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CULTURE: THE MISSING LINK?

THE IMPORTANCE of Africans' cultural heritage to their sense of who they are still isn't recognized sufficiently by them, or others. Culture is the means by which a people expresses itself, through language, traditional wisdom, politics, religion, architecture, music, tools, greetings, symbols, festivals, ethics, values, and collective identity. Agriculture, systems of governance, heritage, and ecology are all dimensions and functions of culture—for instance, "agri-culture" is the way we deal with seeds, crops, harvesting, processing, and eating. Whether written or oral, the political, historical, and spiritual heritage of a community forms its cultural record, passed from one generation to another, with each generation building on the experience of the previous one. Such a collective self-understanding directs a community in times of peace and insecurity; it celebrates and soothes it during the passages of birth, adolescence, marriage, and death; and it enables it to survive during transitions from one generation of leaders to another.

Culture gives a people self-identity and character. It allows them to be in harmony with their physical and spiritual environment, to form the basis for their sense of self-fulfillment and personal peace. It enhances their ability to guide themselves, make their own decisions, and protect their interests. It's their reference point to the past and their antennae to the future. Conversely, without culture, a community loses self-awareness and guidance, and grows weak and vulnerable. It dis-

integrates from within as it suffers a lack of identity, dignity, self-respect, and a sense of destiny. People without culture feel insecure and are obsessed with the acquisition of material things and public displays, which give them a temporary security that itself is a delusional bulwark against future insecurity. We see this in many places in Africa today. An example of the destruction to African cultures wrought by the imposition of arbitrary imperial boundaries can be seen in the fact that, while most of us know what might constitute a French, Russian, Chinese, Japanese, or Indian culture, it is impossible to speak meaningfully of a South African, Congolese, Kenyan, or Zambian culture.

My long-standing attempt to understand the impact of the destruction of culture on Africa's current challenges has partly been a personal journey to discover who I really am. It began on my first day of primary school, when I was too young to appreciate the deliberate trivialization of my culture and the political, economic, and social impact of the colonial administration's imposition of their culture on ours.

I absorbed a beautifully prepackaged set of beliefs intended to indoctrinate and prepare my community for a long colonial rule without any resistance: once Africans accepted our second-class position, we would be safe and taken care of— happy slaves in our own land. It was not until I went to the United States in 1960 to begin my university education that I started to become interested in my cultural roots. Recalling what my grandparents told me of the history of our community, I began to realize that, unlike what I had been taught, much of what occurred in Africa before colonialism was good. As with the ritual through which power changed, the *ituika*, the leaders were accountable to their people, who were able to feed, clothe, and house themselves. People carried their cultural practices, stories, and sense of the world around them in

their oral traditions, which were rich and meaningful. They lived in harmony with the other species and the natural environment, and they protected that world.

My grandparents and others of their generation measured their happiness, their material and spiritual well-being, in ways far different from today. Their medium of exchange was goats. They kept domestic animals, which they used carefully for survival and treated humanely, and cultivated a variety of food crops on their lands. Because most of their basic needs were met, they didn't consider themselves poor. They lived within a community full of rituals, ceremonies, and expressions of their connection to the land and their culture; they didn't feel alienated or adrift in a meaningless, highly materialistic world that assigns value only in dollars and cents, because their world was animated by the spirit of God. They took what they needed for their own quality of life, but didn't accumulate and destroy in the process—and they did all this so that future generations would survive and thrive. By the time my mother died, in 2000, everything could be sacrificed for money: forests, land, goats, values, and even people. In a cash economy, it became necessary to destroy the environment, own part of it, and deny others access to it—including those whose families had lived on it for many generations.

It is my search into this heritage I have in common with millions of others in Africa and elsewhere that convinces me that the tenets of modernity—with its belief that material goods, greater technology, and innovation at any cost will solve all our problems and meet all our needs—are insufficient to provide an ethical direction for our lives. Ultimately, I began to accept, and even yearn for, the part of me that had been concealed for so long, the part found in the culture into which I was born and within which I'd partly been raised. It was impatiently waiting for me to explore and understand. I suspect this is an experience shared by Africans across the continent and in

the diaspora, and by many others whose cultures have been threatened with extinction.

One way I felt this dislocation between who I was and what I was educated to be was through my name, which reflected the imposition of a "foreign" identity upon my own. When I was born, as was traditional in Kikuyu culture I was given the name Wangari, after my paternal grandmother, and Muta, my father's first name. But, as the child of Christians, I was baptized and given a biblical name, Miriam, which is how my parents, friends, and teachers addressed me while I was growing up. Miriam became my first name and Wangari my last, a practice encouraged by the colonial administration to downplay African surnames, so that only the British would be called by their formal last names. (Clearly, this process served to facilitate the local peoples' acceptance of their inferior status and colonized identity.) When I came under the influence of the nuns at the schools I attended, I embraced the Catholic faith and was encouraged to take a new name, because Miriam was perceived as more akin to Protestantism. To honor the Holy Family of the New Testament, I chose to be renamed for Mary and Joseph, feminized to Josephine, upon being received into the Catholic Church as a teenager. Josephine was shortened to the nickname Jo, and from then on I was known as Mary Jo Wangari. It was at college in the United States that I recognized the strangeness of being called Miss Wangari, which is the equivalent of being called the daughter of myself. Eventually, I reclaimed my birth name—and with it some measure of my origins.

Even today, although Africans living in Africa will more likely use their Christian names, they often very quickly reclaim their African names once they go beyond the continent. Through a process of self-liberation, they appreciate the satisfaction of owning aspects of their culture. Through my own journey, I know that it takes effort and will to recognize

that one is not backward, inferior, out of touch, or a "tribalist" if one accepts one's cultural heritage and defines oneself by it—that, indeed, only *that* culture can provide self-knowledge and self-identity.

To be sure, culture is a double-edged sword that can be used as a weapon to strike a blow for empowerment or to threaten those who would assert their own self-expression or self-identity. In many communities in Africa and other regions, women are discriminated against, exploited, and controlled through prevailing cultures, which demand that they act a certain way. They are denied power, access to wealth and services, and even control of their bodies through practices such as female genital mutilation, early or child marriage, and rules of disinheritance. Some cultures demand that men be warriors and learn to kill, or to treat women a certain way, or to repress emotions, such as affection, pain, and compassion. Those who break away from the norm are punished or ostracized. These are some of the negative aspects of culture. We cannot shy away from these realities.

When I first began to engage with Kenyan civil society in the early 1970s and joined the National Council of Women of Kenya, it was on behalf of the Kenya Association of University Women. Although I'd returned to Kenya as Wangari Muta, committed to playing my part in advancing my newly independent country, I wore Western clothing and spoke fluent English, including at home with my family. I moved into the privileged setting of the university, where I achieved a doctorate, available then only to the tiniest minority of people in Africa, and an even smaller minority of African women. Although opportunities have expanded since, the number of African PhDs, and in particular women PhDs, is still comparatively small.

It was, therefore, as a member of an exclusive, Westernized

elite common then to many societies in postindependence Africa that I began to listen to rural women speak of their difficulties in obtaining firewood to cook nutritious foods and providing clean drinking water and fodder for their animals—the beginnings of the Green Belt Movement.

It was through my contact with these women that I began to seek the linkages between poverty and environmental degradation and the loss of culture. When I began to build the Green Belt Movement, I thought that all that was needed to encourage people to conserve their ecosystem and restore food security was to teach them how to plant trees and to make connections between their degraded environment and their difficulties. However, over the years I began to recognize that the rediscovery of culture was not something simply personal, but a political and social necessity, and that a reengagement with one's roots meant attempting to embrace all of its richness, contradictions, and challenges in fitting into the modern world.

I started to understand why communities were not only culturally uprooted, but were also literally pulling up the few remaining trees available to them, on which they and their children and grandchildren depended. When communities were told that their culture was demonic and primitive, they lost their sense of collective power and responsibility and succumbed, not to the god of love and compassion they knew, but to the gods of commercialism, materialism, and individualism. The result was an expanding impoverishment, with the peoples' granaries and stomachs as empty as their souls.

When I began to become active on environmental issues, people were curious about why I was helping women plant trees. *Was it because of where I was born or raised, or how and where I was educated! Was it because of my parents or grandparents! Was it something in my cultural heritage that partic-*

ularly cherished the natural world? Was I doing it to advance my career, become rich, achieve fame, or gain political power? Why, they continued, *did I persist in pursuing environmental conservation when so many odds were stacked against me?* After all, I had a flourishing academic career at the pinnacle of learning in postindependence Kenya, the University of Nairobi.

Their incomprehension was understandable. During the 1980s, the regime in Kenya regularly accused people who challenged the government's policies or practices that subverted rural populations of being "antigovernment." When I was accused of both, it wasn't because I was planting trees. Rather, it had more to do with the journey I had embarked upon.

While I could understand to some extent the government's paranoia about holding on to power, what I couldn't fathom was why the environment was not as important to my fellow Africans, or Kenyans, or even Kikuyus, who were in the government or in positions of authority in society, as it was to me. Why were political leaders behaving as if they had colonized their own country—and, in so doing, had facilitated the exploitation of natural resources like indigenous forests and land by handing them over to their political supporters or making them available to corporate interests? Why were they disinheriting their own people and future generations?

I realized then that it was not just the poor who had been culturally uprooted. Even those with power and wealth were not only unwilling but also unable to protect their environment from immediate destruction or preserve it for future generations. Since they, too, had been culturally disinherited, they did not seem to recognize that they had something to pass on. Although they were the people expected to protect their countries' wealth, they perceived themselves as passersby, and so took whatever they could on their way through. This also explained to me why many Africans, both leaders and ordinary

citizens, facilitated the exploitation of their countries and peoples. Without culture, they'd lost their knowledge of who they were and what their destiny should be.

Of course, this problem isn't only an African one: people all over the world, rich and poor, are shortsightedly stripping the Earth of her bounty in favor of acquiring wealth today, at the expense of the survival of future generations, whether theirs or other peoples'. And yet, I feel the problem acutely as an African, precisely because I am within a generation or two of those who had a culture that, albeit unknowingly, contributed to the conservation rather than the destruction of their environment. By making these linkages, the full dimensions and impact of the loss of cultural connection to the environment became clear to me.

THE WRONG BUS SYNDROME

Through this analysis of the intersections of culture, the degradation of the environment, and political corruption, I realized it was necessary to enlarge the Green Belt Movement's conception of conservation to include a recognition of cultural heritage and the consequences of its loss, how and why culture was important, and how its neglect manifested itself in the ways the public reacts to the environment, and even to life itself. We came to understand that we had to allow people to see that the system in which they were living was fundamentally flawed. Until it was corrected, and people could feel empowered and hold their government accountable, the Green Belt Movement's work would not be fully realized. This is how the Civic and Environmental Education seminars gradually became an essential part of the Green Belt Movement's approach to development.

One part of the seminar is an exercise we named "The Wrong Bus Syndrome." Traveling by bus is a very common

experience in Kenya, as it is in many African countries. Since most Africans can identify with a traveler in a bus, it's easy for seminar participants to visualize what happens if a traveler makes the wrong decision and gets onto the wrong bus: she or he will arrive at the wrong destination and will, without a doubt, encounter unexpected problems. These may include sleeping out in the cold, going hungry, or experiencing something dispiriting or dangerous (such as harassment by the police or attacks by thugs). If the traveler gets on the right bus, he or she should have a relatively easy journey, because all has gone according to plan.

Throughout the many seminars the Green Belt Movement has held over the years, people have offered the following main reasons why a traveler could get on the wrong bus: he or she fails to ask for directions and does not seek all the necessary information; someone accidentally or deliberately misinforms the traveler; the traveler is incapacitated through mental illness, drug abuse, alcoholism, a state of distress and confusion, or genetic impairment of the mind; the traveler has a misplaced sense of arrogance and adopts a know-it-all attitude; the traveler cheats him- or herself and trivializes the implications of making the wrong decision; the traveler is fearful, intimidated, cowed, and lacks confidence and self-assurance; or the traveler is simply ignorant.

As part of this exercise, seminar participants are asked to enumerate the problems they're facing in their communities. The answers are issues familiar to poor people, and those concerned with development, all over the world—and they are legion. A group of a hundred once enumerated no fewer than 150 problems! Among the most common are hunger, poverty, unemployment, collapsed institutions, a lack of security, violations of human rights, and religious differences that split communities and divide friends and neighbors. Other problems

relate to the immediate environment: loss of local biological diversity, especially forests; soil erosion; pollution; the disappearance of indigenous food crops; and the drying up of marshlands, streams, and springs.

In light of all these challenges, when asked if they're moving in the right or wrong direction, or traveling on the right or wrong bus, individuals in the seminars are usually unanimous in their opinions: they *are* on the wrong bus. They recognize that they haven't asked questions of their leaders—from the local chief to their MP to the head of state. They've been over-trusting, and haven't paid adequate attention to the information available to them. They haven't had the courage to stand up to these leaders and challenge the direction they have been taking the people in, or they have relied too much on their leaders' assurances that all the people have to do is to trust them. Or they have assumed that politics is beyond their understanding. Some may have allowed themselves to be misled by alcohol, drugs, or misinformation, making them easy victims for exploitation. All of these choices mean they are less capable of reaching the destination they want.

Interestingly, in every seminar, participants point to the loss of traditional culture as one of the major causes of troubles such as the misuse of alcohol and drugs, irresponsible behavior toward women and girl children, high secondary school dropout rates (especially for girls), prostitution, theft, the breakup of family relationships, and the commercialization of religion. They express distress at the phenomenon of street children, and the spread of HIV/AIDS. As they analyze further the causes of their problems, many people come to the conclusion that their society has lost its accepted values and taboos and has, therefore, become both vulnerable and susceptible to any leader who promises them the immediate satisfaction of their felt needs.

In turn, the seminars aim to allow individuals to deepen their sense of self-knowledge and realize that to care for the environment is to take care of themselves and their children—that in healing the earth they are healing themselves. The Green Belt Movement's tree-planting program and Civic and Environmental Education seminars seek not only to empower the poor economically and politically, but also to encourage them to internalize a sense of working beyond self-interest and make a greater commitment to service for the common good.

In the course of the seminar, after participants have concluded that they are moving in the wrong direction, the question is put to them: "What do you do now?" It is at that point that attendees reach the state where they decide that they must take charge—not to continue going the wrong way, but to get off that bus, board the appropriate one, and start moving in the right direction.

Getting on the right bus will help them deal eventually with the long set of problems they have listed. At this point in the process, participants gain what in Kikuyu is called *kwimenya*, or *kujijua* in Kiswahili, or in English, "self-knowledge." When they experience *kwimenya*, participants can confront the choices they made that led them to take the wrong bus. They can also begin to choose differently.

Attendees recognize that they cannot be fatalistic, but must acknowledge their own agency. They comprehend that they need not only to choose wisely which bus to take, but to exercise *kwimenya* on issues as significant as how they are governed, how they govern themselves, how they manage their resources, how they expand democratic space, whether they respect or violate each other's rights, and whether they create or destroy peace. They see that if they are going to get better governance, they have to participate in elections, and determine which leaders they want.

Exercising *kwimenya* entails being responsible oneself, but

holding leaders responsible as well—in other words, not only protecting the soil on your own land and conserving nearby forests, but also demanding that the government protect the country's soil and forests from degradation and exploitation. The recognition of the need for both personal and political responsibility and accountability leads people to the realization of the central importance of democratic governance.

In my own personal journey, I realized that not only was I on the wrong bus, but everyone else was, too—and that one of the main reasons why we had gotten on the wrong bus was because we had lost our cultures. My analysis led me to conclude that if people are denied their culture, they are vulnerable to being exploited by their leaders and to being exploiters themselves.

The reawakening of *kwimenya* can provide individuals with deep psychological and spiritual clarity. There is enormous relief, as well as anger and sadness, when people realize that without a culture one not only is a slave, but also has in effect collaborated with the slave trader, and that the consequences have been long-lasting and devastating, extending back through generations. A new appreciation of culture gives traditional communities a chance, quite literally, to rediscover themselves, revalue and reclaim who they are, and get on the right bus.

RECLAIMING CULTURE

The challenge for the many parts of Africa that were decultured is to rediscover their cultural heritages, and use them to both reconnect with the past and help direct them in their political, spiritual, economic, and social development. Despite their apparent simplicity to outsiders, who might consider their own culture more complex and sophisticated as well as more relevant and practical, the expressions of one's own culture are much more meaningful and constructive to those who claim them than alien (and supposedly superior) holy scrip-

tures, or masterpieces of literature and music produced by an occupying power. As wonderful and enriching to human experience as foreign heritages are to those who subscribe to and value them, they are nevertheless aspects of other peoples' experiences and heritage.

Indeed, through their strong power of suggestion, foreign cultures may reinforce a sense of inadequacy and nurture an inferiority complex in those constantly exposed to them and urged to perceive them as "better." This is partly why foreign cultures play an important role in power politics, and in economic and social control. Once people have been conquered and are persuaded to accept that they not only are inherently inferior but also should gratefully receive the wisdom of the "superior" culture, their society is undermined, disempowered, and becomes willing to accept outside guidance and direction. This experience has been repeated throughout human history.

Citizens of former colonial powers are often baffled as to why indigenous or colonized peoples seem to suffer disproportionately from alcoholism, homelessness, mental illness, disease, lethargy, fatalism, or dependency. They cannot fathom why many of these peoples seem unable to relate to the modern world, why many of their children cannot stay in school, or why many do not thrive in the contemporary, industrialized world of big cities and corporate capitalism. They are surprised that their development programs don't produce the desired results and their attempts to alleviate the conditions under which so many indigenous or colonized peoples suffer may meet with passivity, indifference, resistance, or sometimes hostility.

What these well-meaning development specialists, philanthropists, politicians, and others perhaps don't fully appreciate is that indigenous or colonized people have been living a split life for centuries. In the colonial era and the decades following

African independence, the cultures of the African peoples were trivialized and demonized by colonial administrators, missionaries, and local devotees. Then the pre- and postindependence leaders and the international community urged the peoples of Africa to modernize, move beyond their "tribal" inheritance, and embrace the newer cultures, readily available today in films and on television and the Internet.

African communities have been attempting to reconcile their traditional way of life with the foreign cultures that condemned their own and encouraged them to abandon it. What are people to do when everything they believe in—and everything that makes them who they are—has been called "Satanic" or "primitive" or "witchcraft" or "sorcery"? What do they turn to? What wisdom do they call upon? What can be done to resist? And when, as is usually the case, this heritage is solely oral, how can they rediscover and reclaim its positive aspects?

Before the arrival of the Europeans, Mount Kenya was called Kirinyaga, or "Place of Brightness," by the people who lived in its shadow. The Kikuyus believed that God dwelled on the mountain, and that the rains, clean drinking water, green vegetation, and crops, all of which had a central place in their lives, flowed from it. When Christian missionaries arrived in the area toward the end of the nineteenth century, they told the local people that God did not live on Mount Kenya, but rather in heaven, and that the mountain and its forests, previously considered sacred grounds, could be encroached upon and the reverence accorded to them abandoned. The people believed this and were persuaded to consider their relationship with the mountain and, indeed, nature itself as primitive, worthless, and an obstacle to development and progress in an age of modernity and advances in science and technology. This did not happen only, of course, to the people who lived around Mount Kenya.

Over the next generations, the reverence and spirit that had led the communities to preserve specific species of tree, like the wild fig, and the forests on Mount Kenya died away. When the white settlers and then the local communities themselves cut down the trees to plant coffee and tea and other agricultural products, encroaching farther and farther up the mountain, there was little resistance. From then on, they were seen as commodities only, to be privatized and exploited. The awe and sense of place that had allowed the communities around Mount Kenya to recognize, however unconsciously, that in order to safeguard their livelihoods they needed to protect the mountain's ecosystem, including its forests, were gone.

This is why culture is intimately linked with environmental conservation. Because communities that haven't yet undergone industrialization often retain a close, reverential connection with nature, and their lifestyle and natural resources are not yet commercialized, the areas where they live are rich in biological diversity. But these habitats are most in danger from globalization, privatization, and the piracy of biological materials, precisely because of the wealth of natural resources contained in the biodiversity. As a result, communities are losing their rights to the resources they have preserved throughout the ages as part of their cultural heritage. The belittling of indigenous culture continues for many minority groups. The source of the disdain these days, however, is more likely to be other Africans rather than people from other regions of the world.

The demonization of the indigenous cultures to which Africans were subjected for centuries extended into every facet of their lives, and left them vulnerable to diseases and social pathologies that dog them to this day. In the case of the Kikuyus, it led not only to the continuing deforestation of Mount Kenya and the degradation of the environment in the

surrounding region, but also to the virtual disappearance of the cultivation of many indigenous foods like millet, sorghum, arrowroots, yams, and green vegetables, as well as the decimation of wildlife, all in favor of a small variety of cash crops. The colonizers and those who accepted their beliefs trivialized the old ways, including the owning of cattle as a sign of wealth, growing crops that evolved in the local environment for household consumption, and sourcing medicinals from local foods and plants. All of these were considered indicative of a "primitive" way of life. The loss of indigenous plants and the methods to grow them has contributed not only to food insecurity but also to malnutrition, hunger, and a reduction of local biological diversity.

In many African societies, traditional cuisine has also drastically changed, and for the worse. Instead of a largely meatless, saltless, and fatless diet, full of steamed or roasted vegetables, the colonized rich have adopted the perceived diet of the rich, with all the ailments that come with it, such as high blood pressure, diabetes, gout, and the loss of teeth. In the meantime, the poor have tried their best to catch up with the wealthier citizens, and soon suffer from malnutrition, hunger, and diseases associated with trying to chase an unsustainable lifestyle rather than maintaining a traditional, more nutritious diet.

The brewing and sale of alcohol during the colonial period provide another example of how cultural norms were subverted, introducing a new set of social problems that persist to this day. When the British came to Kenya, they banned the brewing of local beer and even initially forbade Africans to drink bottled (European) alcohol, lest they forget their place. However, once the British had built breweries and put the local ones out of business, they allowed, indeed *promoted*, the locals' consumption of foreign brands of alcohol, with ready cash the only constraint. Locals were given business licenses to

open village bars for consumption of only the bottled brews from breweries owned by the colonialists. Before this, bars did not exist. People drank alcohol only at home or at community celebrations.

By this time, all the traditional strictures on the use of alcohol—such as allowing its consumption only in middle age and reserving its use for ceremonies or festivals—had been done away with by the colonial authorities. When the festivals and ceremonies themselves were also banned, a culture of drinking alcohol without a reason, age limits, or social controls was encouraged. Drinking halls sprouted in every shopping center and opened their doors to men, women, youth, and today, even children. When colonial laws gave Africans the freedom to drink alcohol in village bars without the restraint of cultural norms, many locals drank themselves to destruction. As elsewhere in Africa, the banning of indigenous practices had relatively little to do with maintaining purity, spreading civilization, or stimulating a love of Christ—or, for that matter, warding off the temptations of Satan. It had a lot to do with rubber, gold, diamonds, oil, slaves, and cash.

In Kenya now, alcohol and cigarettes appear to receive more attention from advertising agencies than food and medicine. The pursuit of profits is so aggressive that in small towns it is easier to identify the brands of beer and cigarettes than to know the names of the shops they're sold in or those of the centers where the shops are located. Even today, in some communities, the brewing of local alcohol is still prohibited by colonial legislation held over as part of national law. Partly because of poverty, many people often consume illegal and adulterated alcohol bought and sold in secret; many such brews have destroyed health and caused blindness and death, not to mention the breakdown of families.

TOWARD HEALING AND RECOGNITION

At long last, development agencies, religious leaders, academic institutions, and even some government officials are beginning to acknowledge the multiple facets of culture in Africa, and its role in the political, economic, and social life of African communities and nations. Environmentalists and international institutions are also coming to realize culture's centrality in the protection of biological diversity. For all human beings, wherever we were born or grew up, the environment fostered our values, nurtured our bodies, and developed our religions. It defined who we are and how we see ourselves. No one culture is applicable to all human beings; none can satisfy all communities. Just as we are finally starting to see the value of biological diversity, we are also belatedly recognizing that humanity needs to find beauty in its diversity of cultures and accept that there are many languages, religions, attires, dances, songs, symbols, festivals, and traditions, and that this cultural diversity should be seen as a natural heritage of humankind.

In addition, efforts are being made to undo some of the cultural and psychological damage inflicted on Africa by the many forces that have competed with themselves on her soil. For example, church leaders are facilitating what is being called the Africanization of the Church of Christ. African priests, for instance, will now accept indigenous names instead of demanding that an African take a European name at baptism. Performing African dances in churches (albeit with changed words and meaning) is now quite common. Farm produce and livestock rather than cash is now an acceptable part of the offertory.

New converts are not forced to discard their traditional clothing and adornments in favor of Western dress, and they can proudly accept Christian fraternity without the need to

look like a Westerner. All this would probably make the original missionaries and converts turn in their graves, but it is a reflection of the new consciousness and tolerance for different cultures that many Africans—including those in mainstream Christian religions—are acknowledging.

This isn't to say that there aren't still difficulties. Even now, some African religious leaders find it difficult to preach in favor of their own culture when they have been preaching against and distancing themselves from it for many years. It takes courage to be in charge of one's own identity and recognize that one was deliberately misinformed.

Nonetheless, progressive religious leaders from Africa and Europe have begun finding political and social space for African cultures. Hence the significance of the message from the then head of the Anglican Communion, Archbishop George Carey of Canterbury, in December 1993, when he publicly apologized in Nairobi on behalf of those missionaries who had condemned all aspects of African spirituality and traditions. He conceded that some facets of the culture were completely compatible with the teachings of Christ, even though some of them may have been incompatible with European culture, traditions, and values. Dr. Carey said he hoped that this wrong would be put right so that the confidence and self-respect of the African way of life, including aspects of its spirituality, sense of justice, respect for life, and basic human rights, might be restored for Africa's benefit.

In September 1995, Pope John Paul II similarly apologized to Africans for the sins committed by missionaries when he came to Nairobi to present the report of the African Synod on the Catholic Church in Africa. He also acknowledged that not all African heritage was Satanic or incompatible with Christ's teachings. Indeed, at an open mass at Uhuru Park in Nairobi, the pope was treated to aspects of church liturgy that were borrowed from African cultures and would have been unaccept-

able to the missionaries and the African priests who followed in their footsteps.

The pope encouraged Africa's religious leaders to recognize that a people's culture is dynamic and must be influenced by other cultures it interacts with. Therefore, African cultures will have been affected and influenced by the cultural traditions and practices from the Europeans, Indians, and Arabs who left their mark on the continent of Africa. Nevertheless, he concluded, Africans themselves had to decide what they wished to take from other cultures, to claim what is good and retain it, and decide what was worthless at this time in their development and needed to be abandoned. Others cannot do this for Africans, the pope emphasized, without perpetuating the culture of patronizing the African people.

Undoubtedly, the cultures that existed in the past had problems: an overdependence on an elite who determined what was acceptable and what wasn't; and an attitude that assigned every setback to God's will. Some of what occurred, and continues to this day, was and is cruel and ignorant. As we've seen in recent years in Kenya, Rwanda, Congo, Sudan, Sierra Leone, Côte d'Ivoire, Uganda, and other countries, Africans are still maiming and killing each other in senseless conflicts, as well as forcing vast numbers of people from their homes to live in misery in unsanitary and overcrowded encampments.

However, there is nothing particularly African about human beings preying upon one another, or people attacking each other because of their religious affiliation or ethnic or racial background, or women being discriminated against. Furthermore, I am inclined to believe that because the precolonial societies were mostly intact and had a robust cultural life, the African cultures that were demonized by the colonizers and the missionaries had some sense of *kwimenya* that allowed them to survive the vicissitudes of the weather, the occasional wars between other groups, and cultural upheavals. *Kwimenya*

would have enabled them to open up to the progressive ideas of human rights and self-determination without the jettisoning of everything their culture valued. And, surely, one attribute these societies possessed was a recognition that there was no one else to whom they could turn to solve the problems that affected them—no international donors or agencies, no government beyond their own immediate council, no big brother to look after them—apart from the resources found within their own culture. Consequently, they were forced to embrace their challenges and seek solutions for themselves.

One resource for precolonial Africans that is sorely missed is the traditional healer or medicine man or woman, which in Western terms would be defined, at least in part, as a psychiatrist. Both provide a similar service, in that they attempt to plumb the psyche in ways that cannot ordinarily be reached by either surgery or drugs. They possess a natural ability to listen and empathize, and are skilled in responding to emotional trauma and suffering. As repositories of the wisdom gathered over generations, traditional healers served an important function in indigenous societies. If the colonial administrators had not demonized them—as they had their own traditional healers—they might have been introduced to reading and writing and thus been able to share, in written form, their knowledge as it evolved with the times.

Today, genuine medicine men and women could play an important role in helping contemporary Africans understand the problems they face as they straddle modernity and tradition, the West and their native cultures, and as they try to meet the challenges of determining their identity in relation to other communities. But, because Africa has few psychologists in the Western sense, the choices for Africans are stark: they are either mentally sound or in a mental hospital. Of course, people can seek counsel from their priests or imams, but because it is generally still believed in Africa that one cannot be either

a good Christian or a good Muslim while being open to traditional healing, the individual's turmoil may not be fully acknowledged or addressed. It will take many years for African authorities to accept the presence of traditional healers again, just as it has taken many years for them to concede that traditional midwives can fill certain gaps in the nursing profession, so that all women are provided with basic hygiene and assistance when they give birth.

It is within this context that reports, for instance, of older women in Kenya being burned alive because they have been accused of practicing witchcraft, or of children in Angola and Congo who have been cast onto the streets because their families believed them to be possessed by the devil, should be interpreted. This persecution expresses a dichotomy common to many Africans caught between tradition and modernity.

Behind these phenomena lies a trauma sadly familiar to many of the world's poor. As in other regions, many African societies are in tumult, only just emerging from years of civil war and with economies, communities, and families fractured or decimated. When calamities follow one upon the other—disease, war, poverty, or famine—it is not surprising that the reactions can become outsized and extreme. In such circumstances, a desperate people may turn on their own, hoping they will have one fewer mouth to feed by demonizing a family member, or ridding themselves of what they perceive to be a "cursed" existence.

As I have suggested, the transition Africans underwent from indigenous practices and worldviews to imposed spiritual and cultural systems from elsewhere was rapid, and in many cases incomplete. Consequently, while many Africans want to say they don't believe in the traditional way of life, their understanding of, say, the Christian doctrine of suffering and redemption is often nonexistent or only skin deep. For many Africans, Christianity is as full of devils and good and bad angels as their

"old" religions were. They believe they can hear and communicate with God, speak in tongues, and prophesy. These facets of religious expression remind them of the supernatural elements in their own traditions. As I see it, in both cases people are torn between belief systems they don't fully understand.

As Pope John Paul II also recognized, cultures are dynamic, changing with time and place, interacting with other cultures and evolving and adapting: people should not have to become walking museums. Progressive cultures help their peoples survive and pass their wisdom and a sense of destiny to the next generation. African cultures, of course, cannot return to where they were. Too much has been lost, and reverting to a precolonial mind-set—even if it were possible—would not serve contemporary African peoples well as they struggle to move forward. What Africans need to do, as much as they can, is recapture a feeling for their pasts that is not solely filtered through the prism of the colonialists. This will not be easy, because five hundred years is a long time to struggle against all forms of oppression. Nonetheless, just as Africans can honor sacredness beyond that contained in the Bible or the Koran, so they should not be embarrassed that, for instance, their languages were not written down or that their weapons against the colonial forces were spears. Even the British, who perfected stainless steel and the Gatling gun, once discovered themselves faced with an enemy—in this case, the Romans—who possessed greater technological skills and superior weaponry, and whose cultural achievements dominated their own.

Traditional technology and artifacts reflect the creativity inherent in those societies. When that sense of creative potential is lost, the innovative part of the brain is left dormant, making it more difficult to think in new or pioneering ways. The latent creativity lacks a medium for expression. This is why Africans should honor and record, in written form for current and future generations, the fact that their communities once knew how to make spears, and take the ingenuity and skill employed in forging these weapons and apply them to developing products that are more relevant to today's needs.
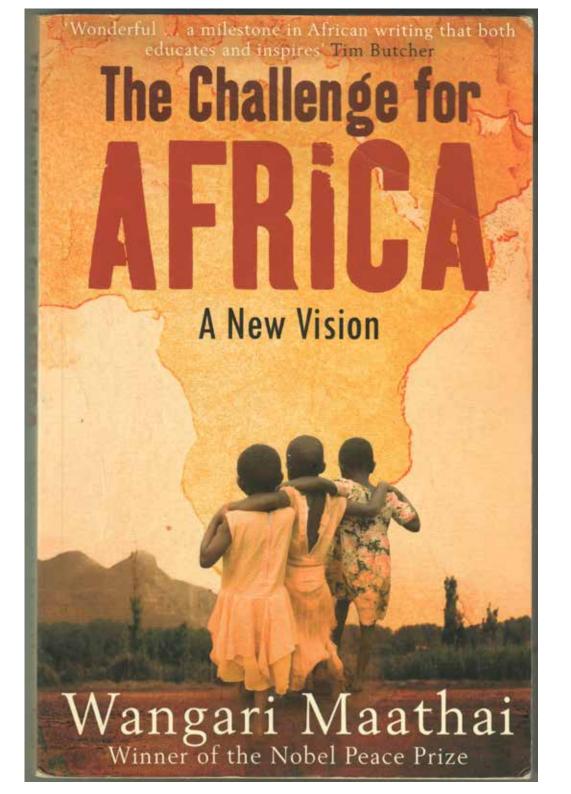
Culture could be the missing link to creativity, productivity, and confidence. Ultimately, it is critical that Africans dispense with what might be called the culture of forgetting that has enveloped Africa since colonialism and re-collect their history and culture, and the kwimenya that comes from both. Without them, Africans lack a foundation on which to build for the future.

'Wonderful ... a milestone in African writing that both educates and inspires' Tim Butcher

The Challenge for AFRICA

A New Vision

Wangari Maathai

Winner of the Nobel Peace Prize

ENVIRONMENT AND DEVELOPMENT

CLIMATE CHANGE will bring massive ecological and economic challenges. In such a context, therefore, alleviating dehumanizing poverty—and achieving the UN Millennium Development Goals (MDGs)—will become even more difficult. The MDGs, agreed upon by the UN General Assembly in 2000, increasingly guide global development policies, practices, and aid flows around the world. As some observers have noted, they are imperfect measures—not least because, when they were announced, different regions of the developing world had made more progress toward achieving the goals than others; sub-Saharan Africa was, overall, the furthest behind. Nevertheless, the MDGs offer a useful heuristic device not only as a tool to analyze development in general, but as measures against which the commitment of leaders in both the rich industrialized countries and the developing world to progress in human welfare and sustainable development can and should be judged.

The eight MDGs, to be met by 2015, are: 1) eradicate extreme poverty and hunger; 2) achieve universal primary education; 3) promote gender equality and empower women; 4) reduce child mortality; 5) improve maternal health; 6) combat HIV/AIDS, malaria, and other diseases; 7) ensure environmental sustainability; and 8) develop a global partnership for development.

Achieving each of the eight MDGs depends heavily on healthy ecosystems; but this fact is often overlooked, and the seventh MDG has not received as much attention as the oth-

ers. In my view, however, it is the most important, and all of the other goals should be organized around it. What happens to the ecosystem affects everything else, as is illustrated by an example from the Central Highlands of Kenya.

The environment on and around Mount Kenya and the Aberdare mountain ranges has gradually degenerated, and the biological diversity that led Mount Kenya to be designated a World Heritage Site by UNESCO is threatened. The Aberdares serve as one of Kenya's main water towers—a system of natural reservoirs that hold moisture in snow and mist, in soil and vegetation, and in aquifers above- and belowground. For decades, these mountain ecosystems have been ravaged by deforestation, illegal logging, nonindigenous plantations, overcultivation, and other forms of human encroachment. Yet within the mountains' forests lies some of the most fertile soil in Kenya, and the glaciers and rainfall the forests attract feed hundreds of tributaries of the largest river in Kenya, the Tana. The Tana flows 440 miles from the Central Highlands to the Indian Ocean and provides drinking water for millions of Kenyans in major urban centers, including the capital, Nairobi. These water resources, and the forests, are essential for Kenya's agriculture, livestock, tourism, and energy sectors, as well as household water and fuel.

If the mountains' ecosystems continue to be degraded, it will become impossible to achieve the MDGs in Kenya. With the destruction of the mountains' forests and the gradual disappearance of glaciers (apparently due to climate change), the Tana's water flow is reduced. Simultaneously, massive deposits of river-borne silt reduce the lifespan of the dams built across the river. Both lead to lost capacity for hydropower, which provides 60 percent of Kenya's energy.[1] Without this (clean) energy, Kenya is unable to provide electricity to a very large part of her rural and urban populations.

The dearth of adequate and reliable sources of energy stymies the possibilities of further rural electrification as well as national industrial growth. Demand for power in Kenya is growing by an average of 7 percent per year.[2] Due to shortfalls in hydropower that go back many years, Kenya has been forced to buy power from Uganda—with money that should have been used for development. In so doing, the government sacrifices other priorities like combating HIV/AIDs, malaria, and other diseases (MDG 6) and improving maternal health (MDG 5). Shortages of electricity also mean that poor people in rural and urban areas use wood fuel for energy, furthering deforestation and limiting prospects that MDG 7 will be achieved.

Agriculture in Kenya, as in most of Africa, is watered by rain, not irrigation systems. With the destruction of the mountain forests, rainfall patterns are affected, and with them, yields from cash and food crops. Small-scale farmers working degraded soils are among the poorest people in Kenya. For them and their families, not having enough nutritious food to eat is a common phenomenon. The lack of regular rainfall, therefore, also undermines prospects for eradicating extreme poverty and hunger (MDG 1) and reducing child deaths (MDG 4) from causes associated with malnutrition.

The loss of the forests also means that no vegetation remains to hold the soil in its place. As a result, enormous amounts of valuable topsoil are swept or blown away. When rainwater runs downstream through lands that are extensively cultivated, it can cause massive soil erosion and sometimes flooding, which not only damages farms and food crops, but can displace people from their homes. When the rains fail, and subsequently crops, aid in the form of food, clothing, and shelter from the government or donor agencies becomes necessary. In 2005, three million people, or nearly 10 percent of the popu-

lation of Kenya, were dependent on government food aid. In such an unsettled—and at times desperate—situation, children's schooling is disrupted, and in this context governments cannot hope to achieve universal primary education (MDG 2).

As deforestation gathers speed, women are forced to walk longer and longer distances to find wood for cooking and heating and clean water. In times of environmental difficulty, children, particularly girls, may be taken out of school to help with harvests and the collection of wood and water, or to look after their younger siblings as their mother's workload increases. Thus, protecting the mountain forests would help achieve gender equality (MDG 3) and improve the chances that all girls complete primary school, and as a result have a chance to continue their education to a higher level (MDG 2).

In addition, many of Kenya's national parks, and the wildlife within them, benefit from the Tana River and the rainfall from Mount Kenya and the Aberdares. (The presence of two species of monkey, more commonly found in Uganda and Congo, in the Tana basin is a reminder of the rainforests that once covered much of Africa from west to east.) If the mountains' ecosystems are destroyed, the savannahs will not be sustained. Tourism then will be a thing of the past, even though it's one of the most important sectors of the Kenyan economy and a major generator of employment, which, of course, contributes to poverty reduction. It goes without saying that city dwellers also depend on the environment's capacity to provide food, sources of energy, and water.

All of these challenges to human development could be avoided or their intensity reduced if the government managed the forested mountain ecosystems more sustainably. As it is now, the impact of the forests' destruction is felt by many economic sectors, and it is frustrating efforts to realize all but one of the MDGs, number eight, which calls for "a global partner-

ship for development." But when a country has been unable to realize the other MDGs, how can it form a partnership for development? The very basis for such development is absent.

Likewise, Ethiopia, which had 40 percent forest cover at the turn of the twentieth century, has only 3 percent today—a result of a cash crop economy, overgrazing, and the use of trees for fuelwood, all of which have contributed to the threat of famine. This is holding its own development back.[3]

As it currently stands, Africa's economies will need to grow by upward of 7 percent per year if they're to keep pace with efforts to halve extreme poverty (MDG 1) by 2015.[4] Even though it's true that Africa had further to go in 2000 to meet the MDGs than other developing regions, it should be a cause of some embarrassment to the peoples of Africa that most countries on the continent are unlikely to have met a majority of the MDGs by the target date.

THE ESTABLISHMENT OF MONOCULTURES

The situation in Kenya is not helped by the establishment of monocultural plantations of exotic species of trees (a scheme until recently known as the *shamba* system). During the 1930s and '40s, the British colonial authorities deemed large sections of the five "water towers" (Mount Kenya, Aberdare, Mau complex, Cherangani hills, and Mount Elgon) suitable for commercial plantations of fast-growing species of pines from the Northern Hemisphere and eucalyptus from the Southern. The eucalyptus and pines were intended to provide timber for the then-emerging building industry and firewood for steam engines. Local flora were considered slow-growing and economically less exploitable than imported species of trees, and, therefore, large sections of indigenous forests were clear-cut and replanted with the imported tree species.

To manage the plantations of nonindigenous trees that were established, the colonial administration introduced a farming method—called *shamba*, which means "field" in Kiswahili—whereby the forestry department allowed communities living near the forests to cultivate food crops while nurturing the commercial seedlings, for free. As one might imagine, the *shamba* system worked very well for the colonialists and for the peasant farmers, who were hungry for land to grow crops. The trees thrived in the cool environment (Mount Kenya is seventeen thousand feet above sea level) and in the then-virgin soil. Unfortunately, as the human population grew, the demand for land to grow food crops likewise expanded. As government foresters authorized more and more forest to be converted into farmland, more indigenous trees were felled for more plantations and for farmers to grow food crops—a situation exacerbated by increased demand for timber. I remember as a child seeing huge bonfires in the forests as the indigenous biodiversity was burned to make way for the commercial tree plantations.

Shamba plantations are harvested every thirty years or so. The continuous planting, harvesting, and replanting of the same commercial monocultures of trees, along with the long-term cultivation of food crops by farmers, drastically minimizes the prospects for local biodiversity to return. The *shamba* system is also rife' with opportunism and corruption from farmers, who benefit from growing food crops on forest land, and government officers, who are tempted to sell trees, lease land, and allow charcoal burning and illegal grazing. Foresters, who control access to the public lands, are eager to allow people back into the forests. The remuneration for facilitating some of these activities ends up in the pockets of some foresters rather than in the national treasury.

I have opposed the continuation of the *shamba* system for many years. I don't consider plantations of exotic monocul-

tures of trees to be forests, but rather tree farms. Unlike indigenous forests, plantations destroy local biodiversity, leaving the land bare except for the monoculture of trees. Plantations lack the ecological and biological systems to retain and conserve rainwater: the extensive leaf system, the intensive and varied vegetation, the debris of biological materials that accumulate and form a sponge at ground level. In forests, a not insignificant amount of water is retained on leaves, bark, and in the soil. When it evaporates, it creates the humidity that feeds other ecological systems and the rainfall cycle. All these are removed when the forest is clear-cut, cultivated, and planted with food crops and plantations. It is partly for that reason that the plantations lack the capacity to receive and conserve rainwater. When it rains, much of the water rushes down the slope and is lost and many rivers either dry up or have their water levels greatly reduced.

When the NARC government came into power in 2002, it was more committed to conserving the environment than the previous administration and it banned the *shamba* system. While environmentalists in Kenya applauded this decision, it was greeted with dismay by many MPs and the public whose parliamentary constituencies border the forest. Many Kenyans lack an appreciation of the difference between an indigenous forest and what I call a tree farm. Kenya's forests are worth far more intact than they are fragmented or converted into tree farms.

For the first time as a partner of the Kenyan government (the new NARC administration), the Green Belt Movement launched a project to restore degraded forests in the Aberdares. Local women grew indigenous tree seedlings and planted them in the forest. For each seedling that survived, the women (and some men who joined them) were compensated with a small financial incentive to continue their work. If a woman planted many trees and ensured that they survived, she could earn a

decent income to pay for school uniforms, books, and fees; nutritious food; or health care for herself, her husband, and their children. It is through this kind of approach that the Green Belt Movement addresses the MDGs in a holistic and sustainable way.

Nature has an extraordinary capacity to regenerate, especially in the tropics, and the benefits of a revitalized natural system don't have to take years to manifest themselves. By the end of 2007, it was clear that the Aberdares had begun to rehabilitate. Although the areas of the forest that had been cleared previously still did not have significant numbers of trees, many bushes had returned. More important, it was possible to see how, when the rains fell, water no longer ran off; instead, it was absorbed by the new vegetation, made its way to their roots, and replenished the underground reservoirs. As a result, rainfall patterns improved, some streams that had dried up returned, and the water levels in the rivers that emerged were noticeably higher. The rivers themselves were cleaner, and in some, fish had returned. Even the quality and quantity of tea produced in the area were reported to have greatly increased.

Many of my constituents told me that they saw that the rivers were healthier and appreciated that more water was available to them for washing, drinking, and cooking in their households. They had gained a greater understanding of the role that forests play in providing water. They were also, through much environmental education, aware of the alternatives to encroaching on the forests: that there was no reason why Kenya could not establish *shambas* and exotic plantations in the two-thirds of the country that is arid or semi-arid.

In addition, they were aware that crops could be cultivated in *shambas* outside the forest, or in the many tracts of land that Kenyans do not fully use. They also knew the Green Belt Movement had recommended that Kenyans with land should plant 10 percent of it with trees, which could supply the timber

industry and allow the land to be used much more economically than it is at present. In all these ways, pressure from communities on the government to cultivate crops in the forests would be reduced, or ended altogether; indeed, people who lived near the remaining indigenous forests could participate in their restoration by, like the Green Belt Movement groups, replanting native tree species and, in turn, bringing back the indigenous biodiversity.

In spite of these arguments, a substantial number of the same people who welcomed the return of the rivers and the regrowth of the forest informed me, as their MP, that they would still prefer to return to the forests to cultivate food crops because of the high demand for and cost of food. Even though the benefits of ensuring that the rivers were full and clean were evident, my constituents were unable to think beyond their immediate needs.

They forgot or chose to ignore the dry riverbeds and the degraded soil, and concluded that they were unwilling to sacrifice their current desire to grow potatoes, carrots, cabbages, and other such foods in the forest in favor of long-term survival. This is food they could have farmed on their own plots, if they had invested in fertilizer or used manure from animals and biomass to improve the quality of the soil; or food they could have bought in the markets, if their coffee and tea were better managed and they received their due income from its profits. In a sense, the forests were victims of the corruption both in the management of the forests and in the cooperatives that the farmers belonged to.

Under pressure from foresters and communities, the Kenyan government is now planning to bring back the *shamba* system, under a new brand: the Plantation Establishment and Livelihood Improvement Scheme (PELIS). PELIS opens the door to the possibility of further destruction of remaining forests. If the government offers the poor an opportunity to cul-

tivate crops in the forests through the PELIS program, I doubt the people will say no for the sake of the forests' long-term health (and their own).

This short-term thinking reflects the failure of people and their governments to look too deeply into the root causes of environmental decline. When a river dries up in Kenya or a crop fails, people tend to pray to God for more rain and food. They will wonder if food aid will become necessary if the harvests fail, or worry whether the boreholes and wells will be similarly affected. What they don't do as much as they should is ask *why* the river has dried up or crops have failed—questions that involve a deeper analysis and a more holistic approach to the management of ecosystems.

This only intensifies the need for responsible governance from those who do have an understanding and are entrusted with the long-term welfare of both the people and the resources that they need to survive. Given this mandate, it is extraordinary that the Kenyan government should even consider reintroducing the *shamba* system in a country where only 2 percent of forest cover remains. Moreover, why would any African government pursue such a policy in light of the projections of the toll that climate change will exact on the continent?

THE MARCH OF THE DESERT

The challenges facing agricultural communities throughout Kenya are mirrored throughout Africa and many of the poor countries in underdeveloped regions. In these regions, concern for environmental issues is treated as a luxury. But it is not: protecting and restoring ecosystems, and slowing or reversing global warming, are matters of life and death. The equation is simple: whatever we do, we impact the environment; if we destroy it, we will undermine our own ways of life and ulti-

mately kill ourselves. This is why the environment needs to be at the center of domestic and international policy and practice. If it is not, we don't stand a chance of alleviating poverty in any significant way. Nor will we create for the African people a continent where security and progress can be realized.

Indeed, if we are serious about engendering cultures of peace in Africa, protection and rehabilitation of the environment must be a priority. This is partly because at the heart of many of the conflicts that continue to challenge Africa are degraded land, depleted water sources, lack of rain, poor soils, and desertification.

The recognition that underlying almost every conflict is either a struggle for control over resources or a scramble to access them after they have become scarce is clear in almost every conflict on the continent, from Chad to Somalia, Sudan to Ethiopia and Kenya. When I flew north to visit Chad in August 2008, I looked out of the plane windows over the landscape and saw, over and over again, the remnants of abandoned villages: as many as fifty huts spread out in a circle and, all around them, desert. These people had not left their villages after being attacked. They had come to the area when it was fertile, established farms, and cultivated their crops. Then the land had become completely degraded and they were forced to move on, to the next fertile area and the next village.

I could only ask myself: *Where could these people go next?* The Janjaweed militias who attack citizens from the neighboring region of Darfur may have many political and economic justifications for their actions, but it seemed clear to me that they were pushing farther south in search of new grazing grounds for their livestock for the same reason the villages had been abandoned: the relentless march of the Sahara Desert. The result is conflict, rape, violence, hundreds of thousands of deaths, and vast numbers of refugees.

To reverse the process of desertification requires massive

investment, and yet this does not appear to be a priority of many African governments. The ordinary people who live in the villages may not always fully comprehend what is happening to their environment; they just keep moving on. And if their governments understand, they don't seem to care or seem to be doing much about it.

I am often asked whether a trade-off is required between the environment and development. I always say no. We need and must have both; what is important is a good balance between the two. Africa is still rich in natural resources that can be used sustainably and equitably for the benefit of her peoples. Up until now, however, most African governments have not prioritized the environmental sector in terms of budget allocation, nor made it a central focus of parliamentary discussion or policy development. Even when policies are in place, they are rarely enforced to their full effect.

The results of this lack of prioritization are evident in the serious ecological decline throughout the continent. According to the UN Food and Agriculture Organization, between 2000 and 2005 Africa lost about ten million acres (or 1 percent) of its forests a year—a rate more than three times the global average.[5] Loss of forest was significant in Angola, Cameroon, the Democratic Republic of the Congo, Nigeria, Sudan, Tanzania, Zambia, and Zimbabwe. According to a recent UNEP study, the current pace of deforestation is a concern in thirty-five African countries, while significant loss of biodiversity affects thirty-four. Overgrazing and other poor farming practices have led to the expansion of the Sahara Desert south into northern Nigeria and northern Kenya. Malawi has been almost wholly deforested.[6] And the list goes on.

THE CHANGING CLIMATE

According to UNEP's *Global Environment Outlook 4* (2007), which compiled data from scientists and international agencies on the entire range of environmental and social indicators, by the middle of this century climate change could affect growing seasons in northern Africa, because less rain will water semi-arid systems. On the coasts of western and central African nations, rising sea levels and flooding could result in the disruption of coastal settlements, while the further destruction of mangrove swamps and coastal degradation could have negative impacts on fisheries and tourism, with some estimates pointing to a 2 to 4 percent loss of agricultural GDP in that region.

Southern and western Africa, as well as the Sahel region, may become more parched, including in the drylands that skirt expanding deserts. Similarly, the Kalahari through to the arid regions in northern South Africa, Angola, and Zambia may experience larger sandstorms and more dynamic dune fields (that is, shifting desert landmasses), because less moisture and higher winds will lead to a decline of the vegetation that binds sand to the ground.[7]

Scientists are predicting that some regions in Africa will receive more rain, particularly in the tropics and some parts of the east. This may allow the cultivation of new crop varieties. However, previously malaria-free highland areas in Ethiopia, Kenya, Rwanda, and Burundi could increasingly see the presence of malaria-carrying mosquitoes, especially by the 2080s. Southern Africa, too, may see the southward expansion of the transmission zone for malaria-bearing mosquitoes. Mountain biodiversity could be impacted, and there is the possibility that fish stocks in some major East African lakes could decline.[8]

Climate change threatens to eliminate or severely reduce the glaciers on Mounts Kenya and Kilimanjaro, as well as those in the Rwenzori Mountains of Uganda.

A world where climate shocks become more common will also ratchet up risk factors for conflict between and within countries. Researchers found that when shortfalls in seasonal rains led to drought and economic distress in forty sub-Saharan African countries between 1981 and 1999, the likelihood of civil war rose by 50 percent.[9] Millions of Africans may become environmental refugees this century because of the effects of climate change. This is in spite of the fact that, at 4 percent of the world's total, and one ton of carbon dioxide a year per person on average, Africa's collective and individual greenhouse gas emissions are negligible—in contrast to those of the emerging economic giants of China and India, and Europe. And North America, home continent of the United States, one of the world's top emitters of greenhouse gases, consumes over 24 percent of total global primary energy despite having only one-twentieth of the world's population.[10]

The argument over whether climate change is or is not exacerbated by human activity has, to all intents and purposes, been settled. What remains for the world to decide is what actions it will take to reduce the intensity and scale of those changes. While it isn't yet possible to pin specific meteorological events on global warming, it is evident that for the poor of the developing world, the effects of climate change are already being felt and the threats to human well-being caused by environmental degradation are neither abstract nor localized.

These changes would be hard to adjust to in and of themselves even if they were not compounded by the problems already facing the African continent. Almost half of Africa's land area is vulnerable to desertification—particularly the Sahel and southern Africa.[11] In addition, the Sahara continues to spread by thirty miles a year,[12] and the pace of desertifica-

tion has doubled since the 1970s.[13] Within three generations, by the 2080s, the proportion of arid and semi-arid lands in Africa is likely to increase by 5 to 8 percent.[14]

Climate change will also have social and economic effects. Millions more poor people from rural areas are likely to relocate to cities, or to seek to flee their countries altogether, joining other environmental refugees. Coastal areas may become less habitable, forcing people living there to find other means of earning an income or to migrate inland. Women will be disproportionately affected by climate change, because across Africa they are most directly dependent on natural resources. They collect the firewood and draw the water; they plant the seeds and harvest the crops. However, women's voices have been largely absent from policy discussions and negotiations over global warming. Their experiences, creativity, and leadership should be part of the solution to the climate crisis.

THE EXPANDING FOOTPRINT

Scientists are only just beginning to understand the depth and range of services provided by Earth's ecosystems.[15] In 1998, a team of economists and scientists estimated that the life systems of the planet provided an astonishing $33 trillion worth of benefits,[16] or even as much as $54 trillion.[17] Yet the Millennium Ecosystem Assessment, a global effort undertaken between 2001 and 2005 involving nearly 1,500 researchers worldwide, found that a majority of both land and marine ecosystems throughout the planet are degraded, some critically.[18] If these trends are not reversed, many livelihoods will be threatened.

Of course, the cavalier attitude toward the Earth is not only an African problem: the danger we collectively face—of not paying sufficient attention until too much has been lost—challenges all human societies. Indeed, according to the 2005 Footprint of Nations report, humanity's collective ecological

footprint averages out at 21.9 hectares (about 54 acres) per person, although the planet's biological capacity can support only an average footprint of 15.7 hectares (about 39 acres) per person. (The footprint analysis measures the combined natural resources—such as water, energy, land, and forests—used to support a person's lifestyle.) Although the average ecological footprint in the developed world far surpasses the size of that in Africa (less than one hectare, or 2.5 acres, per person),[19] the fact that humanity's current use of resources is outstripping the planet's ecological capacity should give all of us reason to pause. It is simply not sustainable for the rest of the world to mine, log, drill, build, dam, drain, and pave in a rush to achieve the standards of living of the industrialized countries, which themselves depend on massive resource extraction from the global South.

Given these realities, it continues to baffle me that African leaders do not educate their people so they understand the enormous threat likely to face them and how important it is for them to use the resources within their borders to mitigate this threat and adapt to the inevitable changes in climate. States are custodians of these resources, and citizens have an interest in how these resources are managed on their behalf. Throughout Africa, the budgets of environmental ministries are dwarfed by those of defense ministries or national security, even in countries where the major threat to security is desertification, poverty, and unemployment. It further astonishes me that those concerned with or working for the development agenda in Africa still don't acknowledge that the environment must be at the center of all solutions, just as neglect of it is at the root of our most pressing problems. The continent must wake up.

It is this prevailing mind-set that explains, in part, why Africa lags behind other developing regions in progress toward

the Millennium Development Goals. If Africa does not change, not only will it not achieve the MDGs, it will also further degrade or destroy the resource base on which development depends, and in so doing exacerbate and entrench the challenges that the continent faces. No amount of advanced weaponry can fight the desert. But the problem can be overcome by planting trees and other vegetation to curb soil loss and harvest rainwater, and it is in repulsing the sands of the desert as they encroach on arable land and in fighting deforestation and climate change that the genuine battle for national and human security lies.

SAVING THE FORESTS

Just as natural resources provide the basis for human development, they also serve as a buffer against the worst effects of climate change. There is a cruel irony in the fact that the negative effects of climate change will be felt most keenly by those least responsible for creating global warming. As major polluters, the industrialized countries have a responsibility to deal with climate change at home, but also to assist Africa and the rest of the developing world to address its effects. They are in a position to share their technological know-how to reduce vulnerability and increase adaptive capacities. Mechanisms ought to be established—quickly—to raise steady and reliable funds for the prime victims of the climate crisis, who will be poor and rural, very young, and, more often than not, female. And many of them will be African.

Africans cannot reverse global warming, but they can, while calling for urgent action by the largest emitters of greenhouse gasses, do their part. Right now, most governments' forest policies are not helping matters. Africa is home to about 17 percent of the world's forests. However, around half of the planet's

global deforestation has taken place on the continent, and Africa has the highest rate of deforestation in the world—currently losing approximately half a percent of its forests annually.

Industrialized countries should accept their moral duty to assist Africa and other poor regions to find alternative and renewable sources of energy—such as biomass, wind, hydropower, and solar—and enable the global South to participate in the carbon market so Africa can develop industries based on renewable energy sources. In 2007, global investors plowed $148 billion into new wind, solar, and other alternative energy initiatives.[20] But those funds were almost wholly concentrated in the industrialized countries, along with some in China, India, and Brazil. Almost none of this investment is coming to Africa, despite the continent's vast energy poverty and abundant sun and wind. Africa's challenge lies in making herself a relevant beneficiary of these resources.

One exception, however, may be Algeria, which is already planning to export solar power.[21] A huge $70 billion "supergrid" in the Sahara could provide Europe with up to one hundred gigawatts of clean electricity by 2050,[22] while also supplying electricity for local consumption.[23]

Aside from further research into and development of these and other sources of energy, all nations must work to reduce their energy consumption and move beyond fossil fuels, to cut their greenhouse gas emissions from all sources, and to adopt policies so that corporations operate more responsibly wherever they are and individuals can live more sustainably. Otherwise, Africans will suffer even more from the consequences of overconsumption from peoples across the oceans. In the meantime, Africa must do her part. Indeed, it may be a good time to remind Africa that the United Nations Conference on New and Renewable Sources of Energy was held in Nairobi in 1981. It is a measure of the commitment to these issues that neither

the hosts nor the continent followed through with investments in research and implementation. Instead, they waited for technology and the means of mitigation and adaptation to be developed in continents that needed them least. Nearly three decades later, Africa finds itself in an even more vulnerable position. This trend is clearly unacceptable.

While the industrialized world can help mitigate the effects of climate change by supplying Africa with appropriate technology, the continent itself can do its part by prioritizing the protection and rehabilitation of its forests. All governments must make a concerted effort to stop unsustainable logging and find mechanisms, such as reforestation programs, whereby the poor can secure a livelihood by protecting and not degrading their environment. Well-managed, participatory tree-planting programs that serve as carbon offsets for industrial-country emissions are an important mechanism to support responsible global warming mitigation efforts in developing countries.

The Green Belt Movement, for example, is working with the World Bank's BioCarbon Fund through an Emission Reductions Purchase Agreement (ERPA) to continue reforestation efforts in Mount Kenya's and the Aberdares' forests, the *shamba* system notwithstanding. The trees that the Green Belt Movement groups plant will, according to World Bank estimates, capture 375,000 tons of carbon dioxide by 2017. In addition, these trees will restore the health of the soil, offer habitat for biodiversity, help regulate the local climate, support regular rainfall, and provide poor, rural people with a small income.

Partnerships such as this also present a challenge to NGOs when they work with international institutions or private-sector companies, some of which may have undertaken activities that harm the environment. It is my belief that, while it would be preferable to work with partners who are holistic in their approach to the protection of the environment, the reality is that many corporations, organizations, and governments are

not always doing the right thing. It is therefore necessary to work to assist in actively making a difference to the daily lives of the people in the region and, in so doing, preserving more forest.

One such project was formulated in 2006 at the annual meeting of the UN Framework Convention on Climate Change in Nairobi. The Green Belt Movement, UNEP, and the World Agroforestry Center (ICRAAF) launched the Plant for the Planet: Billion Tree Campaign to encourage tree planting as a means of mitigating global climate change, while restoring habitats and ecosystems. Prince Albert II of Monoco and I served as patrons of the campaign. From the outset, the partner organizations were aware that for the project to succeed, a wide variety of participants, from the government through to the private sector, as well as individuals and citizen groups, would have to cooperate. The sheer scale of the action—planting one billion new trees by the end of 2007—necessitated the engagement and participation of governments, organizations, and millions of individuals. By October of that year, we had achieved our goal.

Initiatives like the Billion Tree Campaign, while essential, shouldn't provide an excuse for industrialized countries not to take serious and immediate steps to reduce their greenhouse gasses. Both developed and developing countries must take action to deal with the negative impacts of emissions. To me, this is a matter of environmental justice and the price for peace. It should be addressed more responsibly by all.

The world's forests are its lungs. Thick, healthy stands of indigenous trees absorb huge amounts of carbon dioxide, a major greenhouse gas, and hold vast reserves of carbon. As these forests are cleared for timber, agriculture, mining activities, human settlements, or commercial development, a vital element in slowing, and ultimately reversing, global warming is lost, and local, regional, and global climates will be further

destabilized. In a vicious cycle, as climate change continues, forests will become more vulnerable: soils may dry up and trees die on a mass scale. At the 2007 meeting of the UN Framework Convention on Climate Change in Bali, Indonesia, both government officials and NGOs signed on to the "Forests Now Declaration." Its main tenet: If we lose forests, we lose the fight against climate change.