VITAL SIGNS

BETTER DATA, BETTER DECISIONS

By Investments (Private Sector) and Communities

(An Integrated Monitoring and Decision-Support System to Inform Investments in Sustainable Production in Africa)

INVESTMENT QUESTIONS FOR SUSTAINABLE PRODUCTION

1. Location: Where is the best location for my investment (e.g. in relation to existing natural capital, availability of labor (social capital), infrastructure, inputs, and market access)?
2. Baseline: Capital inventory/Asset management: Status of assets (natural, social, economic)? Which assets need conservation/restoration? What opportunities exist to maximize benefits? etc.
3. Risks: What are associated risks (social, economic, natural and political) to this location and baseline? Approach?
4. Approach: What is the best approach to optimize prevalent circumstances, resources and risks?
5. Monitoring: How are investments performing? What are the outcomes/impacts to natural capital? social and economic benefits of livelihoods for stakeholders?

AN INTEGRATED MONITORING SYSTEM FOR SDGs AND NDCs.

Conservation International (CI) has developed an integrated monitoring system to support informed decision-making in Africa. The Vital Signs monitoring system (www.vitalsigns.org) collects and integrates data with the aim to provide nearreal-time decision support tools to policy makers and investors and influence development in a way that protects the environment, while also improving human livelihoods in the face of climate change and associated uncertainties. Vital Signs integrates external data sets such as the World Bank's Living Standards Measurement Survey (The Tropical Rainfall Measuring Mission (TRMM), Demographic Health Surveys, The Climate Prediction Center Morphing (CMORPH) remotely sensed climate products; African Soil Information Service for soil health; The Tropical Ecology, Assessment, and Monitoring Network (TEAM) for climate, carbon stocks, and biodiversity; The Food and Agriculture Organization (FAO) agricultural production statistics and many others to give a comprehensive picture. As one integrated monitoring system, Vital Signs is well placed to provide a cost effective integrated approach to monitoring the SDG and NDC indicators in countries. New advances in machine learning and data fusion, and the massive computational power available with cloud computing, enable Vital Signs to provide this support to countries.

VITAL SIGNS

CONSERVATION
INTERNATIONAL

EXPECTED OUTCOMES

(i). An integrated monitoring system that supports SDG and NDC implementation, monitoring and reporting—appropriate to the needs and priorities of stakeholders, and to data availability.

(ii). Decision support tools for evaluating tradeoffs and synergies between development and conservation at multiple scales; and strengthened capacity for integrated monitoring and reporting.

(iii). Partnership established to provide a stronger evidence base for inter-ministerial and inter-sectoral coordination and policy coherence, highlighting co-benefits and complementarity of actions, trade-offs and policy actions that could benefit multiple SDGs and NDC.

(iv). A framework for measuring progress and impacts of using the integrated approach to implement, monitor and report on SDGs and NDCs.

(v). Amplification and broad uptake of the integrated approach, fostered through evaluation of impacts, documentation of lessons learned and sharing these lessons and successful models via a regional community of practice and platforms such as CI's Gaborone Declaration for Sustainable Development in Africa (GDSA) and others.

FLAGSHIP PROJECTS

1. Open source data; The Vital Signs data platform (www.vitalsigns.org/get-data) offers   free access to all its data with a simple login to track users and application. This is groundbreaking as for the first time in these countries; there is free access, not only to extensive datasets on agriculture, nature and wellbeing, but insights for policy makers, practitioners, community and investors.

2. Resilience Atlas: Using the Resilience atlas (www.resilienceatlas.org/) developed by CI, Vital Signs maps and integrates key existing datasets around the broad themes of agriculture, livelihoods, and biodiversity conservation and allows stakeholders in each country to directly visualize, on a map, the relative suitability of alternative areas for investment. These atlases assess suitability for project activities, taking into account the conservation of critical natural capital that supports local livelihoods and expected consequences of future climate change on livelihoods and natural capital.

3. Global Environment Facility (GEF) Food Security Project: A 12 country food security and resilience project funded by the GEF ($120million); where CI co-implements the monitoring component. For this project Vital Signs applies the latest data science tools to support Planning and monitoring of project implementation using customized online Resilience Atlas, where users can derive insights from large survey and climate datasets by visualizing the factors that affect resilience to stressors and shocks of each project area (www.foodsecurityiap.resilienceatlas.org). Data from a range of sources (including the European Space Agency, EO4SD, NASA, World Bank, FAO,and others) is incorporated into both the Trends.Earth and Resilience Atlas systems for use by the hub project and IAP countries.

4. The Agriculture, Livelihood and Conservation (ALC) Initiative of the David & Lucille Packard foundation: As part of this work, Vital Signs developed online atlases using global and regional publicly available datasets for Ethiopia (https://ethiopia.resilienceatlas.org/map) and the Democratic Republic of Congo (DRC) (https://drc.resilienceatlas.org/ map). The atlases enable the Foundation and other stakeholders to directly visualize, on a map, the relative suitability of alternative areas for investment activities. It takes into account the conservation of critical natural capital.

5. Creating insights for stakeholders: As part of its work, Vital Signs has generated:Soil nutrient atlases (www.vitalsigns.org/soil-nutrient-maps), crop suitability atlasesthat can be applied by extension workers in Uganda (e.g.www.vitalsigns.org/blog/soils-and-climate-suitability-cassava-production-uganda),indicators of soil fertility in Rwanda to guide their Forest and Landscape Restoration efforts (www.vitalsigns.org/blog/low-carbonnitrogen-ratios-characterize-rwanda-soils),among others.