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Exploring the Links Between Conservation and Health

By Jane Goodall, PhD, DBE

Hooo-he-hoo-he-hoo-he-hoo-he-hooo-he-HOOOO-he-HOOOOO-he-HOOO-he-hoo.[1] I like to start with this chimpanzee call—which I've taken literally all over the world, from cathedrals and temples, to the United Nations and the European Parliament, from rural village communities to Ivy League universities—because so often we forget that we are part of the animal kingdom. Looking back over the 45 years of my chimpanzee study in Tanzania, I find it most fascinating to see how the line between human beings and the rest of the animal kingdom, which was once thought so sharp, has become increasingly blurred. Chimpanzees have been wonderful ambassadors from the animal kingdom because they are clearly so like us—and we like them—starting with the striking biological fact that we share about 99 percent of the structure of our DNA with chimpanzees. You could get a blood transfusion from a chimpanzee if you matched the blood type.

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How sad, then, to find that these chimpanzee beings are, as we speak, vanishing rapidly from Africa along with gorillas, bonobos, and many other amazing animals of the African forests. What is causing this? Ever-growing human populations and their increasing demands on the natural habitat: people need more land to grow their crops, graze their cattle, or build their houses, so wildlife is being pushed back. In many places, animals have become locally or totally extinct. When you cut down a forest with endemic species, many of them are gone before we even know what they are, or what disease they might cure, or what part they play in the whole interconnected network of life.

Bushmeat and Human Health

The greatest threat facing chimpanzees today is the bushmeat trade, which is the commercial hunting of wild animals for food, made possible because logging roads have opened up the forests to hunters, who shoot everything—antelopes, monkeys, gorillas, chimpanzees, elephants, even birds and bats. Then they dry the meat in the sun or smoke it, load it on trucks, and take it to town, where the urban elite will pay more for it than chicken or goat. Some bushmeat is even shipped overseas to exotic restaurants that serve African expatriates.

The Jane Goodall Institute (JGI) has joined the Congo Basin Forest Partnership, which was launched by the U.S. Department of State with matching funds from the European Union, to explore ways to control the trade in bushmeat. Through these partnerships—with local NGOs, government officials, and donor agencies like USAID and the World Bank—we are trying to find ways to control and ultimately prevent the slaughter of endangered species. Interestingly, Christina Ellis, a former JGI family member, found that this is already starting to happen: some women in Cameroon, realizing that the trade is totally unsustainable, have formed cooperatives and urged that hunters and sellers be licensed and given quotas.

The more we realize that we are part of the animal kingdom, the more it becomes obvious that we should have long ago foreseen some of today's frightening health problems, for there is a long his-

Dr. Jane Goodall began her landmark study of chimpanzees in Tanzania in June 1960, under the mentorship of anthropologist and paleontologist Dr. Louis Leakey. Her work in the Gombe National Park became the foundation of future primatological research and redefined the relationship between humans and animals.

In 1977, Goodall founded the Jane Goodall Institute (JGI) for Wildlife Research, Education, and Conservation to continue field research on wild chimpanzees and to advance the power of individuals to take informed and compassionate action to improve the environment of all living things. JGI is active in efforts to protect chimpanzees and their habitats, and is widely recognized for establishing innovative community-centered conservation and development programs in Africa. Under the umbrella of JGI, the Roots & Shoots education program has been established in more than 90 countries.

Goodall's scores of honors include the Medal of Tanzania, the National Geographic Society's Hubbard Medal, Japan's Kyoto Prize, the Prince of Asturias Award for Technical and Scientific Research, the Benjamin Franklin Medal in Life Science, and the Gandhi/King Award for Nonviolence. Goodall is a Messenger of Peace for the United Nations and a Dame of the British Empire.

For more information, please visit **www.janegoodall.org** and **www.rootsandshoots.org**

tory of animal-to-human transmission of disease. The fact that this seems to be occurring with increasing frequency is a measure, I suspect, of increasing human population density, and, as a result of a growing reliance on wild animals for food, with the increased likelihood of animal viruses and bacteria infecting those who kill, butcher, or handle the carcasses. Researchers like Beatrice Hahn of the University of Alabama have shown that HIV1 and HIV2 originated from the contamination of different populations of chimpanzees and monkeys in Africa (see, e.g., Sharp, Shaw, & Hahn, 2005). The retroviruses then jumped the species barrier and mutated into the human forms, leading to the global epidemic of HIV/AIDS.

TACARE Takes Care of People

Fifteen or so years ago I flew along the east shore of Lake Tanganyika in a small plane. I was horrified to see the almost total deforestation.[2] I thought, "How can we even think about saving these chimpanzees when the people living here are clearly struggling to survive?" It was very clear that the land around Gombe National Park was required to support far more people than it possibly could, partly due to normal population growth, but also from the influx of refugees from troubled Burundi in the north and from eastern Congo across Lake Tanganyika.

When JGI started the Lake Tanganyika Catchment Reforestation and Education (TACARE) project in 1994, the team explained the various components of the program to the elders in each village. The elders would usually respond, "Why do we need people to plant more trees? We have the women to get firewood. And why do we need to do anything about water? The women get the water," but gradually they began to realize the benefits of the program, like tree nurseries, soil erosion prevention and control, and so on. Eventually the village leaders agreed: "Yes, we want this program."

TACARE started in 12 villages with a rather small grant from the European Union, planting tree nurseries and teaching farming techniques suitable to the extremely degraded and eroded land. We set up conservation education programs for both children and older people, and we worked with the regional medical authorities to provide primary healthcare and basic information about hygiene. We also provide family planning information and HIV/AIDS education. From the beginning, TACARE tried to tie in all of these disparate parts. What's the point of talking about health and immunizing people if you are not also concentrating on supplies of clean water?

We also set up nine microcredit banks modeled on the Grameen bank system.[3] Groups of up to five women (with the option of including two men) can take out loans for small, environmentally sustainable projects. When they repay the loan—as about 98 percent do—then they can take out a slightly larger loan to further develop the business they started. These microcredit loans increase women's self-esteem and give them more control over their lives.

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When members of the JGI-USA board visited some of the TACARE villages last year, a 24-year-old woman who had taken part in our microcredit program told them, "I'm here because I want to thank TACARE for giving me my life." She said, "I grew up in a large family and we never had quite enough to eat, or very good clothes, and we didn't have a good education and I thought that my own life would follow the same pattern. Then I heard about TACARE. By that time I was married and I had one child." She learned about family planning through TACARE's reproductive health program for women. Then she found out about the microcredit program and, together with four other young women, took out a small loan that enabled her to start a small business. This was successful. "I paid back my money," she said, "and after a while, I thought I would have another child. They gave me a loan to employ a part-time helper so that I could look after the child and continue the business. And now," she went on, "I just want to tell you thank you again

because I have two children, and they will always be well-fed, well-clothed, and well-educated."

The board members had tears running down their cheeks. The woman's story shows that once you have access to counseling about family planning and reproductive health, and once you have primary health programs that reduce the likelihood that 30 percent of your infants will die, then you can realistically start thinking about planning a family.

It has been shown all around the world that as women's education improves, so family size is reduced. We have a scholarship program that enables selected girls to go to secondary school. And we take steps to ensure they stay the course. Some drop out for reasons that do not immediately spring to mind to those of us growing up in Western society.

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On my most recent village visit, all the children, dressed in their best clothes and waving branches with flowers on them, ran out to greet me—"Dr. Janey! Dr. Janey! TACARE! TACARE!" The parents, too, were in their best clothes; the teachers were smiling. They were there to take part in a ribbon cutting ceremony to open a new building. It was a surprise visit for me. What kind of building? I thought maybe a dispensary or a new classroom, but instead it was a Ventilation Improved Pit Latrine—a VIP latrine. A building with a cement floor, divided in two, with three little stalls on one side for girls—three holes with lids, a tube coming up with netting on the end (to trap flies and thus prevent the spread of disease), doors that closed and could be latched for privacy—and the same for boys on the other side of the wall.

Before, they had only a piece of rotting wood with a hole surrounded by a thin layer of thatch or palm fronds—stinking, sometimes quite dangerous, extremely unhygienic, and with absolutely no privacy. Subsequently I learned that the one of the reasons girls often do not finish school is they cannot stand these conditions once they reach puberty. Since it has been well-established that improving women's education helps reduce family size, it follows that even appropriate latrines can play a significant role in reducing population growth rates.

We are building our resources for TACARE villages all the time, improving primary health, hygiene, and education along with farming methods. The villagers can now reclaim sterile land instead of cutting down more forest, and they are beginning to understand the need for conservation. Most importantly, they realize that international conservation organizations like JGI are concerned with more than just wildlife—we are also interested in working to improve the lives of local people and communities.

Most TACARE villages are now growing woodlots that provide a much more easily accessible source of firewood and timber. The women no longer have to hack at tree stumps to get fuel wood for cooking. And if these seemingly dead tree stumps are not cut, they have the ability to transform into a 30-foot tree within five years. This amazing regenerative power has helped produce thriving TACARE forests around a number of the project villages.

These restored forests may provide the last chance for the long-term survival of the Gombe chimpanzees. Today there are less than 100 individuals in the tiny, 35-square-mile national park. They are prevented from moving beyond the boundaries, as they once did, by the cultivated fields that surround the park. Now, however, with the villagers' help, we hope that we can create leafy corridors, so that the chimpanzees can, once again, exchange genetic material with other small remnant groups outside the park. If we can get enough villages to participate, we may be able to preserve the genetic pool of this very special population of chimpanzees.

Scaling Up TACARE in the Democratic Republic of the Congo and Beyond

When USAID assessed the whole TACARE project in 2004, they were pleased and impressed with

what they found. We were actively encouraged to submit more proposals and to continue our collaboration with USAID/Tanzania, which had begun in 2003. And now, with the support of USAID's Office of Population and Reproductive Health and the Global Development Alliance, we are starting to replicate TACARE in the Kivu area of the Democratic Republic of the Congo (DRC). In addition, we are beginning to set up similar programs around our chimpanzee sanctuaries in Congo Brazzaville near Point Noire, and in Uganda on Lake Victoria's Ngamba Island.

For the last two years we have been working with Dian Fossey Gorilla Fund International (DFGFI) and Conservation International in the area between the Maiko and Kahuzi-Biega National Parks in the DRC. The DRC is a dangerous place, but before we joined the partnership, DFGFI had already set up a very strong umbrella group of several local grassroots NGOs. This strong, well-established association of local partners allows us to work in these remote areas, despite the lack of infrastructure and general instability, by using local people to deliver our messages and to implement activities. The situation in the area is improving, with many refugees returning home and rebel groups disbanding or being disarmed, so we are hopeful and optimistic.

In addition to supporting public health and livelihood projects in the DRC, JGI plans to help people realize that as the environment is destroyed, their own lives become increasingly difficult. This message is not so difficult to get across as might be expected, because the old people in the villages understand. They remember what it was like when they were young; they know what it is like to see soil that was once arable becoming increasingly eroded and infertile.

There are opportunities to save a part of every wilderness area with programs like TACARE which, theoretically, could be replicated in many places throughout Africa, and also in Asia, currently struggling with conservation, overpopulation, and poverty issues. But the support of political institutions is absolutely crucial. We could not do what we do without the willing support of the local and central governments. When I meet government leaders they are typically receptive to our conservation message, and they are usually cooperative in word—and sometimes in deed—once they come to trust us. But so often, after we have developed a good relationship with a particular individual, he or she will suddenly move to a quite different position, and then one has to start all over again.

Jane Goodall speaks with ECSP's Geoff Dabelko at the Woodrow Wilson Center.

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Roots & Shoots

By and large, our programs have been well-received in other countries; for example, China's vice-minister for the environment asked me to put Roots & Shoots, our youth program, into Chinese schools during our very first meeting. We may have even planted some seeds of Roots & Shoots in Pyongyang, North Korea.

Roots & Shoots began in Tanzania in 1991. It is a symbolic name: "roots" make a firm foundation, and "shoots" seem tiny but can break through

Dr. Jane Goodall with members of Roots & Shoots in Tanzania. August 2002.

brick walls trying to reach the sun. If we imagine the brick walls are all the problems we have inflicted on this planet—environmental and social—then Roots & Shoots offers a message of hope: hundreds and thousands of young people can break through the problems of social inequality, poverty, disease, and environmental degradation to make this a better world for all living things.

The program began in Tanzania in l991 with just 16 high school students. Today we have registered more than 7,500 groups, ranging in size from a few children up to a whole school, from preschool through university, in more than 90 countries. In China, we now have offices in Beijing, Shanghai, and Chengdu. Roots & Shoots links young people around the world to help them better understand people of other nations, religions, and cultures, and to understand, too, that they are a part of an amazing animal kingdom. The program emphasizes understanding, respect, and compassion for people, animals, and the environment. This nonviolent program promotes ways to resolve conflict through negotiation rather than violence, and through discussion rather than fists, knives, or guns.

There is not much point in my wearing myself out trying to save chimpanzees and their forests in Africa, and encouraging other conservationists who are working to save environments, ecosystems, and wildlife around the world if, at the same time, I am not inspiring our youth to be better stewards than we have been.

When I am asked why I spend so much time working with children, I explain that there is not much point in my wearing myself out trying to save chimpanzees and their forests in Africa, and encouraging other conservationists who are working to save environments, ecosystems, and wildlife around the world if, at the same time, I am not inspiring our youth to be better stewards than we have been. I started Roots & Shoots because as I was traveling around the world, I met so many young people who seemed to have lost hope. They were depressed or apathetic or angry, and sometimes violent. When I talked to them, they all said more or less the same thing: they felt that way because they believed that we had compromised their future. We have.

I have three little grandchildren and when I look in their eyes and think how we have harmed this planet since I was their age, I feel pain, and shame. I want to devote the rest of my life to helping young people realize that if they join programs like Roots & Shoots—which has, as its central message, "every individual matters, every individual has a role to play—and every individual makes a difference every day"—they can make the world a better place. And that applies to each one of us. We must roll up our sleeves and do something to help our own human communities, our environment, and the amazing animals with whom we share the planet. And then, especially if we are wealthy, we must look beyond our own communities and do what we can for the rest of the world.

Since 9/11, Roots & Shoots' Global Peace Initiative has helped young people around the world understand more about each other and, often, therefore, to be less afraid. They learn how we need to solve our problems by using our brains and our amazing capacity to communicate through language, which differentiates us more than any other single thing from our closest living relatives on the planet, the chimpanzees. The time has come when we must use this gift that we have, this extraordinary power, to become responsible stewards, share what we know with children, and empower them to go out and make a difference in the world.

Notes

1. *"He"* is a voiced inhalation. This article is an edited transcript of a lecture given at the Woodrow Wilson Center on April 6, 2005. Video of the event is available online at http://www.wilsoncenter.org/index.cfm?topic_id=1413&fuseaction=topics.event_summary&event_id=115320#

2. See Goodall (2003) for an edited transcript of an April 3, 2003, lecture at the Woodrow Wilson Center on this topic.

3. The Grameen Bank, started by Muhammad Yunus in 1976, provides credit to the poorest of the poor in rural Bangladesh without any collateral. Microcredit is the extension of small loans to entrepreneurs too poor to qualify for traditional bank loans. To learn more, please see www.grameen-info.org/ or www.gfusa.org

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