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# ADDING IT UP: ECONOMIC TOOLS TO IMPROVE INFRA-STRUCTURE PLANNING AND CONSERVE BIODIVERSITY

In April 2012, Stephen Asuma, Uganda Country Coordinator for the International Gorilla Conservation Programme, received an announcement about a training course in economic tools to support biodiversity conservation in the Albertine Rift. He decided to apply — a decision that would lead to a three-year collaboration and produce a groundbreaking economic study to protect mountain gorillas in Uganda's Bwindi Impenetrable National Park while ensuring secure livelihoods for communities dependent on tourism incomes. USAID recognizes that a biologically diverse environment and robust natural resources are critical to ending extreme poverty in countries like Uganda, where poverty directly influences decisions about natural resource use on a daily basis.

The course, "Economic Tools for Conservation and Infrastructure Planning in the Albertine Rift," was being offered by Conservation Strategy Fund (CSF) as part of USAID's Biodiversity Understanding in Infrastructure and Landscape Development (BUILD) Program. Stephen's application emphasized that "... we conservationists need to be able to understand principles of economics and development work. We need to be able to quantify and monetize the value of natural resources ... to be able to strongly articulate the case for nature so that the planners and decision-makers understand and appreciate the call for sustainable development."

At the two-week course, Stephen was joined by government, civil society, media, and academic colleagues from throughout the Albertine Rift region to learn about economic incentives for natural resource management, economic drivers of environmental problems, environmental valuation methods, cost-benefit analysis of projects and policies,

and communication and negotiation techniques. After the course, CSF invited proposals from course graduates for follow-up analysis of priority biodiversity and infrastructure issues in the region.

Stephen and his colleagues at the International Gorilla Conservation Programme were deeply concerned about a proposed road project that would pass through Bwindi Impenetrable National Park, a globally recognized UNESCO World Heritage Site that is refuge for almost half the world's population of critically endangered mountain gorillas, and one of Uganda's main tourist attractions. Previous studies suggested that if the road were upgraded, the gorillas would actively avoid the area near the road, and would have higher mortality from disease, poaching, and vehicle collisions. Stephen explained the situation in his proposal to CSF: "An alternative route has been identified that would serve the local community better through providing access to services to a greater number of people, albeit that the route would be longer and therefore a financially more expensive alternative. Currently, there is no comprehensive information for decision-makers on which option is economically the most suitable."

The road analysis showed that two road alternatives would have a better overall economic performance than upgrading the existing route through the park, despite having higher up-front costs. Not only do the alternative routes present lower overall risks to the gorilla population, they also provide thousands more people with access to important services like healthcare and education. **When the potential loss of tourism revenue due to reduced gorilla populations — up to \$214 million over 20 years — is included, upgrading the road through the park actually costs twice as much as the alternatives.**



BWINDI IMPENETRABLE NATIONAL PARK, UGANDA, 2014: Stephen Asuma, right, and another student in the USAID-funded Economic Tools for Conservation and Infrastructure Planning course walk one of the roads proposed for improvement in Bwindi Impenetrable Park. Photo by Conservation Strategy Fund

BWINDI IMPENETRABLE NATIONAL PARK, UGANDA, NOVEMBER 2004: Bwindi is home to nearly half of the world's gorilla population. Photo by Amy Pokempner, Wildlife Conservation Society

As coordinator of the International Gorilla Conservation Programme's strategic engagement with government and civil society partners, Stephen understood the importance of involving key stakeholders from the outset of the project. He traveled to the Bwindi region to train data collectors and discuss the project with local community members and authorities. Stephen and CSF representatives also met several times with the Uganda National Road Authority, Uganda Wildlife Authority, National Environmental Management Authority, and Uganda Poverty and Conservation Learning Group to discuss the project and to share preliminary results.

Thanks to the analysis as well as strong consultation and communication throughout the project, the Uganda National Road Authority expressed openness to considering the alternative routes. Importantly, the Uganda Poverty and Conservation Learning Group endorsed the results of the analysis at a stakeholders meeting in early 2015, stating that they "...believe that the development of a road outside [the park] presents the potential for a win-win outcome. Local economic development will be supported in the short and long-term, opportunities for communities to engage in and benefit from

tourism will increase, risks to gorilla tourism and related revenues will be avoided, and the biodiversity and cultural values of [the park] will be conserved.' The fate of this road has not yet been decided, but the fact that the route through Bwindi Impenetrable National Park has been stalled and the Ugandan National Roads Authority is open to considering alternatives is a powerful result in itself. The study has been widely disseminated via meetings with local communities and politicians, and Stephen and his colleagues remain hopeful that the stark economic realities revealed by this study will sway decision-makers in the direction of the alternative routes, thereby protecting some of the world's last remaining gorilla habitat.

USAID's Biodiversity Policy released in 2014, emphasizes not only targeting our efforts in strategic places, but also integrating biodiversity and other development sectors for more effective outcomes. Support of the Conservation Strategy Fund's training in economic tools for conservation and infrastructure planning in Uganda and other locations is an excellent example of how such tools can benefit biodiversity and local people.