

SERVIR STRATEGIC PLAN 2020-2025



SERVIR Strategic Plan 2020-2025

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This document outlines the joint USAID and NASA key strategic goals for SERVIR for the next five years. Each goal has focus areas to improve or accelerate SERVIR's ability to realize the program's theory of change and achieve the overall goal of empowering regional and national actors to use Earth observations and Earth science for development.

SERVIR Strategic Plan USAID Concurrence Sheet

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SERVIR Strategic Plan 2020-2025

1. INTRODUCTION

Around the world, people are increasingly consuming geospatial data, products, tools and services to inform decisions, policies, and actions relevant to geographies at global, regional, national, and local scales. The broad utility and efficiency of remote sensing has fueled demand for space-based Earth observation information across thematic sectors. Increasing demand for geospatial data and services provides opportunities for SERVIR's continued leadership in demonstrating the value and impact of Earth observation information, Earth science, and technologies for early action for resilience and sustainable resource management.

SERVIR is aligned to readily adopt, use and tailor new satellite data, including data provided by NASA, other space agencies, and industry partners, as they become more accessible and available. This positioning is evident in SERVIR's successful track record of building capacity to use and integrate technologies, including but not limited to synthetic aperture radar, altimetry, and soil moisture data, emerging information processing techniques such as machine learning and cloud computing. With the right blend of partnerships and capacities, SERVIR will continue to help partner countries improve flood forecasting, water resources management, agricultural decision-making and food security, land cover monitoring, and biomass estimations.

The SERVIR Strategic Plan for 2020-2025 provides guidance to the SERVIR program for the next five years, relying heavily on lessons learned to date. These include the importance of communicating results and impacts to broad user communities, scaling-up services, increasing measures of effectiveness through evaluation activities, and addressing interest in SERVIR through new types of partnerships. SERVIR leadership developed the set of strategic goals in this plan through a detailed Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis with the SERVIR network¹, meetings between the United States Agency for International Development (USAID) and the National Aeronautics and Space Administration (NASA), and cross-mapping between Agency goals and SERVIR objectives. SERVIR leadership also performed a situation analysis and developed an updated theory of change (Section 4) based on our current understanding of root causes and assumptions, and to ensure that the strategic goals will lead to the desired changes.

¹**SERVIR hubs** are the regional institutions that in some cases include consortium members that support geospatial analysis, capacity building, and service design and delivery; the **SERVIR network** includes all hubs, NASA, USAID, SERVIR Science Coordination Office, the Applied Sciences Team, and the SERVIR Support Team; **SERVIR partners** refers to host country government institutions and other collaborating organizations including private sector partners, non-governmental partners, intergovernmental organizations, implementing partners, other donors, and other academic and research organizations.

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Prior strategic goals² are embedded in SERVIR's principles, and have been fundamentally institutionalized into the manner in which SERVIR operates³. These principles are described in Section 2. The three strategic goals for 2020-2025 build on the past and provide new focus areas that will guide the next five years, and are described in Section 3. The theory of change that underpins SERVIR goals moving forward is described in Section 4.

This strategic plan identifies the next set of cross-cutting strategic priorities that will ensure SERVIR remains responsive to both NASA and USAID Agency goals and those of stakeholders and users in SERVIR regions. The SERVIR program and this strategic plan bring to life elements of each agency's goals related to advancing the application of Earth science for the benefit of society (NASA) and by partnering to address critical development issues including building resilience to climate shocks and stresses for improved food security, readiness and response to hydroclimatic disasters, and to improve natural resource management in support of climate mitigation (USAID).

In this next phase, SERVIR will continue to seek to maximize impact on the ground, deepen science collaboration, increase sustainability, and take advantage of a growing number of partners' strengths to achieve the program's objective. Furthermore, SERVIR will continue to lead by example in valuing and fostering a diverse, equitable, and inclusive environment throughout the SERVIR network.

This strategic plan will be reviewed and updated as needed and/or when NASA or USAID plans are revised to ensure that SERVIR remains responsive to achieving agency-relevant results.

²SERVIR's 2015-2020 Strategic Plan had four goals: 1. Reach more users with demand-driven products and services; 2. Connect more innovative and appropriate science; 3. Expand SERVIR networks through new strategic partnerships; and 4. Improve sustainability at multiple levels.

³A selection of SERVIR's impacts resulting from achieving the goals laid out in the 2015-2020 Strategic Plan are communicated in the SERVIR Global Retrospective Report, the Global Report 2020, and articles posted at servirglobal.net and hub websites.

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2. SERVIR PRINCIPLES

SERVIR is focused on ten principles that guide program implementation. These principles are foundational to the strategic goals presented in this strategic plan.

1. Strengthen existing mechanisms, policies, and practices with Earth observation data.
2. Address critical development challenges through an objective and systematic needs assessment process.
3. Apply the most appropriate, high quality science for local contexts, connecting Earth observations with local data.
4. Co-develop needs-driven, impact-oriented services through teams of users, SERVIR hubs, and U.S.-based scientists.
5. Build capacity for sustained use of services by local, national and regional stakeholders and institutions.
6. Strengthen regional initiatives and organizations and their impact on both global and national issues with an aim to scale and replicate services.
7. Share and communicate SERVIR outcomes and impacts to multiple, targeted audiences.
8. Promote free and open data, open science, knowledge sharing and technical exchange.
9. Reflect on lessons learned and adapt approaches to continuously increase impact.
10. Add to and enable growth of understanding of the Earth system by connecting international knowledge and field presence to satellite missions.

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3. KEY STRATEGIC GOALS FOR 2020-2025

The following strategic goals establish areas of emphasis and focus areas to improve or accelerate SERVIR's ability to realize the program's theory of change and achieve the overall goal of empowering regional and national actors to use Earth observations and Earth science for development gains:

1. Strengthen regional and national capacity and commitment
2. Demonstrate greater development impact of SERVIR services
3. Enhance the SERVIR network's global leadership and influence

3.1 Strategic Goal 1: Strengthen regional and national capacity and commitment

This goal reflects the imperative of local ownership and leadership for long-term sustainability of SERVIR. Through actions in the focus areas, SERVIR will assist regional hubs and partners to institutionalize Earth observations and Earth science services tailored to the needs of decision-makers, and help build the necessary capacities, tap into available resources, and foster international collaborations to empower our partners.

Focus Areas

- 3.1.1 Engage with leadership in existing and new regional hubs and partners to institutionalize SERVIR capabilities and commitment to deliver Earth observation solutions for development beyond project timeframes.
- 3.1.2 Engage strategic regional and national partners, public and private, to strengthen SERVIR's capacity in key technical areas and leverage and complement institutional strengths.
- 3.1.3 Pursue opportunities to diversify financial resources, funding partners, and funding models for sustainability at all levels.
- 3.1.4 Ensure that SERVIR's capacity building activities continue to apply and refine the best available tools and approaches to reach individuals and institutions.
- 3.1.5 Strengthen the ability of U.S. researchers to engage with international partners for capacity building and application of Earth observation science for societal benefit.

3.2 Strategic Goal 2: Demonstrate greater development relevance and impact of SERVIR services

This goal reflects the need to go beyond innovative technical solutions to ensure that wider audiences understand the relevance of SERVIR services, the results generated, and the actions they can take. Actions in the focus areas will acknowledge SERVIR's regional, technical niche, and reinforce strategic engagement of development actors like USAID's field programs and opportunities to scale or replicate services for wider impact.

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Focus Areas

- 3.2.1 Strengthen service planning, design, delivery, and integration into decision-making, with a focus on deeper engagement of development activities and partners, starting with USAID missions and programs.
- 3.2.2 Pursue strategic opportunities to scale and replicate services within and across regions where relevant.
- 3.2.3 Reach wider development audiences through improved interpretation and communication of SERVIR-generated data and information, including case studies and evaluations of services and capacity building activities to demonstrate impact.
- 3.2.4 Explore new areas for SERVIR Earth observation services to reach strategic sustainable development audiences (e.g., outcome monitoring and impact assessment, urban resilience, air quality monitoring, and marine issues).
- 3.2.5 Promote locally-appropriate solutions to geospatial technology and infrastructure (e.g., cloud, on-premise, and hybrid solutions, owned and/or endorsed by user organizations) for sustainable technology adoption and Earth observation service delivery.

3.3 Strategic Goal 3: Enhance the SERVIR network's global leadership and influence

This goal reflects the incredible knowledge and experience generated by the program's network of partners, and the growing internal and external audiences for this knowledge that have the potential to multiply our impact. Actions focus on widening participation in the network's technical exchange program, investing in thought leadership to reach wider audiences, and supporting individuals to build their leadership potential.

Focus Areas

- 3.3.1 Leverage expertise across the SERVIR network to accelerate global learning and exchange in Earth observation for development, including the SERVIR network and external audiences.
- 3.3.2 Provide thought leadership and training to share Earth observation methods, approaches, and principles that tackle critical challenges and improve equity and benefits for disadvantaged, marginalized, and other vulnerable groups.
- 3.3.3 Demonstrate cross-benefits of science and applications with international development and resilience goals.
- 3.3.4 Influence the global agenda to direct investments in the use of Earth observations to advance development goals and build local capacity and self-reliance.
- 3.3.5 Nurture the professional development of individuals across the SERVIR network to lead and influence the use of Earth observation for sustainable development.

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4. THEORY OF CHANGE

The SERVIR theory of change (see graphic on page 11) describes SERVIR's pathway to achieve its goals and bring about results. The theory of change serves as a guide to SERVIR and its partners to help align efforts for a complementary approach with shared objectives. Each SERVIR hub has a unique structure and supporting results framework, as such there are likely to be differences in how this theory of change is applied among hubs and across the network. It also lists some explicit assumptions, and conveys what is within the manageable interests of the program. The strategic plan complements the theory of change by identifying specific opportunities, approaches, and results that will increase the impact and value of the program as it is carried out.

This theory of change replaces the previous SERVIR results framework. Previously, the SERVIR results framework focused on outcomes for:

- Increased provision of Earth observation products and tools,
- Improved awareness and access to information among users, and
- Improved capacity of analysts and decision-makers, with
- Increased capacity of hubs to serve as regional service providers as a cross-cutting result.

The new theory of change integrates user and hub capacity into a single outcome. It describes services rather than products and tools. It goes beyond provisioning of information by specifying that the desired outcome is service integration into decision-making processes. With an outcome for coordination and collaboration at multiple scales, the new theory of change recognizes this as a critical component to SERVIR's overall desired change to increase use of Earth observation information for development impact for improved resilience and sustainable resource management. The new theory of change identifies the following parallel and interdependent outcomes:

- **Improved capacity** of regional, national and local partners to use Earth observation data and technologies, including institutional, human, and gender dimensions,
- **Services co-developed and integrated into decision-making**, including improved access to quality data and analysis, and improved engagement, awareness, and trust in the products, and
- **Improved coordination and collaboration**, across disciplines, internationally, and within regions and countries—this includes at the network scale
- **Gender and social inclusion** and **promoting a culture of science for society** are cross-cutting outcomes.

These outcomes contribute to the impact of improved resilience and sustainable resource management through early action and increased use of Earth observation information, Earth science, and technologies in decision-making.

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The SERVIR theory of change, as illustrated on the following page, states that if SERVIR: 1) co-develops and integrates Earth observation services into decision-making processes; 2) improves the capacity of regional, national and local partners to use Earth observation data and technologies; and 3) strengthens coordination and collaboration around these solutions across disciplines and scales, while simultaneously promoting gender and social inclusion and a culture of science for society, then SERVIR will achieve the overall desired change to improve resilience and sustainable resource management through early action and increased use of Earth observation information, Earth science, and technologies. Thus, SERVIR will positively affect lives and livelihoods in the countries and regions where the SERVIR network focuses its work.

INPUTS

OUTPUTS

OUTCOMES

SERVIR Theory of Change

1. EO¹ Services for decision-makers

- Service planning and design based on local needs assessment, stakeholder consultation and mapping [hub level]*
- Adaptive management and sustainability planning based on feedback and local and national use of services [hub level]
- Analysis or strategic partnerships developed to understand relevant decision-making processes (e.g. political economy analyses, mandates, constraints) and effectively embed services within them [network and hub levels]
- Computing and data storage resources for hubs [network level]
- Science and data support, including validation and tailoring of data and models [network and hub levels]
- Relationship building and sustained engagement with national and local decision makers for coordination, collaboration, and information sharing [network and hub levels]

- 1.1. Services that are easily accessible to local stakeholders and provide access to quality, timely, tailored data
- 1.2. Validated, calibrated datasets, models, products, tools, and publications
- 1.3. Scaled, replicated, and/or transferred services
- 1.4. Collaboration agreements with key partners, co-developers, or users
- 1.5. Services that integrate gender and social inclusion

1. Increased co-development, integration, and institutionalization of EO data and analytical services into local and national decision-making processes.
 - 1a. Decision makers have greater access to timely, quality data, information, and analysis
 - 1b. Decision makers have improved engagement, awareness and trust in data products, information, and analysis

Cross-cutting outcomes:

- Gender and social inclusion integrated into services, opportunities for women in STEM increased
- A culture of science for societal benefit promoted

2. Capacity

- Financial and technical support for hubs and partners [network level]
- US researcher and science support and training provided to hubs and local partners [network level]
- Organizing and supporting exchanges and workshops [network and hub level]
- Capacity assessments (e.g. USAID Human and Institutional Capacity Development projects (HICD) developed with hubs and partners [network or hub level]
- Gender and social inclusion strategy and implementation plans [network and hub level]
- Capacity building framework for SERVIR [network level]
- Individual training and development plans [hub level]
- Partnerships with universities to facilitate learning and skill building [network and hub level]

- 2.1. Hubs and partners supported
- 2.2. Capacity assessments and implementation plans for local organizations
- 2.3. Technical exchanges, training workshops, and shared methods
- 2.4. Individual training and professional development
- 2.5. Gender and youth engagement and capacity building events and fellowships

2. Improved capacity of local, national, and regional partners and stakeholder organizations to use and train others to use EO data, information, and technology in decision-making
 - 2a. Improved human capacity of local, national and regional organizations
 - 2b. Improved institutional capacity of local, national and regional organizations
 - 2c. Greater inclusion, capacity, recruitment, and promotion of women and underrepresented groups in local, national and regional organizations

IMPACT

Improved resilience and sustainable resource management at local, national and regional scales achieved through early action and the increased use of Earth observation information, Earth science, and technology.

3. Coordination, collaboration

- Partnership development and formalization
- International and national public communication about SERVIR work and results
- Regular outreach and awareness building among EO and decision maker community to coordinate efforts and reduce duplication
- Collaboration and coordination across researchers, SMEs, practitioners, development actors, and decision makers
- Engage academia, civil society, or think tanks to produce policy and resource management analyses for decision makers based on SERVIR tools and data

- 3.1. Communications products and campaigns implemented targeting key audiences
- 3.2. SERVIR network and EO for development community supported, knowledge shared
- 3.3. Technical teams of local and international collaborators for services established
- 3.4. Research results shared and published in scientific and development journals, blogs, events, and other outlets

3. Improved long-term coordination and collaboration across disciplines, within and across geographies, and with other EO for development efforts
 - 3a. Improved long-term, technical collaboration across hubs, US-international researchers, and other partners
 - 3b. Increased regional, national, and/or sub-national collaboration
 - 3c. Increased awareness of the uses, methods, and benefits of EO for development.

Assumptions:

- Users will disseminate improved information effectively to reach beneficiaries
- Complementary investments will be made to support actions informed by SERVIR services
- Sufficient internet connectivity to sustain technical collaboration, openness to cloud computing

¹Earth observations (EO)

SERVIR hubs are the regional institutions that in some cases include consortium members that support geospatial analysis, capacity building, and service design and delivery.

SERVIR network includes all hubs, NASA, USAID, SERVIR Science Coordination Office, the Applied Sciences Team, Subject Matter Experts (SMEs) and the SERVIR Support Team.

SERVIR partners refers to host country government institutions and other collaborating organizations including private sector partners, non-governmental partners, intergovernmental organizations, implementing partners, other donors, and other academic and research organizations.