

## **Bridging data science and biodiversity conservation in the Caribbean Islands Biodiversity Hotspot**

**Port of Spain, 13 March 2026** – Civil society organisations (CSOs) across the Caribbean are on the frontlines of biodiversity conservation, protecting forests, wetlands and coastal ecosystems that communities depend on. Yet as environmental threats grow more complex, so too does the need for smarter, more efficient tools to support conservation work.

Around the world, conservationists are turning to data science, artificial intelligence, remote sensing and Geographic Information System (GIS) to guide decisions and maximise impact. However, uptake in the Caribbean has been slower and opportunities for regional collaboration as it relates to emerging technologies remain limited.

In response to this, an initiative led by [The Cropper Foundation](#) (TCF) and supported by the [Critical Ecosystem Partnership Fund](#) (CEPF), under the small grant mechanism administered by the Caribbean Natural Resources Institute (CANARI), set out to explore how data science and emerging technologies can strengthen conservation efforts in the region, and what it would take to make that shift a reality.



*CSO assessment on conservation technology and digital maturity workshop, St. Vincent and the Grenadines.  
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### **Towards conservation technology**

Conservation technology is the application of technological tools, methodologies and innovations to promote, transform and enhance protection of biodiversity and earth's natural resources.

*The Preparatory Grant to Support Integration of Data Science and Technology in Caribbean Conservation Efforts by Civil Society*, which emerged from previous practical experience in Trinidad and Tobago, was implemented under a simple but ambitious premise: digital tools have the potential to transform conservation work by improving data management, strengthening monitoring, making better use of limited resources, and supporting evidence-based decision-making.

It sought to assess current capacity, understand barriers to adoption, and develop recommendations to support the integration of these tools into biodiversity conservation efforts in Jamaica, Saint Lucia and Saint Vincent and the Grenadines.

### **Building awareness and assessing capacity**

In total, 21 conservation practitioners from 13 Caribbean CSOs participated in workshops designed to assess their organisational capacity for conservation technology. Participants were invited not only to learn, but also to reflect critically on their own organisational systems and capacities, by using self-assessment tools to evaluate their strengths and gaps.



*CSO assessment on conservation technology and digital maturity workshop, Jamaica.  
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The results were revealing. Many organisations demonstrated strong leadership and a clear commitment to conservation outcomes. However, participants also pointed to deeper structural challenges, including cultural barriers, weak data-sharing systems, limited intellectual property protection, and restricted access to equipment and technical expertise.

Inadequate training opportunities and limited access to technology were consistently identified as key constraints to adopting data-driven approaches.

The project also included targeted outreach, workshops, webinars, and an asynchronous online course.

### **Beyond the challenges**

While challenges were evident, the project sparked important conversations and increased awareness of how technology could support conservation. Participants expressed growing interest in related topics such as cybersecurity, digital communications, and improved data management practices.

Importantly, the process also underscored a critical insight: moving from theory to practice will require more hands-on support. A previous pilot in Trinidad and Tobago, where CSOs were paired directly with technology experts, proved more effective in bridging the gap between knowledge and

implementation. This suggests that mentorship-style models or embedded technical assistance may be more impactful than standalone training.

The project reinforced a broader truth: technology alone does not drive transformation. Adoption requires trust, accessible training, practical support, and alignment with organisational realities.

As Caribbean CSOs continue to safeguard the region's unique biodiversity, integrating data science and emerging technologies remains a promising frontier. The question is not whether these tools can help but how to create the right conditions for them to thrive.

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Learn how CEPF's support is enabling other Caribbean CSOs to use technologies in conservation work here: <https://arcg.is/vTiGD>.