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WORKING FOR A SUSTAINABLE FUTURE

Remember Rwanda?

by James Gasana

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Remember Rwanda?

The genocide of 1994 seemed inexplicable. But a study of links between extreme environmental degradation and the enormous violence that occurred between Hutus and Tutsis could have important implications for stressed populations in other regions.

by James Gasana

EDITOR'S INTRODUCTION

On April 6, 1994, a plane carrying the presidents of two African countries was struck by a missile and crashed. Both presidents—Juvénal Habyarimana of Rwanda and Cyprien Ntaryamira of Burundi—were killed. Both were members of the Hutu ethnic group. Counting the murder of Burundi's president Melchior Ndadaye the previous October, a total of three Hutu presidents had been assassinated in six months.

The crash of the plane was described by a Rwandan official as being “like pouring fuel on a burning house.” The country exploded into genocidal conflict between the Hutu and the rival Tutsi, who had been out of power in Rwanda but who had established a base in neighboring Uganda from which they had been launching attacks against the regime that had ousted them. Hutu bands killed large numbers of Tutsi in an effort to forestall the invasion. But within weeks, the Tutsi regained control and waged retaliatory attacks on the Hutu, hundreds of thousands of whom were by then fleeing the country.

The exchanges of massacres were so horrific that people in other parts of the world, who had paid little atten-



Erosion steals nutrients from a hillside farm in northwest Rwanda (Giciye commune), 1988.

James Gasana

tion to Rwanda until news of the genocide broke, were bewildered as to what could have caused such fury. The conflict was portrayed in the media as one of deep ethnic hatred. But to those who were on the scene during the years preceding, the story is far more complicated than that. The real causes of the blowup are rooted in a half-century history of rapid population growth, land degradation, inequitable access to resources, political power

struggles, famine, and betrayal.

James Gasana, who was Rwanda's Minister of Agriculture and Environment in 1990-92, and Minister of Defense in 1992-93, at one point tried to warn his government of the coming conflagration (see page 29), but to no avail. In the following article, adapted from a paper he wrote for the IUCN's Task force on Environment and Security, he analyzes what happened as environmental and economic decline set the stage for a social collapse. It's a story that has important implications not only for Rwanda, but for every region where population pressure threatens to exceed what the resource base can maintain.



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In the aftermath of the genocide, Hutu refugees—many of whom were implicated in carrying it out—wait for passage at the Ruzizi bridge on the border of Rwanda and Zaire (now Congo) in 1994.

Before the end of the 1950s, it was the Tutsis who dominated Rwanda, both sociologically and politically. Tutsis constituted only 10 to 15 percent of the population, but they owned most of the arable land and accounted for more than 95 percent of the chiefs and 88 percent of the bureaucracy. In 1959, however, a revolution by the Hutu peasants of southern Rwanda brought the Hutu to power and resulted in a redistribution of land to previously landless people. Many of the Tutsi aristocracy fled to neighboring countries, particularly to Uganda, from which they launched counter-attacks against the Rwandan regime in the 1960s.

The Hutu, enforcing a one-party regime in which the Tutsi had no voice, lived from then on with the specter of counter-revolution. The hostilities between the two groups were exacerbated by the Cold War, as the Communist countries helped arm the counter-attacks of the Tutsi refugees, while the Western countries provided support to the Hutu regime.

In 1973, under pressure from both internal dissent and external attack, the regime was toppled by a coup d'état. Major General J. Habyarimana, supported by a northern faction of the army, took control from the southern-based group that had progressively assumed power after independence in 1962. Habyarimana was to hold power for the next 20 years, but under increasingly difficult conditions. It's the story of those two decades that explains the otherwise incomprehensible events of 1994.

The story begins with a country undergoing a population explosion that was to increase it from 1,887,000 people in 1948 to 7,500,000 in 1992—making it the most densely populated country in Africa. Most of the people were poor farmers, and in the 1980s, many of the poor got even poorer, as a result of what I call "*pembenization*"—from the Swahili word "*pembeni*," or "aside," as used in the Rwandan expression "*gushyira i pembeni*"—"to push aside."

One of the root causes of *pembenization* was, ironically, the land tenure program established by the 1959 revolution as a means of giving the peasants a more equitable share in the country's assets. The revolutionaries did not foresee what would happen as children inherited their parents' land and divided it up equally. With the population expanding, the inherited pieces—many of them very small to begin with—got smaller.

At the same time, the land holdings of the elite who were in power got larger, as wealthy northern Hutus and their allies spent much of the 1970s and 1980s accumulating land for their own estates. Of course, this further reduced the amount of land available for peasant farmers. Many of the peasants moved to marginal land—to steep slopes and acidic soil, where crops barely grew.



Hutu refugees stream back over the Rusumo bridge border from Tanzania, after the majority of the refugees decide to return to Rwanda in 1996.



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By 1989, an estimated 50 percent of Rwanda's cultivated land was on slopes of 10 degrees or higher. Slopes this steep eroded severely when tilled, and the cycle of poverty worsened (see Table 1).

By 1990, the erosion was washing away the equivalent of 8,000 hectares per year, or enough to feed about 40,000 people for a year. Moreover, because demand for land outstripped supply, virtually all the cultivatable land (other than that being hoarded by the elite) was being used, and there was little opportunity to let fields lie fallow and regenerate. As a result, soil fertility declined faster yet.

Of course, as population grew, the demand for energy increased as well. Rwanda has been heavily dependent on biomass for energy—either wood or crop waste. Most of the energy in those years was provided by firewood. But with more people trying to get more firewood from smaller pieces of land, the country's trees were disappearing at an increasing rate. Deforestation on the steep-sloped lands made the ground more exposed to running water, and increased erosion still more.

In 1991, we estimated that annual tree growth would allow for about 1.9 million cubic meters of wood to be cut. Yet, actual wood consumption by then had reached nearly 4.5 million cubic meters. This heavy overharvesting had yet another impact on farm output: with the firewood supply diminishing, people were forced to increase their reliance on straw and other crop residues for fuel. That meant the residues were no longer going back into the soil. The loss amounted to approximately 1.7 tons of organic matter per hectare each year.

The compounding of all these factors led to a disastrous shortfall in food production. Two-thirds of the population of Rwanda was unable to meet even the minimum food energy requirement of 2,100 calories per person per day. The average person was getting just 1,900 calories—becoming gradually weaker and at the same time more desperate. Nor were there any readily available alternatives to subsistence farming. By the

end of the 1980s, the unemployment rate for rural adults had reached 30 percent.

Throughout the 1980s, the worsening of the rural situation, especially in the south where most of the poor farmers lived, had generated increasing resentment against the Hutu government, which was accumulating wealth for its mostly northern elite. It's important to keep in mind that the peasants and the people in power were both mainly Hutu, so this resentment was an economic, not ethnic,

concern. At the end of the decade, however, with internal strife splitting the Hutus, the Tutsi-led rebels in Uganda judged that this would be a good time to declare full-scale war against the regime.

By 1990, then, the Rwandan peasants were being stricken by both starvation and war. In an interview with Radio Rwanda, representatives of a peasant association named Twibumbe Bahinzi declared:

“There is a generalized famine in the country, that is difficult to eradicate because it is only the cultivators-pastoralists [peasants] who are bearing its impacts while the ‘educated’ [the elite] are enjoying its side effects. Those who should assist us in combating that famine are of no use to us.... It will

require no less than a revolution similar to that of 1959.... On top of this there is war. Even if the cultivators-pastoralists can still till the land, it is very difficult for them to work in good conditions when they have spent the night guarding the roadblocks, and are not sure that they are going to harvest....”

In retrospect, this statement confirms that even under the added stress of war, the peasants did not at this point consider ethnicity to be the issue. It was still an issue of rich and poor, or north and south.

In 1991, with divisions among the Hutus getting worse, president Habyarimana was forced to abandon the one-party rule and allow a multi-party govern-



Cutting the last tree on the lot, 1994.

The Erosion

Table 1. Classification of cultivated land by slope category

Category of slope		Area of cultivated land	
Description	Slope (in degrees)	percentage	hectares
Level to undulating	0-5	34	382,500
Undulating	5-10	16	180,000
Sloping	10-25	32	360,000
Steep	25-30	8	90,000
Very Steep	30-35	6	67,000
Stiff slope	> 35	4	45,000
Total		100	1,125,000

The Warning

“It can be concluded that if the country does not operate profound transformations in its agriculture, it will not be capable of feeding adequately its population under the present growth rate. Contrary to the tradition of our demographers who show that the population growth rate will remain positive over several years in the future, one can not see how the Rwandan population will reach 10 million inhabitants unless important progress in agriculture as well as other sectors of the economy were achieved. Consequently it is time to fear the Malthusian effects that could derive from the gap between food supply and the demand of the population, and social disorders which could result from there.”

—*Report of the National Agriculture Commission (1990-1991), chaired by James Gasana*

The Hunger...and the Violence

Table 2. Food-energy deprivation and incidence of ethnic strife, 1991-92

Food Energy Per Person Per Day	Communes Where Violence Occurred, 1991-92*		Communes Where Violence Did Not Occur, 1991-92*						
	657	Kivu	Nshili	Mudasomwa	Mubuga	Muko	Musange	Musebeya	Nyamagabe
846	Gatare	Gishoma	Kamembe						
	Kagano	Karengera	Kirambo						
1,056			Huye	Kigembe	Maraba				
			Ngoma	Nyabisindu	Runyinya				
1,097	Gishyita	Rwamatamu	Bwakira	Gitesi	Kivumu				
			Mabanza	Mwendo	Rutsiro				
1,187	Nyarugenge		Bicumbi	Butamwa	Gikomero	Gikoro	Kanombe	Kanzenze	
			Mbogo	Mugambazi	Musasa	Rubungo	Rushashi	Rutongo	
1,219	Masango	Nyabikenke					Shyorongi	Tare	
	Nyakabanda	Taba							
1,230	Giciye	Kayove	Nyamyumba						
	Kibilira	Ramba							
	Satinsyi								
1,595			Nyakinama						
1,763	No violence occurred in communes where average food energy was over 1,500 calories per person, per day		Muhura	Murambi	Tumba				
			Cyumba	Kibali	Kivuye				
2,086			Birenga	Kabarondo	Kayonza	Kigarama	Muhazi	Mugesera	
			Rukira	Rukara	Rusumo	Rutonde	Sake		

* Data were reported for 72 communes throughout the country.

ment. But he continued to hold on to the presidency. Some of the splinter groups tried to weaken him by recruiting bands of disaffected youths based in the south, who mounted a sporadic uprising and perpetrated acts of vandalism aimed at destabilizing the regime. The groups were called *Inkuba*, or “thunder,” and *Abakombozi*, or “liberators.”

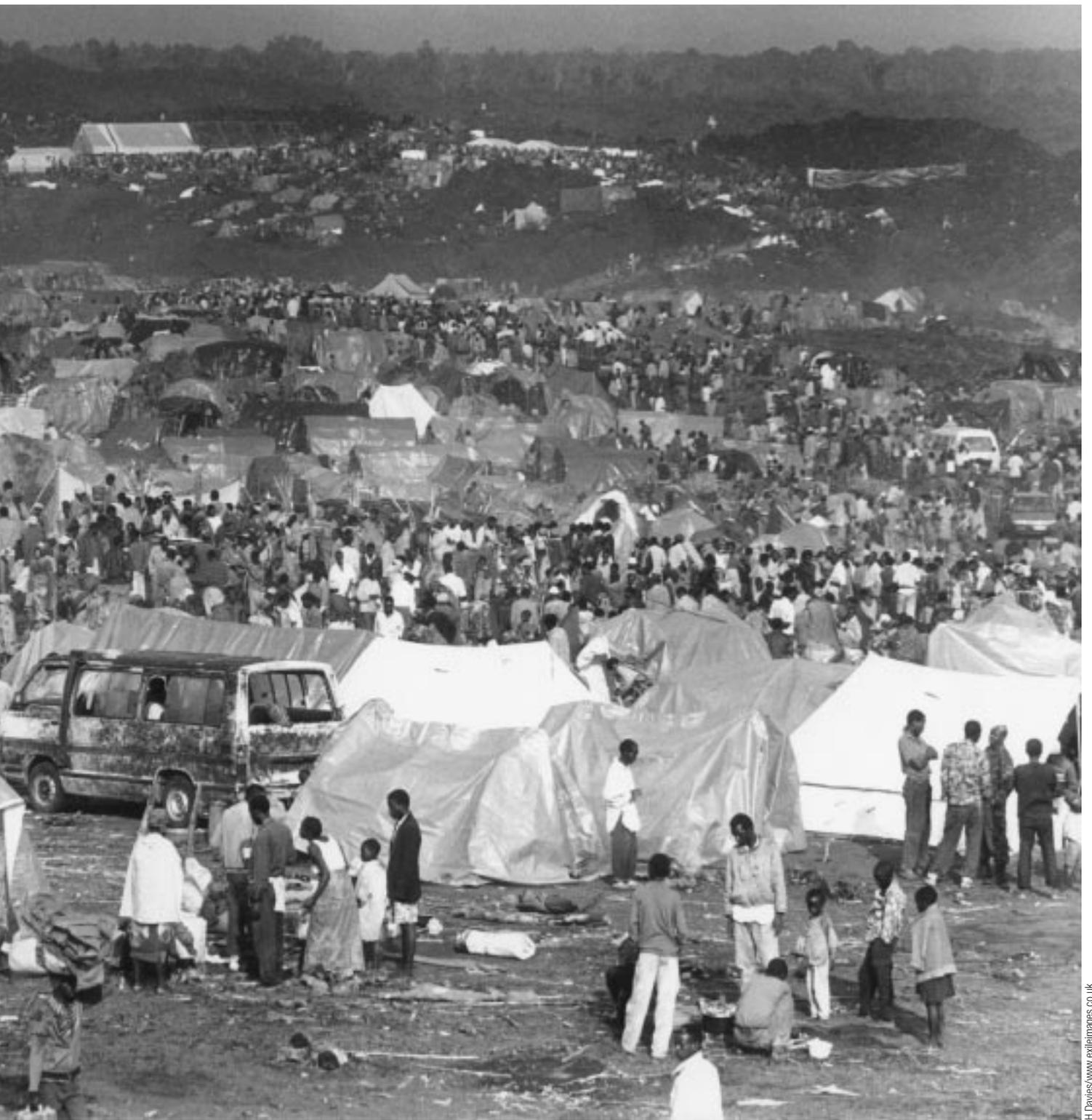
The splinter group leaders spurred on these youths by linking their deprivation to the accumulation of land by the northern elite and its allies. It wasn't that simple, of course. There were other factors, including a collapse in the world market for coffee in the 1980s, which dropped the value of Rwandan coffee exports from \$60 per capita in the late 1970s to \$13 by 1991. But the political targeting evidently succeeded. A study of the patterns of *Inkuba* and *Abakombozi* acts of violence shows that these acts occurred most frequently in the areas with lowest income, most often in places where daily food energy intake had fallen below 1,500 calories per person. In fact, a table showing the average food energy production in each of Rwanda's 10 prefectures shows that incidents of sociopolitical violence occurred in 18 communes (communities) where food production was under 1,600 calories per day, but in none where it was above that level (see Table 2).

The Hutus in power, fearful of losing their government positions and properties, also recruited young men for their protection. A youth wing of the governing party, the *Interahamwe*, was organized to protect the politicians and their lands from the opposition youths and from the large numbers of squatters who had fled their impoverished hillsides. In some cases, the *Interahamwe* “re-liberated” land that the youth groups of the opposition parties based in the south had seized or occupied.

Habyarimana worked hard to deflect the peasant opposition, personally lobbying farmer representatives to rally the peasant movement to his side and to abandon their rhetoric about rural poverty. He accomplished this by promising them that their concerns would be addressed, and by letting his supporters help them to deflect their anger from the elite Hutus to the attacking Tutsis. By 1991, the Uganda-based Tutsi army was making that strategy easy for Habyarimana, as it was targeting Hutus in its guerrilla attacks. By now, thousands of Hutus were fleeing the war and the famine, and had become “internally displaced persons” (IDPs) gathering in refugee camps. The Tutsi rebels were more than happy to treat the camps as military targets. By the time a cease-fire took place in 1992, the IDP population had reached 500,000. But the cease-fire was short-lived, as the plane crash that killed Habyarimana immediately reignited the war. By 1993, the number of refugees had reached 1 million, and by the end of the war about 100,000 had died. It was during this post-



Kitale camp in Goma, Zaire, contained more than a quarter of a million Hutu refugees in 1994.



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assassination period that the worst of the genocidal acts occurred.

The internally displaced persons, rather than finding themselves taken in and protected by fellow Hutus whose districts they had fled to, found themselves resented. There were too many of them, and they put impossible strains on traditional hospitality. Where population pressure had become increasingly unbearable on the farms, it became worse around the refugee camps, with IDPs adding heavily to host populations. As the war escalated, food energy dropped to 1,100 calories per person. And while the IDPs were increasingly resented by their fellow Hutus (the host populations, too, were now hungry), they were increasingly attacked and killed by invading Tutsis.

In the two years before his plane was shot down, the embattled Habyarimana and his political enemies both took political advantage of the Hutu refugees' desperate circumstances. IDP children and teenagers, with no schools to occupy them and often no parents to guide them, became the principal recruiting base for the *Interahamwe* militias—the ones bent on sabotaging and destabilizing the regime. At the same time, as the Tutsi invaders drove more Hutus from their homes, and killed more of them as they fled to the camps, the IDPs also provided a base for Habyarimana's retaliation against the Tutsi, and enabled him to reclaim some of the support he'd lost in the rich-poor conflict. For many of the Hutu IDPs, the harsh reality was that they were forced to choose between two warring camps: the camp of those who wanted them to die before voting, and the camp of those who wanted their votes before they died.

When the presidential plane crashed, it in a sense prefigured the crash of Rwandan society. Extremist Hutu politicians seized on the shock and fear of the moment, using the presidential guard and the *Interahamwe*, comprising mostly the Hutu youths from IDP camps near Kigali, to perpetrate the murder of rival Hutu

politicians and the mass slaughter of the Tutsi. Their efforts to turn back the Tutsi failed, and by mid July 1994, the Tutsi-led RPF had taken over. Following this takeover, more than 2 million Hutu refugees fled to neighboring countries, including 1.2 million to the Democratic Republic of Congo (DRC). The mass exodus, predictably, had a devastating environmental, social, and political impact on the DRC.

In the report I wrote for the IUCN's Task Force on Environment and Security, I suggested that four lessons be learned from this tragic chapter in Africa's history:

First, rapid population growth is the major driving force behind the vicious circle of environmental scarcities and rural poverty. In Rwanda it induced the use of marginal lands on steep hillsides, shortening of fallow, deforestation, and soil degradation—and resulted in severe shortages of food.

Second, conserving the environment is essential for long-term poverty reduction. Consequently, it is essential for the long-term elimination of links between environment scarcity and conflict. In the long term, this is possible only if Rwanda adopts a bold population policy with aggressive family planning programs aimed at reducing the country's fertility rate. The pressures that produce conflict can also be reduced by adopting more sustainable forms

of agriculture, based on techniques that improve soil fertility and increase fuel wood production.

Third, to break the links between environmental scarcities and conflict, win-win solutions—providing all sociological groups with access to natural resources—are essential. The winner-take-all model results in a society gripped by fear, which too easily is exploited by unscrupulous politicians, leading to ethnic enmity and violence.

And fourth, to prevent a bipolar ethnic conflict of the kind that ravaged Rwanda will require a rethinking of what national security really means. Certainly, it means placing human and environmental security ahead of the security of ethno-political regimes.



Save the Children, trying to track the parents of unaccompanied children, displays photographs in Goma, in 1996.

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A cholera epidemic swept through the camps around Goma, claiming up to 2,000 lives a day. A father carries his desperately sick child to a makeshift hospital in Kitale camp, 1994.