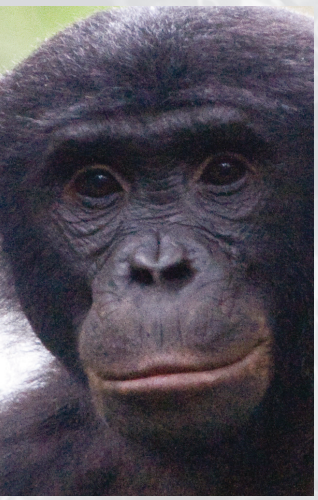
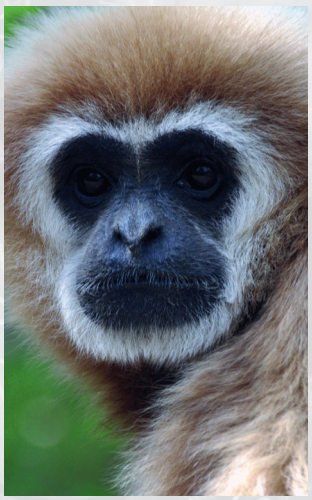
State of the Apes

Industrial Agriculture and Ape Conservation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State of the Apes

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Executive Summary

We are living in what has been termed the Anthropocene, a time period characterized by a loss of biodiversity and species unprecedented in the last 65 million years. Human population growth, shifting social and commercial patterns and economic inequality underpin unsustainable consumption of the world's natural resources and contribute to conflict, water and food scarcity, soil infertility, pollution, climate change and damage to ecosystems.

In our globalized economy, the commodities we consume—be they foods, fuels, timber or industrial inputs—are increasingly grown, harvested and extracted in the developing world, irrespective of their final market. Tropical ecosystems sustain much of the Earth's biodiversity, provide countless natural products and services, and play a vital role in the regulation of the climate and of carbon and hydrological cycles. As industrial agriculture continues to encroach on these environments, accompanied by expanding infrastructure, worsening pollution and a growing human presence, it increasingly threatens the survival of these ecosystems and many of their species.

Among the most threatened of these species are the great apes and gibbons. They have suffered habitat destruction across their range, due to both economic development and local poverty. By increasing our understanding of the impact of industrial agriculture on apes, *State of the Apes: Industrial Agriculture and Ape Conservation* aims to equip actors in government, industry, civil society and the development and conservation sectors to place economic and social development on a more sustainable footing.

To do so, this volume—the second in the series—presents original, rigorous analysis regarding critical ape conservation issues, as well as robust, up-to-date statistics on ape status and welfare. It examines both the direct and indirect impacts of industrial agriculture's encroachment on ape habitat. The book does not demonize agriculture; rather, it recognizes that the sector is vital to producing requisite foods and fuels, and that it has the potential to reduce poverty in some of the poorest countries and regions in the world. In identifying ways to minimize and mitigate the damage caused by agriculture, this volume contributes to the search for solutions that will enable economic and social development while conserving the natural world.

Agriculture in ape habitat has both direct and indirect impacts. Forests are inevitably destroyed as land is prepared and converted for agricultural use, a process that deprives apes of their homes, ranges and food, as well as the access to other groups and individuals that is necessary for breeding. Predictably, the incidence of human–ape interactions grows as apes cross farms and eat crops, as does the risk of disease transmission between humans and apes. At the same time, the illegal hunting, killing and capture of apes increases as people respond to what they see as "pests," seek out wild meat or engage in the illegal pet trade.

The impact of industrial agriculture varies across species. Gibbons, who are territorial and almost entirely arboreal, are probably most affected by industrial agriculture. Other apes, who can forage, sleep or disperse in agro-industrial landscapes, may fare better, but sizeable forests and contiguous natural habitats remain vital to their long-term survival. Fragmentation of ape habitats caused by industrial agriculture almost always results in population decline, from which slow-breeding apes struggle to recover. Local extinctions have affected almost all ape species.

Not only does the developing world—and particularly sub-Saharan Africa—have the fastest rate of human population growth, but it also has a substantial extent of viable arable farmland. Over the past 50 years, agricultural expansion has primarily been related to the foods and oils that form the basic diet for most of the world's human population: cassava, corn, palm oil, plantain, potato, rice, sorghum, soybean, sugar, sweet potato, wheat and yam. Smallholder agriculture has been a significant contributor to forest loss in Africa, but rapid growth in the demand for food and fuel crops—and especially for palm oil—is driving the encroachment of industrial-scale farming into ape habitats.

***State of the Apes 2015* editions:**

Arcus Foundation (2015). *State of the Apes: Industrial Agriculture and Ape Conservation.* Cambridge, UK: Cambridge University Press.

Arcus Foundation (2015). *Situasi Beruk: Industri Pertanian dan Pemuliharaan Beruk*. Arcus Foundation and GRASP.

Arcus Foundation (2015). *Kondisi Kehidupan Kera: Pertanian Industrial dan Pelestarian Kera.* Arcus Foundation and GRASP.

Arcus Foundation (2015). *La Planète des Grands Singes: l'agriculture industrielle et les grands singes.* Arcus Foundation and GRASP.

Arcus Foundation (2015). 猿类状态：农业产业化和猿类猴保护 Arcus Foundation and GRASP.

State of the Apes defines the term "industrial agriculture" as a method of intensive crop production that is characterized by large monoculture farms and plantations that rely heavily on chemicals, pesticides, herbicides, fertilizers, intensive water use and large-scale transport, storage and distribution infrastructure. While this edition uses the term "industrial agriculture," it is also referred to as industrial farming, intensive agriculture or farming, plantation agriculture, large-scale agriculture and commercial farming.

Although smallholder farmers have significant impacts on tropical forests, this volume only covers smallholder farmers who are part of a system that relies on an industry partner to provide inputs or purchase the commodity, thereby contributing to an expansive monoculture landscape.

Consumer pressure to halt deforestation and other environmentally unsustainable practices has spurred the establishment of voluntary standards and bodies to promote them. One of these bodies is the Roundtable on Sustainable Palm Oil, which, like many such organizations, unites producers, processers and retailers, and non-governmental organizations. While the Roundtable faces many challenges in its efforts to transform the global palm oil market into a sustainable one, its experiences in certification schemes and industry engagement are likely to play a central role in shaping the industry as it continues to grow.

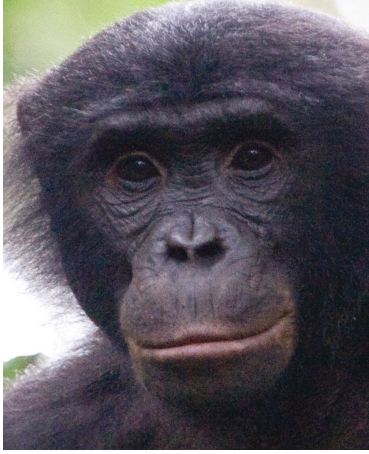
Dedicated research is crucial to increasing our understanding of the impact of agriculture on apes, but protecting apes from the effects of habitat loss and increased human presence is of greater urgency in the short term. Central to this goal—and to the conservation of biodiversity in general—is effective land use planning at the landscape level. By incorporating environmental as well as economic and social considerations, land use plans can help to ensure equitable and sustainable management of land and resources—not least by identifying key areas to be protected and securing migration corridors to connect forests that must be protected and sustainably managed.

While this book shines a spotlight on the impact of industrial agriculture on apes and their habitat, its second section surveys a broader landscape of conservation challenges. In both Africa and Southeast Asia, habitat loss, hunting and disease remain the main threats to ape survival. The pressures vary, but underlying them in all landscapes is the push for development. Logging, mining, and oil and gas extraction—the focus of the first volume of *State of the Apes*—continue to destroy and degrade vast swathes of ape habitat, both directly through their operations, and indirectly through the increased presence of people, who are drawn both by employment opportunities and by access to previously remote forest areas via new roads. Climate change, energy production, poverty, corruption and armed conflict also present formidable threats to apes and to their habitats.

As this volume illustrates, long-term research is invaluable to the monitoring of change in ape habitat and populations, to the design of appropriate conservation activities and policies, and to improving industry practice. In areas where researchers are able to analyze data dating back several decades, it is possible to develop evidence-based recommendations to scale. Wherever monitoring is patchy, inconsistent or interrupted for long periods, the knowledge base is correspondingly inadequate, which complicates efforts to inform policy and practice and to design effective interventions.

As wild ape populations in Africa and Asia have declined sharply, the number of individuals in rescue centers and sanctuaries in range states has grown significantly. Many of these animals are rescued from illegal traffickers, industrial agricultural landscapes or villages where they are kept for entertainment or as pets, frequently in appalling conditions. Sanctuaries in many range states aim to rehabilitate and release apes back into the wild, a goal that is increasingly difficult to achieve, largely due to a lack of suitable release sites.

Beyond ape range states, apes are in captivity in research labs, within the entertainment industry, as pets with private owners and in unregulated zoos. Laws governing apes in captivity are inconsistent and patchy, rendering the task of ensuring their welfare challenging. Moreover, the presence of apes in film and television, and to some extent in zoos, can undermine people's perception of apes as threatened, which potentially reduces their support for ape conservation.



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Social and economic systems worldwide are changing rapidly. These changes are accompanied by an increasing global demand for natural resources, including land, water, minerals, energy sources, food and timber. Today's foremost challenge lies in finding the tools not only to address the complexity of these interrelated trends, but also to implement strategies to balance environmental needs with socio-economic requirements. This volume of *State of the Apes* contributes to this search by presenting original research and analysis, topical case studies and emerging best practice from a range of key stakeholders to examine the interface between ape conservation and industrial agriculture. In assessing the drivers behind agricultural expansion and land investments, it sheds light on governance challenges and legal frameworks that shape land use.

Aimed at policy-makers, industry experts and decision-makers, academics, researchers and NGOs, this edition is designed to inform debate, practice and policy in ways that will help to reconcile the goals of industrial agriculture with those of ape conservation and welfare, and social and economic development.

> "*State of the Apes* is one of those rarely seen, truly groundbreaking publications. Through keen analysis and vivid research, the series considers the survival of the world's ape species in light of both long-standing and newly emerging threats, such as mineral extraction, energy exploration, agricultural expansion and land conversion—forces that will continue to shape not only the future of wild apes, but also of all remaining blocks of wild habitat and the extraordinary biodiversity they contain. By examining the complexity of development forces across range states, *State of the Apes* offers an informed and realistic assessment of the prospects for ape conservation, as well as outlining the potential of policies that may spell the difference between destruction and survival of these extraordinary beings."

Matthew V. Cassetta
Facilitator, Congo Basin Forest Partnership
U.S. Department of State

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