future.

**Location**
Singapore (remote-working)
Must have stable and secure internet access for work.

**About the Project**
Conservation International is establishing remote sensing monitoring programs utilizing Sentinel 1 SAR radar data and machine learning to generate forest disturbance alerts, SAR Forest Alert Detection (SARFAD). These programs are being established for three target areas: (1) Central Cardamom Mountain National Park in Cambodia, (2) Prey Lang Wildlife Sanctuary in Cambodia, and (3) Mt. Mantalingahan Protected Landscape in the Philippines (Palawan). The use of radar overcomes traditional barriers for tropical forest monitoring including persistent cloud cover and, potentially, identification of forest degradation. This is because of the electromagnetic properties of C-band radar that allow it to penetrate clouds and return tree structural information and advances in machine learning and cloud computing that allow for complex pattern detection within "noisy" radar data. The ultimate goal is to allow for reliable deforestation and forest disturbance monitoring regardless of cloud cover.

The program was started in partnership with SERVIR Mekong, a USAID and NASA collaboration. This collaboration continues in Cambodia. For Philippines, Conservation International is contracting the technical consultant who supported the development of the SARFAD in Cambodia to replicate the system for the Mt. Mantalingahan site.

**About the Role**
Working with the Regional Carbon Technical Director based in Singapore and colleagues in the Asia-Pacific Field Division, the intern will provide support in the following areas:
- Collaborating with scientists from SERVIR Mekong, supporting data collection for the training of the machine learning systems.
- Deployment of the SARFAD systems to monitor the environmental conditions and to implement necessary processes to keep the platform available and efficient.
- Provide application and administrative support of the tools in use to monitor systems and applications.
- Performing geospatial analyses of development and monitoring processes, supporting, and assisting with troubleshooting and management of the monitoring system.
- Work with various project managers and peers on implementing workflows in data acquisition and processing.

**Qualifications**
- Current enrolment in a Singapore university (or gap year), reading a Master's degree with a focus on Geography, Earth Systems Science, Spatial Analysis, or related fields.
- Proficiency in spatial analysis, mapping, and the use of remote sensing and associated software (e.g. ArcGIS, QGIS, Google Earth Engine).

**Desirable Qualities**
- Independent thinker and worker.
- Advanced analytical skills.
- Experience with statistical modelling.
- Interest in forest management and mapping.

**Benefits**
The intern will be provided with a monthly stipend of SGD 1,000 for a 5-day work week.

**Application**
To be considered for this internship, please apply to singapore@conservation.org with the subject "**Application: Geospatial Deployment and System Monitoring Intern – [full name]**" and the following attachments:

1. Curriculum vitae.
2. Cover letter, which should include the applicant's interest in working with Conservation International's field programs in the Asia-Pacific and any relevant experience working in an NGO or environmental conservation setting.
3. Period of availability.
4. Sample maps/projects to show experience and skills working with GIS software.

Shortlisted candidates will be invited for an interview.