

Editorial

Homo periculosus var. infestus

In his critically-acclaimed tome, *Africa: A Biography of the Continent*, John Reader writes that "...the world's earliest-known centrally organized food-production system was established along the Nile 15,000 years ago – long before the Pharaohs – then swept away by calamitous changes in the river's flow-pattern"¹. By definition, the practice of agriculture depends on biological diversity with extreme selectivity favoring certain species over others. But the practice of sustainable agriculture demands conservation of biodiversity beyond what is immediately useful for the purpose of supplying reserves and back-ups in cases of natural disasters, pestilence, and anthropogenic malevolence. The perpetuation of agriculture in Africa since its inception implies strong resilience of biodiversity given the frequent occurrence of natural and human scenarios that continue to threaten life on the continent. In fact, recent satellite images of agricultural fields along the Nile portray a level of success that could not have been foreseen by our ancestors (Figure 1A). But the success story is very patchy, and the underlying support system provided by a rich heritage of biodiversity continues to be threatened by a new "species" of globalized humans who we will call *Homo periculosus* variety *infestus* or dangerous humans of a particularly aggressive variety. Not far from the fertile valleys of the Nile, tragic human conflict precipitates natural and social disasters that limit the effectiveness of global efforts toward peace and prosperity in the crucible of civilization (Figure 1B). According to *Conservation International*², there are eight hotspots of biodiversity in Africa: Cape Floristic Region; Coastal Forests of Eastern Africa; Eastern Afromontane; Guinean Forests of West Africa; Horn of Africa; Madagascar and the Indian Ocean Islands; Maputaland-Pondoland-Albany; and Succulent Karoo. Whether or not these so called "hot" spots survive or become "extinguished" spots will depend on how successful we are in balancing conservation strategies against increasing population, per capita consumption, and relatively unpredictable impulses of *H. periculosus var. infestus*. Perhaps not by simple coincidence, there are also eight regions in Africa where major famines have occurred in the past 30 years (Figure 2)

May 22nd 2008 marked the annual celebration of the International Day of Biological Diversity. Food and fuel prices have increased considerably since this same event occurred in 2007. Yet, the demands on African natural resources are relentless from different parts of the world. On the occasion of the 2008 celebration, Mr. Ahmed Djoghlaif, the Executive Secretary of the Convention on Biological Diversity³ said that "If current extinction rates continue, it will be hard to provide sufficient food for a global population that is expected to reach nine billion by mid-century. "And further that "Biodiversity will become even more crucial in the future as climate change is creating uncertainty over which plant and livestock species will remain viable under changing conditions." Another international leader, Mr. Ban Ki-Moon, head of the United Nations drove home the point by observing that "Of the 7,000 species of plants that have been domesticated over the 10,000-year history of agriculture, only 30 account for the vast majority of the food we eat every day. Relying on so few species for sustenance is a losing strategy." The international efforts to reverse the increasing pace of biodiversity loss include the "Billion Tree Campaign" organized by the United Nation Environment Program (UNEP). A quick review of progress in this effort reveals a deficiency in Africa (Figure 3). In the 18 months since the initiation of the campaign, more than 2 billion trees have been planted worldwide, but with a disproportionately small number in Africa, despite the global impact of the quotable quote from our own Nobel laureate:

"When we plant trees, we plant the seeds of peace and the seeds of hope" – Wangari Maathai.

¹ Reader, J. 1998. *Africa: A Biography of the Continent*. New York: Alfred A. Knopf. 801 pages.

² Conservation International. 2008. Biodiversity Hotspots.

http://www.biodiversityhotspots.org/xp/hotspots/hotspots_by_region/Pages/default.aspx. Accessed on 8 June 2008.

³ Convention on Biological Diversity. 2008. <http://www.cbd.int/>. Accessed on 8 June 2008.

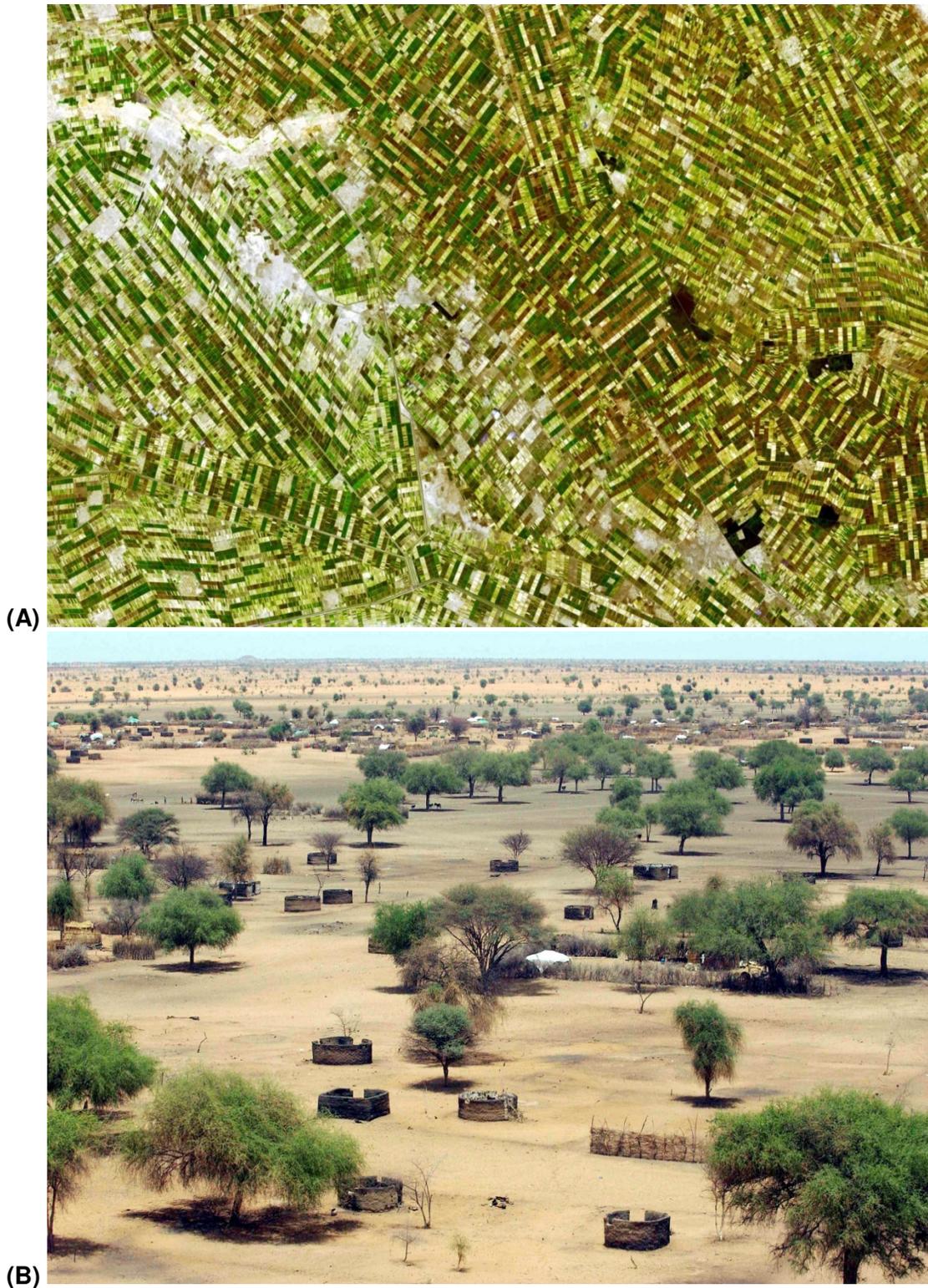


Figure 1. Panel (A) Satellite image of agricultural fields maintained through irrigation from confluence of the white and blue Nile in the El Gezira region of southern Sudan. CREDIT = NASA/GSFC/METI/ERSDAC/JAROS and Rebecca Lindsey⁴. Panel (B) An aerial view of the devastated town of Labado in South Darfur, Sudan, where approximately 60,000 of the town's inhabitants had fled from violence and attacks, and where mud huts were burned out mostly by air attacks. CREDIT=UN Photo/Evan Schneider.

⁴ http://earthobservatory.nasa.gov/Newsroom/NewImages/images_topic.php3?topic=life&img_id=18028

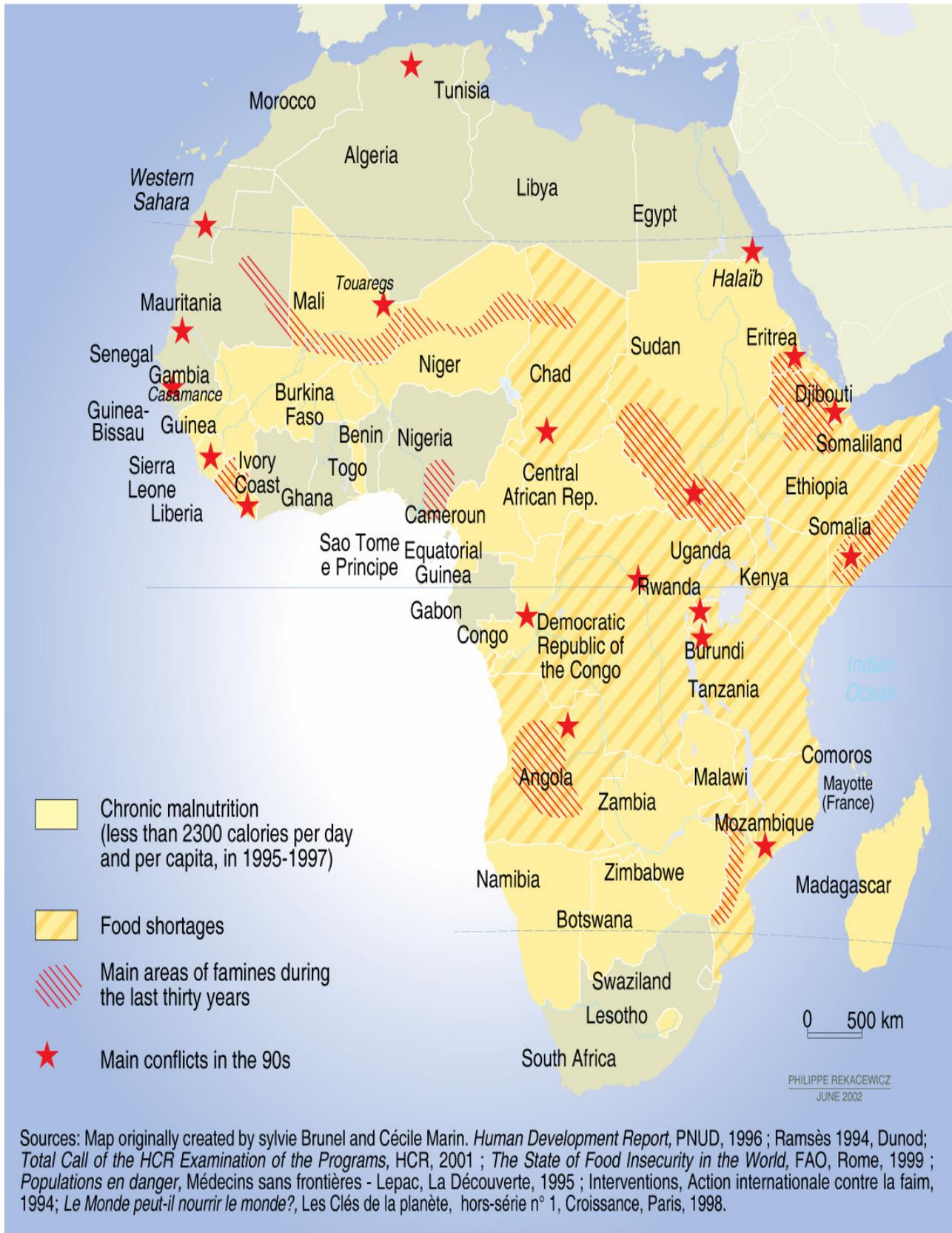


Figure 2. Regions of chronic malnutrition, food shortages, famine, and conflict in Africa. CREDIT = Philippe Rekacewicz, UNDP/UNEP/GRID-Arendal⁵.

⁵ https://maps.grida.no/go/graphic/malnutrition_and_famine.

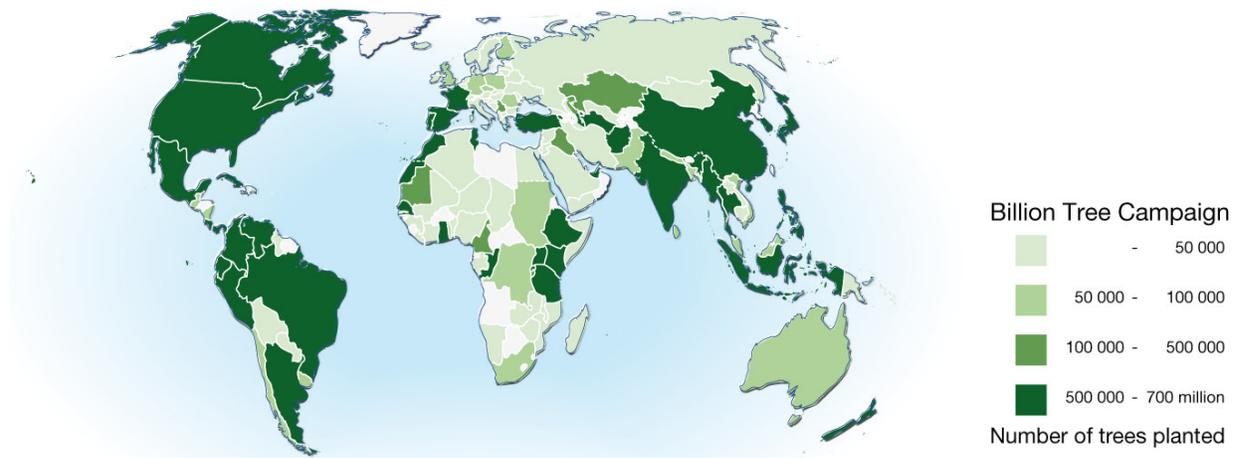


Figure 3. The UNEP's Billion Tree Campaign has been remarkably successful, except perhaps in Africa where the number of trees planted remains lower than expected for the anticipated benefits. CREDIT = Hugo Ahlenius, UNEP/GRID-Arendal⁶.

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⁶ [http://unep.org/Documents.Multilingual/Default.asp?DocumentI ...](http://unep.org/Documents.Multilingual/Default.asp?DocumentI...)