Position: Wildlife Health Data Scientist & Manager
Reports to: Associate Director, Epidemiology, Health Program, Global Conservation
Supervisor to: N/A
Location: New York/ Bozeman, Montana
Country Program/Sector: Health Program, Global Conservation
Position Type: Full-time
Expected travel: Limited

Organization Background
The Wildlife Conservation Society (WCS) is a US non-profit, tax-exempt, private organization established in 1895 that saves wildlife and wild places by understanding critical issues, crafting science-based solutions, and taking conservation actions that benefit nature and humanity. With more than a century of experience, long-term commitments in dozens of landscapes, presence in more than 60 nations, and experience helping to establish over 150 protected areas across the globe, WCS has amassed the biological knowledge, cultural understanding and partnerships to ensure that vibrant, wild places and wildlife thrive alongside local communities. Working with local communities and organizations, that knowledge is applied to address species, habitat and ecosystem management issues critical to improving the quality of life of poor rural people whose livelihoods depend on the direct utilization of natural resources.

Program Overview
The WCS Health Program is central to delivering on our mission to save wildlife and wild places around the globe. Wildlife, livestock, and human diseases will likely have a significant impact on the future development of sustainable land uses, protected areas, transboundary natural resource management, other biodiversity conservation approaches, and livelihood opportunities in many of the landscapes and seascapes where we work. Our work at the interface of wildlife, domestic animal, and human health has demonstrated that a One Health approach can build new constituencies for conservation and strengthen existing ones, while mitigating a key threat to conservation.

Job Summary
WCS has recently incorporated the Wildlife Health Intelligence Platform (WHIP; developed by the Canadian Wildlife Health Cooperative - CWHC) to record wildlife health data and is in the process of updating the existing SMART platform (https://smartconservationtools.org/) to include elements relevant to wildlife disease surveillance (SMART Health). In addition, efforts are on-going to integrate wildlife morbidity and mortality reporting into the SMART system already in use by rangers in the protected areas they patrol in wildlife habitat around the world. Additional efforts are needed to integrate these different components into a functional stream of wildlife health intelligence. Although these systems are piloted as part of the DTRA Greater Mekong Wildlife Bio-surveillance project, they also represent longer term strategic objectives for WCS Health Program, and for wildlife health globally. The adoption of this system for the Wildlife Bio-surveillance project
will be critical for 1) the management of data collected by the three national surveillance systems 
2) capacity building in health data management using best practices.

The Wildlife Health Data Scientist & Manager is integral to the success of the WCS-WHIP database, 
SMART Health and their integration. 50% of this position involves a leading role in future 
development of the WHIP and SMART Health platform in Southeast Asia and eventual rollout in 
other regions of the world where WCS works. The other 50% of this position will focus on data 
analysis in the support of peer-reviewed scientific research broadly related to wildlife disease 
surveillance and zoonotic disease threats. The ideal candidate will be able to function effectively 
with limited oversight and moderate on-site training. He or she should understand the importance 
of database integrity in terms of both efficiency and security. The Wildlife Health Data Scientist & 
Manager will be part of the Health Team and as such will be involved in other projects as needed. 
The Manager reports directly to the Associate Director-Epidemiology of the Health Program in 
coordination with the Associate Director-Asia in support of the DTRA Greater Mekong Wildlife Bio-
surveillance project and will work very closely with the SMART team at WCS. The position may be 
based at the headquarters of the Wildlife Conservation Society (WCS) in New York or the WCS 
office in Bozeman, Montana.

Specific objectives of the Wildlife Health Data Scientist & Manager position include:

1. Coordinate and support the implementation of SMART and WHIP in relevant country 
   programs and reporting as required by the DTRA Greater Mekong Wildlife Bio-surveillance 
   project:
   a. Manage and contribute to the ongoing development and maintenance of WHIP at 
      WCS working closely with the Canadian Wildlife Health Cooperative (CWHC)
   b. Facilitate the integration of WHIP and SMART by WCS and partner agencies and 
      organizations
2. Working with existing data to support the data analysis and peer-review publication needs 
   of the program related to wildlife disease surveillance and zoonotic disease risks. This 
   includes but is not limited to data cleaning, visualization, statistical analyses, and scientific 
   writing etc.

Major Responsibilities:

**WHIP**

- Work with CWHC IT team on customization of WHIP to meet WCS health program 
  requirements
- Receive issues from field teams, troubleshoot and work with CWHC IT to resolve any issues 
  that require their support
- Periodically perform data quality checks
- Conduct training, reviews, and updates with the field teams in countries where WHIP is in 
  use (with plans to expand)
- Maintain WHIP for WCS users, including creation of accounts for all users and assignment 
  of security levels, updating of drop-down menus, creation of projects etc.
- Keep updated version of the WHIP user manual and training guides
- Report on implementation progress as needed
SMART

- Work with WCS Conservation Technology team and broader SMART Partnership to update SMART Health as needed, to ensure staff are informed about updates to the SMART technology, and ensure data and systems are kept up to data nationally and centrally
- Work closely with Conservation Technology team and broader SMART Partnership to deliver training as part of the roll out and ongoing support of SMART Health to field teams
- Monitor Alerts and perform regular analysis and review of SMART Health data across all locations to identify where support may be needed across regions where SMART Health is deployed
- Work individually with country programs to identify way forward in integration of health components in the existing SMART patrol data model in use in each conservation area (+ link with SMART Health)
- Manage SMART Connect server infrastructure
- Develop SMART Reports for both national and central use cases
- Developing training material and maintaining training/demo database and keep an updated version of the SMART Health user manual and training guides
- Troubleshoot and document technology/system issues, and provide support when possible
- Suggest, document, and make continual improvements to SMART and SMART Health systems
- Report on implementation progress as needed
- Maintain access and security of SMART/Health systems

SMART/WHIP integration

- Determine how data will be able to be moved from SMART to WHIP and develop architecture as needed
- Create SMART queries for SMART APIs
- Develop SMART and DTRA reports
- Monitor SMART / WHIP integration, resolving any issues with the integration

Data Scientist

- Use data analysis tools to visualize data and monitor trends in wildlife health across different databases
- Support field teams and program leadership in data cleaning, visualization, and analysis following best practice of reproducibility, versioning, and collaborative code development, and build capacity in this area within both field teams and government partners
- Contribute to developing and maintaining tools facilitating report automation (in particular using Rmarkdown and Shiny), and use these tools to highlight the value of the surveillance systems to our government partners
- Promote access to Wildlife Health Data and System while ensuring data and systems are secured with appropriate access controls.
- Develop research questions and high quality science that support the Health Program
- Help produce and write high quality peer-reviewed publications and reports
Minimum Requirements:

- A postgraduate qualification (PhD) in ecology, veterinary medicine, ecology, biology, public health or related field with a strong foundation in data science and management.
- An understanding of and commitment to, conservation of wildlife and wildlands.
- Excellent interpersonal skills, team skills, and communication skills (oral and written), an ability to adapt to field challenges, while maintaining a high professional standard.
- Solid understanding of data collection and management.
- Expertise with R, R Studio, GitHub, R Shiny and R Markdown is required, QGIS or ArcGIS preferred.
- Strong demonstrable experience in data analysis and scientific writing
- Experience communicating with program developers appreciated
- Advanced skills in MS Excel
- Strong database administration experience (creating tables, running scripts)
- Must be detailed oriented and have excellent problem solving skills.
- Competence and comfort working in a team environment.
- Experience working with government partners preferred but not essential

Qualified applicants please submit a cover letter and resume to fvpnewyork@wcs.org with the subject line: WHP Data Scientist Manager.