

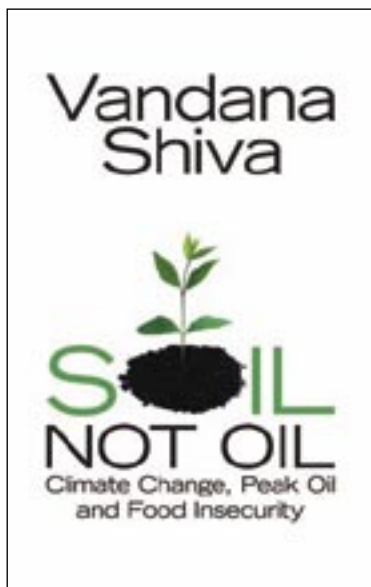
Soil Not Oil

Climate Change, Peak Oil and Food Insecurity

Reviewed by **Collins Miruka**

(Walter Sisulu University of Science and Technology)

Vandana Shiva
 Zed Books: London and New York,
 2008. 144 pp



As in her previous works, Vandana Shiva treats climate change as a hot scientific and political topic, and especially so for the developing world. While books about the potential impact of climate change appear regularly, Shiva's readable style makes these complicated issues very accessible.

The book establishes clear linkages between social justice, climate change and food insecurity, avoiding what is unessential without overlooking key social and economic development issues. For instance, she ably demonstrates how the substitution of human energy by fossil-fuel powered machines creates "disposable people" and how food is denied to millions when the destruction of rural livelihoods is occasioned by increased farm mechanisation.

The book's title is beautifully unpacked in a compelling argument that climate change certainly has a human basis. This is narrowed down to the energy, transportation and industrial sectors as the chief sources of greenhouse gas emissions. She goes on to demonstrate how climate change has resulted in so-called "extreme events" – droughts, floods and tropical cyclones – the effects of which are so much more devastating when they occur in the southern hemisphere.

Even though the book is not a technical treatise, readers would have been better served with a detailed explanation of such sensitive topics as whether increased levels of carbon dioxide cause warming by trapping more solar radiation in the atmosphere or if warming is actually caused by increased absorption of terrestrial radiation. Similarly, a parallel between a glasshouse environment and the greenhouse effect is taken as given: yet in the physical sciences, we know that convective heat exchange is critical to glasshouse temperature but not global warming.

We all agree that food security involves both production and physical and economic access. What Shiva abundantly demonstrates is that, in the industrial paradigm, "productivity" means "labour productivity". The fewer human beings involved in production, the more "productive" a process is, even if it uses more energy and more resources and produces less per unit of inputs.

The book also synthesises various contradictions. For instance, global warming could reduce production in the tropics, where food security is often weakest. Rising carbon dioxide concentrations might enhance production, but incidences of extreme weather may increase. A more rapid rise in sea levels, caused by increased thermal expansion of the ocean and melting of terrestrial ice, may add to financial strains and reduce food access for millions of poor people displaced from coastal areas. These issues and other potentially contradictory relationships between climate change and food security have been given careful consideration in this short book.

Soil Not Oil offers a penetrating analysis of the links between public policy and food security. Its strength lies in Shiva's ability to present a pithy outline of the Green Revolution, list its remaining needs and discuss important public policy issues, while at the same time engaging with relevant themes on climate change. Based on a food-security assessment model, coupled with a wealth of relevant real-world data and experience, she suggests that climate change is already reducing food production in low-income countries and cogently concludes that the social consequences of climate change are more adverse in parts of the world that are already struggling with high rates of poverty and malnutrition. The vulnerability of India and many parts of Asia to climate change and food insecurity is well argued and one readily sees similar consequences facing Africa.