BRIEFING NOTE: SERVIR EVALUATION

SERVIR is a joint partnership between USAID and NASA that collaborates with regional partners to provide satellite-based Earth observation data and science applications to developing nations. Over the past 10 years, SERVIR has reached more than 40 countries in 4 regions, helping to **improve environmental management and resilience and develop the capacity** of government agencies, institutions, and other key stakeholders to **integrate geospatial information and technology** into their decision-making.

USAID's Bureau for Economic Growth, Education, and Environment (E3) commissioned a **mid-term evaluation of SERVIR** to capture its effects across communities, countries, and regions around the world.

Evaluation Questions

1. How are SERVIR's science application tools being used and what are the results/impact of those uses?
2. Are the SERVIR hubs becoming stronger regional service providers?
3. What is the value of SERVIR as demonstrated through measurable effects and their monetary value?

Key Evaluation Findings

ADOPTION AND USE OF SERVIR PRODUCTS

SERVIR products are most commonly **used to strengthen data confidence** and fill information gaps

Some of SERVIR's earliest products are **still seeing continued use nine years after development** and dissemination, and several newer products are on a similar track

Adoption and use of SERVIR products require short-term **trust in product reliability and accuracy,** and long-term **trust in product availability and relevance**

SERVIR'S VALUE FOR USERS AND BENEFICIARIES

SERVIR products are demonstrating **social and economic value for thousands of households**, and producing **administrative value for dozens of government service providers**

Economic models revealed which aspects of SERVIR's products were **most important to their users,** and how they could be modified to improve on their utility

Products have **greatest added value in remote or difficult-to-access terrain** and when management decisions span geographically large administrative units

PUTTING SERVIR DATA TO WORK

Data have successfully been **used to identify critical pre- and post-disaster target areas** for resource deployment

Reliable access to easy-to-use SERVIR data **increased client data confidence** resulting in **more sustainable and productive use of SERVIR products**

Local geospatial data professionals found **new and unexpected uses for SERVIR products and data** in several cases

POLICY SYSTEMS AND COMMUNICATION

Data visualization using SERVIR product outputs is a **powerful tool for communicating** with and mobilizing non-technical audiences

SERVIR geospatial products were **most useful and sustainable when formally integrated** into existing decision-making systems and management practices

Local leadership can be skeptical about the relevance or necessity of geospatial tools and data, but **young incoming specialists are changing attitudes**

Evaluation Methods

The evaluation team implemented a multi-disciplinary design drawing upon innovative and advanced social science methods to assess SERVIR's complex mix of products and services.

Methods Used:

- **Social network mapping**

- **Choice experiments**

- **Client perception surveys**

- **Content analysis**

- **Focus groups**

- **Key informant interviews**

Evaluation Limitations

- Many SERVIR products are early in their deployment, limiting identifiable or measurable impacts so far

- The evaluation targeted products with strong documentation and accessible interviewees, skewing the data towards newer products and thus not fully capturing the extent of SERVIR effects

- Case study results for one product or geographic region are not always generalizable beyond their specific context, even for similar products or regions

- Hub host countries often have higher levels of SERVIR-related activity than their neighbors, making hub data disproportionate within the data collected

300+ interviews and 7 focus groups across 10 countries	Bangladesh El Salvador Guatemala	Kenya Nepal Panama	Rwanda Tanzania Uganda Zambia
3 region-specific surveys	Spanning 35 countries with 400+ SERVIR clients		
9 SERVIR product case studies	CREST Flood Mapping (*Kenya*) Land-Cover Mapping for Greenhouse Gas Emissions Inventory (*Rwanda & Zambia*) Rapid Response Mapping for Disasters (*Nepal*) Agricultural Monitoring to Support Food Security (*Nepal*) Water Quality Monitoring for Lake Atitlan (*Guatemala*) SIGMA 1 Forest Fire Monitoring (*Guatemala*) Ocean Algal Bloom Monitoring for Mesoamerica (*El Salvador*) Implementation of Jason-2 for Flood Forecasting System (*Bangladesh*)		
2 valuation studies	Damage and Loss Avoidance Measurement and Contingent Valuation Method		

Conclusions and Recommendations

- SERVIR products have a higher likelihood of success when they are embedded in existing systems and decision-making processes. Good development practice can help scientists to better understand the decision-making context prior to product development and tool deployment.
- The application of valuation methods can help identify which aspects of SERVIR products are most important to the user, as well as how the products can be modified or adapted to ensure their utility and value.
- Limited, but critical, use of SERVIR products in recent post-disaster efforts suggests an area of focus for future SERVIR action.
- Earth observation data are sometimes the only cost-effective option for gathering information in remote or data-limited environments. SERVIR should explore additional opportunities to serve areas where data are limited due to infrastructure or access.
- SERVIR should establish clear theories of change for products to improve its ability to monitor and evaluate product performance in the future.