

# Wildlife Conservation Society WCS Cambodia Program

## JOB DESCRIPTION

Position	:	GIS and Remote Sensing Specialist
Project	:	EU “Our Tonle Sap”
Duty station	:	Kampong Thom (Travel to project sites in 6 provinces around Tonle Sap Lake)
Report to	:	GIS Manager, Project Lead, Landscape Technical Advisor and Project Manager
Department	:	GIS Department/Tonle Sap Landscape

### Background:

The Wildlife Conservation Society, founded in 1895, has the clear mission to save wildlife and wild places across the globe. WCS's goal is to conserve the world's largest wild places in 16 priority regions, home to more than 50% of the world's biodiversity. We currently manage about 500 conservation projects in more than 60 countries. WCS has been working in partnership with the Royal Government of Cambodia since 1999, providing technical advice and support for the conservation of key habitats and species across the country. The WCS Cambodia program is growing rapidly! We are expanding our family and are looking for applications from qualified candidates to fill the GIS Officer position for a new four-year \$5 million project funded by the EU. The “Our Tonle Sap” Project adopts an integrated landscape approach to strengthen resilience to environmental change in ecosystems, communities and biodiversity throughout the Tonle Sap Biodiversity Reserve. The Project has six co-applicant partners. The Project works simultaneously across multiple scales with government, communities and the private sector. It will enhance management and restoration of critical habitats to facilitate resilience to environmental change by improving government and community management of protected areas, developing and implementing community-level fire management plans, piloting community-managed vegetation rehabilitation and silviculture, and developing ecologically resilient livelihoods that protect floodplain habitat. The Project will also address the drivers of environmental change by supporting national and sub-national government to develop policy that incorporates adaptation and sustainability considerations, and working with development agencies, banks and the private sector to improve environmental and social practices.

### Purpose of Position:

This is a GIS specialist level with advancement opportunity to support conservation technology including Geographic Information System (GIS), Remote Sensing and the other spatial information platforms of the WCS Cambodia program. The GIS Officer is to work with the Geospatial Analytics Team members on a variety of cartography, GIS, remote sensing, database, and data management tasks for WCS Cambodia Tonle Sap Landscape.

### Outputs and Deliverables:

#### 1. GIS

- 1.1. Respond to Fire Information for Resource Management System (FIRMS) monitoring
- 1.2. Respond to habitat particularly flooded forests, grassland monitoring in the project landscape by using Google Earth Engine technology or GIS and Remote Sensing technologies. Report and alert Project Managers and Technical Advisors if significant changes occur.

- 1.3. Provide GIS services for cartographic requests from the project
- 1.4. Conduct field trips or ground-truthing as needed
- 1.5. Provide assistance to National GIS Analyst
- 1.6. Assist in GIS data management and documentation and create metadata for datasets of the project.
- 1.7. Collate, manipulate and update all spatial data from respected project landscape for activity planning and reporting materials
- 1.8. Support project teams at each site and six co-applicants to map and present their key inputs on the maps
- 1.9. Undertake spatial analysis to extract, explore and examine the results (feature data) to prove highly effective for evaluating certain locations for specific purposes, estimating and predicting outcomes, interpreting and understanding change, detecting important patterns hidden in the geo-datasets
- 1.10. Use a range of GPS tools in the field and undertake desk-based data to capture (digitizing) to convert paper maps to GIS datasets for example, record the location of road, river, forest, lake, data on people, wildlife population distribution, vegetation, education/awareness raising and livelihood.
- 1.11. Perform other tasks as needed by supervisor, project manager and technical advisor(s)

## **2. Remote Sensing**

- 2.1. Download FIRMS data (e.g., fires detection from Moderate Resolution Imaging Spectroradiometer (MODIS) aboard the Aqua and Terra satellites, and the Visible Infrared Imaging Radiometer Suite (VIIRS) aboard S-NPP and NOAA 20)
- 2.2. Obtain available satellite imagery (e.g., Landsat 7, Landsat 8, Sentinel-1A, Sentinel-1B Sentinel-2A, Sentinel-2B, Sentinel-3, Sentinel-5P and other sensor products) as needed
- 2.3. Digitization of landscape features on remote sensed data
- 2.4. Interpret satellite image segmentation for land-use/land-cover mapping for habitat monitoring
- 2.5. Provide image interpretation for remote sensing resampling features
- 2.6. Tasks as needed by supervisor and technical advisor(s)

## **3. Others**

- 3.1. Strong experience in using geographical information system (GIS) software such as Arc GIS, QGIS, web-based mapping application, Google Earth Engine technology and Remote Sensing
- 3.2. Provide technical support for project SMART officers
- 3.1. Coordinate/assist training as needed

## **QUALIFICATIONS AND EXPERIENCE:**

- Bachelor's degree in land management and land administration, agriculture, forestry, environmental science, biodiversity conservation, cartography, climate change, computer science/software engineering or a related field
- Experience working on wildlife conservation, environmental issues, protected area management, fisheries and forestry
- Minimum four-year experience working in this area.
- Strong facilitation, presentation, and coordination skills, and a good understanding of fisheries management, wildlife conservation, rural context and rural communities are advantageous.
- Excellent interpersonal and communication skills, and ability to work independently and as part of a team

- Good in English (especially reading and writing), fluency in Khmer
- Good analytical/problem solving and critical thinking skills
- Good Computer skills (MS Words, Excel and PowerPoint and GIS)

#### **ABILITY**

- Ability to handle multiple tasks and assignments simultaneously required.
- Spending long periods of time in remote locations
- Living and staying with communities
- Work overtime when required
- Working on own initiative with minimum supervision and staying on tasks
- Travelling by boat and motorbike
- Work in close collaboration with government agencies such as Department of Agriculture Forestry and Fisheries (DAFF), Department of Environment (DoE), Department of Water Resources Management and Meteorology (DoWRAM)
- Maintain excellent communication with and encourage strong participation of local staff
- Liaise with partners, the private sector, and international and local NGOs as required