

Conserving Africa's Great Apes: Lessons Learned

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African great apes are conservation flagships yet all four species - bonobos, chimpanzees, eastern gorillas and western gorillas - remain threatened by habitat loss, bushmeat hunting, the live animal trade and diseases such as Ebola haemorrhagic fever (Walsh et al., 2003; Miles et al., 2005; Junker et al., 2012; Kuhl et al., 2017). In 2002, the conservation organisation WWF started a range-wide African Great Apes Programme (AfGAP) to address threats to each sub-species. This article highlights the main lessons learned by the two programme co-ordinators during AfGAP's first phase (2002-2007) when 15 projects (total budget c. US\$ 2.2 million) were implemented in Cameroon, Central African Republic, Democratic Republic of Congo (DRC), Gabon, Republic of Congo and Rwanda. We hope the views expressed (those of the authors and not necessarily of WWF) could inform efforts to tackle current and emerging threats to great apes.

A strong and flexible strategy is essential

The WWF action plan for African great apes (Stephenson, 2003) had objectives for

protection and management, community support, policy, capacity building, trade control and awareness and listed priority ape populations. Future strategic plans for range-wide ape conservation programmes should:

- Incorporate key elements of existing strategies at the levels of landscape (e.g., the Trinational Dja-Odzalal-Minkebe strategy), region (e.g. the Congo Basin Forest Partnership Strategy) and sub-species/species (e.g. Oates et al., 2007) to ensure integration of ape-focused work into broader conservation programmes (while not diluting outcomes for apes). Stakeholders should be consulted to distil ideas to a common focus for a given site or population.
- Identify priority populations to help focus project work and make it more measurable than loosely-defined threats-based strategies. The conservation activities required in important areas identified by regional action plans (e.g. Kormos & Boesch 2003; Kormos *et al.*, 2003; Tutin *et al.* 2005; Oates *et al.* 2007) can in turn be prioritized by conservation agencies using criteria relating to, for example, feasibility, relevance, impact and cost-benefit (Stephenson, 2003; Stephenson & Ntiama-Baidu, 2010).
- Allow flexibility to adapt priorities to emerging threats and changing security and political environments, replicating strategies, actions and partnerships that work and adapting those that don't.

Work with national agencies and NGOs for sustainable outcomes

WWF implemented great ape projects with governmental and non-governmental partners.

- In every case, engaging local communities and local authorities was essential to securing success.
- Partnerships were particularly important in areas where WWF was not present

on the ground, such as in Cross River gorilla habitat in Cameroon (where the Wildlife Conservation Society, WCS, led the project) and in bonobo habitat in Salonga National Park, DRC (where the Zoological Society of Milwaukee led).

- Future work needs to build on existing governmental and non-governmental partnerships to rally efforts around existing conservation strategies.

External factors influence success, especially in areas of conflict

Civil unrest and violent conflicts have had major repercussions for conservation in central Africa. However, in spite of increased threats from poaching during times of reduced local governance, ape populations can survive (Dudley et al., 2002; Waller & White, 2016).

- It is vital to maintain long-term support for wildlife and national parks staff through periods of crisis; local NGOs are even more important than ever at such times (Stephen et al. 2017).
- The need for perseverance is demonstrated in the long-term conservation success of the International Gorilla Conservation Programme in DRC, Rwanda and Uganda. In spite of the turmoil in the region, a continued presence by international NGOs helped ensure mountain gorilla populations continued to rise (Gray et al., 2013). This example also demonstrates the advantages of long-term projects over short-term interventions.

Monitoring project performance and impact is vital

While AfGAP projects delivered concrete results that advanced great ape conservation, we were mostly able to measure only activities and outputs, rather than outcomes (reductions in pressures) and impacts (changes in populations), limiting our ability to compare the effectiveness of different strategies. This common management problem

can be resolved with more structured monitoring (Stephenson & Reidhead, 2014; Stephenson et al., 2015). Project portfolios delivering a common strategy should:

- Establish robust project monitoring plans at the outset which include at least some impact, outcome and output indicators that are common across the portfolio, allowing aggregation of results against programmatic goals and objectives. This often needs to be facilitated by central capacity (i.e. programme co-ordination).
- Ensure data are collected (and an appropriate proportion of the project budget is set aside) to measure outcome and impact indicators in the long-term (especially for larger-scale projects) and outputs and activities in the short-term. Great ape population monitoring must involve field surveys (Aesbischer et al., 2017), which can be enhanced by the latest technological methods, such as satellite-based remote sensing (Jantz et al., 2016), camera trapping (Beaudrot et al., 2016), genetic monitoring (Gray et al., 2013) and face recognition (Crunchant et al., 2017). It is also vital for species recovery programmes to measure threats (Crees et al., 2016), using techniques like the Spatial Monitoring and Reporting Tool (SMART; www.smartconservationsoftware.com).
- Ensure that projects are subject to post-intervention evaluations against pre-intervention baselines where their scale and budget merit it (Schoneveld de Lange et al., 2016).

WWF's experience with African great apes reflects a trend for mixed and equivocal levels of success in delivering species action plans (e.g. Giminez-Dixon & Stuart, 1993; Fuller et al., 2003). Lessons learned would be easier to determine if greater effort was invested in monitoring performance and impact (Stem et al., 2005; Stephenson et al.,

2015).

Species conservation programmes will continue to rely on biologists (and increasingly social scientists and indigenous people) to provide the data required for priority-setting and monitoring. But for conservation to be successful, governments and NGOs need to engage with partners outside their traditional community of stakeholders. Project need to involve local people living alongside the species, as well as business and industry and other actors, who can help mitigate key threats to great apes and tackle the underlying drivers of biodiversity loss.

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