



# The Kibale Fuel Wood Project: *Evaluations and Evolutions*

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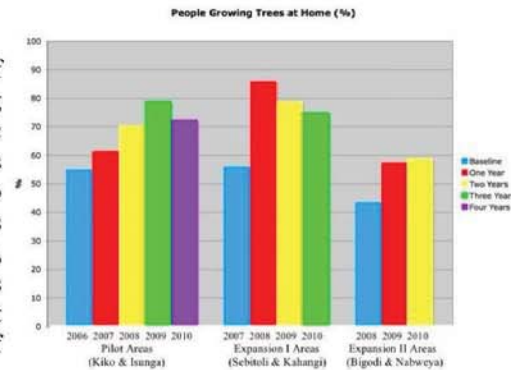
www.NewNatureFoundation.org

Since 2006, the Kibale Fuel Wood Project has worked to protect the wildlife of Kibale National Park in Western Uganda by empowering neighboring community members to meet their needs in sustainable ways. Home to the densest population of primates in Africa and countless other endangered and endemic species, the forest is being cut down for firewood. Only with an actively involved and invested community will long-term protection of Kibale be possible. The project focuses on improving the people-park relationship, thereby helping create a positive outlook for future generations of humans and wildlife alike.



## Trees

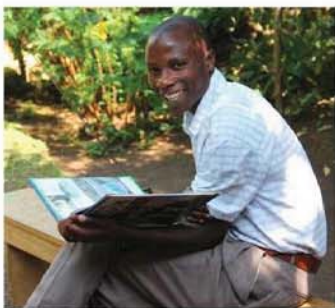
The number of people growing *Sesbania sesban* around their farms continues to increase. Across all target areas, 69% of families plant trees at home, 59% of



which grow *Sesbania* (up from 51% and 10%). The increased amount of home-grown wood has led to a decrease in encroachment into Kibale: only 11% of those surveyed collect wood inside the protected area (down from 30%).

While institutional partners served as tree demonstration areas in the project's original design, we have found that tree-growing contests (instituted in 2008) serve as a more realistic example about how people can grow trees on their own land. During judging, participants and other community members walk together to learn from one another's trials and errors in growing firewood. One winner in each target area is awarded a bicycle for having the best firewood crop of the year, encouraging high participation rates. This year, the contest winners averaged approximately 425 trees each, a sufficient amount to provide all the firewood needed by the family!

Another evolution has been the promotion of two additional species, *Calliandra* and *Leucena*. Though they do not grow nearly as fast as *Sesbania*, these native trees coppice well, thus reducing the need for re-planting. Interested parties are informed about the positive and negative aspects of each species, and can choose for themselves which trees best suit their needs.



## Education

The KFWP is centered around a multi-faceted educational campaign including Science Centers, video shows, workshops and contests. The first of their kind in Uganda, the Science Centers are comprised of natural history museums, libraries, and tree and stove demonstration areas, and have proven invaluable in reaching a wide cross section of the population. The traveling video show presents wildlife films to audiences of up to 650 people, showcasing the natural wonders that have made Africa famous to those that seldom experience them. At workshops, individuals learn the intricacies of building stoves and planting trees in a fun way, often observing a showdown between efficient and traditional stoves, or helping plant at one of the Science Centers. Writing contests were discontinued after three years (details in the newest report, on our website), but the tree planting contest mentioned above as well as cooking, singing and dancing competitions help assemble huge crowds to facilitate dissemination of project information and communal discussion about the national park – search “Kibale Dance” on YouTube to watch how fun community conservation can be!

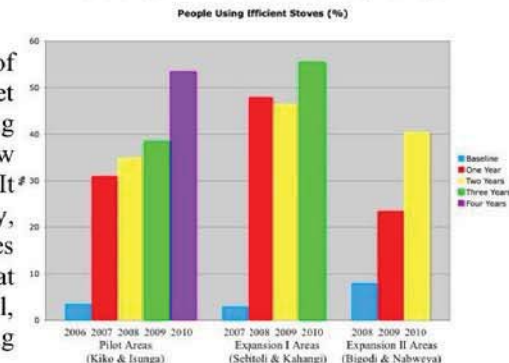
|                                       | June 2006–<br>May 2007<br>(Two<br>Target<br>Areas) | June 2007–<br>May 2008<br>(Four<br>Target<br>Areas) | June 2008–<br>May 2009<br>(Six<br>Target<br>Areas) | June –<br>December<br>2009<br>(Six Target<br>Areas) | January –<br>December<br>2010<br>(Six Target<br>Areas) | Totals                  |
|---------------------------------------|--|---|--|---|--|-------------------------|
| Science Center Attendance             | 3,500<br>(One location)                            | 6,970<br>(Two locations)                            | 10,322<br>(Four locations)                         | 8,707<br>(Four locations)                           | 13,561<br>(Four locations)                             | 43,060                  |
| Video Show Attendance (23 shows)      | 8,050  | 6,340<br>(25 shows)                                 | 14,640<br>(47 shows)                               | 6,840<br>(24 shows)                                 | 13,895<br>(47 shows)                                   | 49,765<br>(166 shows)   |
| Workshop Attendance                   | 165<br>(Four workshops)                            | 755<br>(Twelve workshops)                           | 755<br>(Fourteen workshops)                        | 50<br>(One workshop)                                | 1,140<br>(Seven workshops)                             | 2,865<br>(38 workshops) |
| Stoves Built                          | 142<br>(Two Target Areas)                          | 214<br>(Four Target Areas)                          | 416<br>(Six Target Areas)                          | 107<br>(Four Target Areas)                          | 142<br>(Two Target Areas)                              | 1,021                   |
| Writing & Drawing Competition Entries | 313<br>(Two Target Areas)                          | 1,097<br>(Four Target Areas)                        | 1,500<br>(Six Target Areas)                        | ---   | ---  | 2,910                   |
| <b>Total Interactions</b>             | <b>12,170</b>                                      | <b>15,376</b>                                       | <b>27,633</b>                                      | <b>15,704</b>                                       | <b>28,738</b>  | <b>99,621</b>           |

**Thank You** to ZACC for supporting the KFWP with a conservation award in 2009, and to the Woodland Park Zoo and Puget Sound AAZK for helping the project get off the ground. The following institutions have also supported the project's first five years: American Society of Primatologists; Arcus Foundation Great Apes Fund; Blank Park Zoo; Chester Zoo; Classic Escapes; Cleveland Metroparks Zoo; Columbus AAZK; Columbus Zoo; Disney Worldwide Conservation Fund; Fresno Chaffee Zoo; Great Ape Film Initiative; Great Ape Trust of Iowa; Honolulu Zoo; Idea Wild; International Primatological Society; John Ball Zoo; Kibale Association for Rural and Economic Development; Kibale Forest Coalition for Conservation Education; Little Rock AAZK; Miami Metro Zoo; Milwaukee Zoo; Natural Encounters; New Zoo; North Carolina Zoo UNITE Program; Oakland Zoo; Philadelphia AAZK; Philadelphia Zoo Docent Council; Point Defiance AAZK; Reid Park Zoo; Roger Williams Park Zoo; San Diego AAZK; Wild-4-Ever; Zoo Boise; Zoo New England; many private donors.



## Stoves

Our adaptation of the classic “rocket stove” is built using mud, bricks, cow dung and ash. It works as a chimney, aiming hot gasses and fire directly at the cooking vessel, thereby increasing



cooking temperatures, reducing smoke, and reducing the overall amount of wood needed.

**The average family using a KFWP stove uses 27% less firewood than the average family using a traditional stove.** Experiments continue to indicate that the same design can be even more efficient when tended by a careful cook, recently having demonstrated reduced wood consumption of 62%. **50% of families surveyed across the six target areas are currently using efficient stoves.**

**The KFWP has assisted in building 1,021 stoves since 2006**, with an unknown additional number built without project assistance. Almost all of these stoves are still in use. When touring villages, we routinely come upon unsuspecting people who are proud to explain how they patched their stove with mud when it was needed, or even dismantled and rebuilt the entire stove when moving their kitchen. Estimating that 90% of the stoves built with assistance from the KFWP are still in use (and not counting independently built stoves), this equates to **a savings of more than 2,400 kilograms (5,280 pounds) of wood daily, or nearly one million kilograms (2.2 million pounds) of wood each year**, much of which would have been cut within Kibale National Park. This wood savings **reduces CO<sub>2</sub> emissions by more than 1.56 million kilograms (1.723 tons) per year.**



## What's Next?

In its sixth year, the KFWP will reduce paid hours of community liaisons in Expansion Phase II areas, bringing all target areas to the point of self-reliance that has been intended since project inception. Yearly surveys will continue to document how project ideas are being executed as outside supervision continues to decrease, while incentives like competitions will continue to encourage people to build stoves and plant trees without outside assistance. If stoves continue to be built, trees continue to be planted, and if attendance remains high at video shows and Science Centers, we will be convinced that the project has staying power. Depending on survey results over the next several years, we may decide to keep community liaison activities at the reduced levels, or we may see the need to periodically infuse communities with temporarily increased assistance and encouragement.

In the meantime, we are beginning implementation of a new program: The Kibale Eco-Char Initiative. This program aims to supplement the wood being grown thanks to the influence of the KFWP with biomass fuel briquettes made from farm waste. Utilizing banana peels, peanut shells, sawdust, waste paper and other easily available waste products, compact briquettes are created with a simple lever machine, dried in the sun and used as fuel. An amazing technology developed in the United States during the 1970s, the idea has recently been gaining popularity in developing countries as natural fuel wood sources diminish. While there are a few successful incarnations of the idea elsewhere in East Africa, biomass briquettes have never been promoted around Kibale. We are confident that the idea has the potential to further protect Kibale's wildlife while helping the park's neighbors meet their needs in sustainable ways. There is even a possibility of turning briquette production into an income generating activity for local citizens, thereby assisting to alleviate poverty, an activity that has been shown to further promote wildlife conservation.