

Editorial

Women, Science, Technology and the Environment

"When the rural environment becomes unsustainable, it's the women whose lives are most disrupted..... Environmental science must be a compulsory primary and secondary school subject. Many universities offer degrees in Forestry or Natural Resource Management, but environmental issues must be taught earlier because many people drop out of school before reaching the tertiary level. We need all African children to grow up with environmental knowledge, so they can better manage our resources. Rural African women would benefit most from such a policy.

Wangari Maathai, Nobel laureate in 2004 and founder of the Green Belt Movement (Wangari Maathai. 2007. Preface to "Reclaiming Rights and Resources: Women, Poverty and the Environment. Shalini Gidoomal (Main Writer). CARE International, Nairobi, Kenya. http://www.care.org/newsroom/articles/2007/04/rights_resources_report.pdf).

March 8th is recognized worldwide as the International Women's Day (<http://www.internationalwomensday.com/events.asp>). The theme for this year is "*Equal rights, equal opportunities: Progress for all*" (<http://www.un.org/en/globalissues/women/>)" In many African native traditions, deification is an equal opportunity enterprise with no gender bias in reverence for powerful women who are deified as custodians of nature and environmental purity. For example, in the Yoruba culture, Oshun, Oya, Yemoja, Olokun are among the well known feminine deities in the African diaspora. The primordial shrine of Oshun in Oshogbo, Nigeria was declared a World Heritage site in 1995, in part because of the location in a sacred grove, among the last remnants of primary high forest existing in southern Nigeria (UNESCO World Heritage. <http://whc.unesco.org/en/list/1118>) (Figure 1). But modern reality is far from ancient mythology.

African women have much to offer in terms of environmentally sustainable economic development, but there is a large gender gap in access to education, research, technological engagement, and policy formulation in environmental issues. The gap is captured appropriately by the Millennium Development Goals (MDGs). All eight MGDs will not be met without full engagement of women in societal affairs. Our main focus here is captured by MGD-7, to "ensure environmental sustainability (United Nations Millennium Development Goals. <http://www.un.org/millenniumgoals/enviro.shtml>)."

The handy publication by CARE International highlights the cases of women facing accomplishing extraordinary environmental protection projects against equally extraordinary odds seven countries. In Burundi, the least urbanized country in the world, women struggle to combat soil degradation. Women of the nomadic pastoralists of the Borana region of southern Ethiopia figure out ways to adapt to shifting patterns of rainfall. Cocoa farming women in Ghana fight off large corporations who make their money through logging practices that threaten forest ecosystems. And in Niger, increasing scarcity of arable land is fueling a new kind of oppressive seclusion of women.

The names of the women who lead these commendable efforts will probably remain unknown to most readers of this journal. But their roles are no less important than those of women who are world famous for their indomitable crusade against environmental degradation. In this direction, we shall highlight the contributions of two women whose contributions to environmental sustainability continue to inspire generations of women, men, and school-aged children.

Rachel Carson (1907 – 1964) is credited with inspiring the environmental movement leading in part to the establishment of the National Environmental Policy Act and the creation of the Environmental Protection Agency in the United States. She worked as a field scientist and a writer. She gave us the classic books on the interconnectedness of nature's components and processes. Her book entitled "The Sea Around Us" first published in 1951 won the National Book Award, and was a bestseller. However, it was "Silent Spring" published in 1962, and focusing on the connection between indiscriminate use of pesticides and other toxic chemicals and the adverse impacts on biodiversity that catapulted Rachel Carson into conflict with industry and empathy with like minded environmentalists. *Silent Spring* remains a major tutorial for students of the environment world-wide.

Wangari Muta Maathai (born in 1940), a Kikuyu of Kenya has become the star of the environmental movement in Africa

and inspiration to people worldwide about the power of grass-roots organization in sustainable development. Her contributions have been recognized internationally, through the 2004 Nobel Peace Prize, among other prestigious awards. Wangari Maathai is perhaps best known for founding the *Green Belt Movement* (<http://www.greenbeltmovement.org/>), supported in part by the United Nations Voluntary Fund for Women. The movement has an ambitious agenda, including the “Billion Trees” campaign, rigorous environmental education, climate change adaptation, and advocacy and networking. Fulfilling this agenda items will take a lot of work and cooperation across gender, technological gaps, scientific uncertainty, and socioeconomic status. All hands must be on deck for the work and for the celebrative appreciation of women’s role in environmental protection.



Figure 1: The entrance to the shrine of Oshun deity in Oshogbo, Nigeria. United Nations Heritage site (<http://whc.unesco.org/en/list/1118>).

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