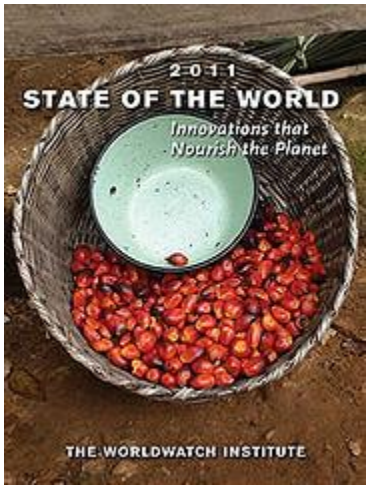
State of the World 2011: Innovations that Nourish the Planet

by Bhavani Prakash



Several decades have lapsed since the "Green Revolution" promoting large scale agriculture and intensive use of pesticides, yet nearly a billion people on the planet continue to starve.

With growing realisation about the toxic effects of fossil-fuel based inputs on top soil, water, workers' health as well as the increasing opposition to technologies such as genetic modification of seeds, World Watch Institute's latest report "**State of the World 2011: Nourishing the Planet"** comes as music to the ears. Launched on 12th January 2011, the report advocates a shift to small scale agriculture as a sustainable path for food security and hunger alleviation.

The report is a result of the visit of Nourish the Planet's team to 25 countries of sub-Saharan Africa over a one year period, which draws from hundreds of case studies and face-to-face examples of working solutions. Founded in 1974 by economist and farmer Lester Brown, World Watch Institute has been releasing informative and indepth environmental reports every year.

Some of the **main facts** highlighted in the report:

* According to the UN Food and Agriculture Organization, **925 million people** around the world go hungry everyday, **239 million** of whom live in **sub-Saharan Africa.**

* Agriculture's share of global development aid has dropped from more than 16% in 1980 to a **mere 4%** today. Much of that money **fails to reach poor farmers** of Africa.

* The prescriptions of the Green Revolution are not always appropriate or applicable to the **60% of the food-insecure** who live in South Asia and sub-Saharan Africa, mostly on small farms. In sub-Saharan Africa only 4% of the cultivated land is equipped for irrigation.

*In sub-Saharan Africa, **75 percent of agricultural producers are women**. Yet women also make up half of the population that is living on less than US$1.25 a day. The Millennium Development Goal to halve hunger by 2015 will not be met without a revolution in the way decision makers think about women—not just as agricultural producers, but as business people who need access to markets and financial services.

The report interestingly invites 'farmers, scientists, donors, agribusiness executives, and the global community' to consider **three main paradigm shifts:**

GO BEYOND SEEDS :

In a world dominated by a few varieties of crops, the focus is usually on new seeds including GM seeds to increase production. However, what works in the long term is nourishing and managing soil, indigenous crops and scarce water resources.

Innovations such as human powered pump and treadle pumps are effective local solutions, and so is intercropping with trees which reduces solar gain and heat intensity on the fields, while increasing crop yields. The focus needs to shift from single crop yields of large scale agriculture to biodiverse yields of small farms.

GO BEYOND FARMS:

The mindset has to move from 'more production' to preserving what has already been produced. A quarter to half of food harvested in poor countries is contaminated or spoilt before reaching the table. Better silos and low cost methods such as plastic bags can help .

According to the report, "*Although reliable figures are lacking, official estimates suggest that post-harvest losses across Asia average around 13 percent. China lost 15 percent of its grain harvest—up to 11 percent of the nation's rice—in 1993. In Vietnam, 10–25 percent of rice is normally lost, and in extreme conditions as much as 40–80 percent can be lost. In Brazil and Bangladesh, crop losses average 22 and 20 percent, respectfully. Despite the magnitude of this problem, only 5 percent of investments toward agricultural improvements are directed at reducing post-harvest loss.* '

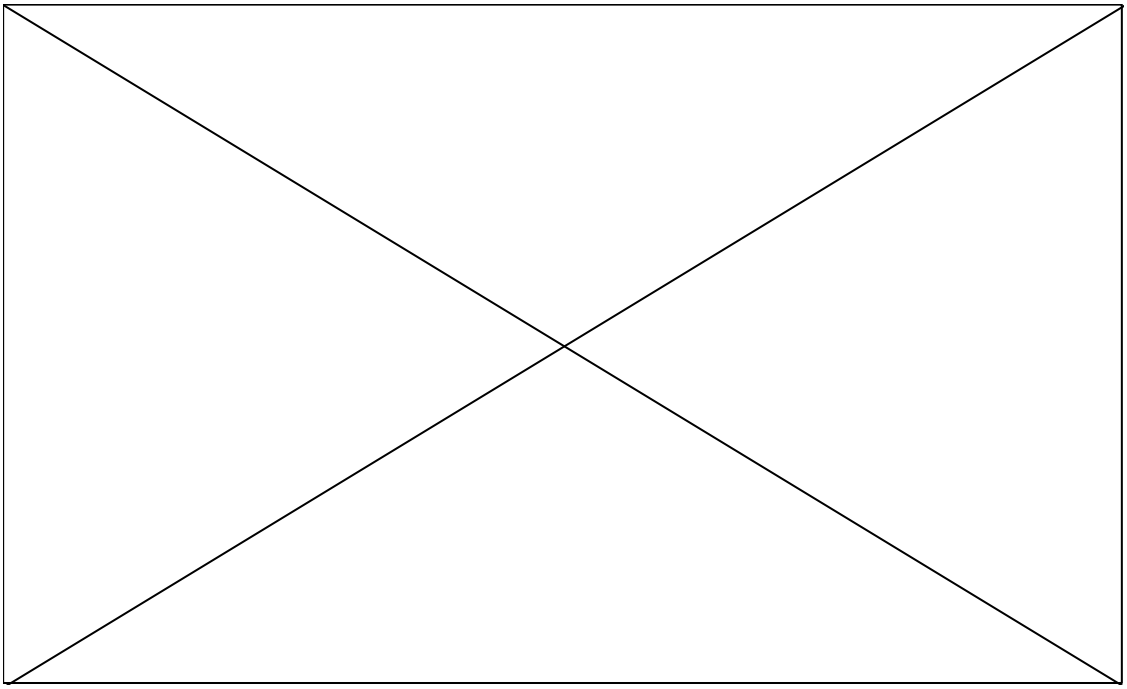
Another trend the report makes note of is the increasing urban populations. It mentions, "*In 2008, the share of people living in urban areas broke 50 percent for the first time, and UN projections place more than 65 percent of the global population in urban centers by 2050. As more people migrate from rural areas, **hunger is moving to cities as well**. In Africa, 14 million people migrate to cities each year, and worldwide some 800 million people depend on urban agriculture for their food needs.* Urban agriculture is one of the key ways to promote security.

GO BEYOND AFRICA:

Agriculture and the global food system are major contributors to climate change mainly due to the intensive use of fossil fuel based inputs and factory farming of livestock. Livestock production is estimated to contribute **18 percent of global emissions of greenhouses gases,** especially methane which is more potent than carbon dioxide. Large scale clearing of forests for agriculture causes about 17 percent of human-caused CO2 emissions and reduces their ability to absorb carbon. However, agriculture can become part of the solution. By intercropping

farmlands in Africa with trees, **50 billion tonnes of carbon can be sequestered o**ver the next 50 years, and that is a sizeable contribution equivalent to an entire year's weight of global carbon emissions, from a continent which contributes very little to the problem in the first place.

Here's a short video about the study:



Conclusion : The report is optimistic and shows a pragmatic way forward to tackling a number of issues – climate change, food security, women's welfare, poverty alleviation and self-reliance in the poorest of countries while highlighting several ground level innovations that work.

The document quotes sustainability researcher Jules Pretty as having surveyed in 1999, more than 286 projects in 57 developing countries. She found that the average crop yield gain was 79 percent over previous production practices. Similar studies of sustainable rice intensification (SRI) plots in eight developing countries found that, on average, **farmers increased yields 47 percent using mostly organic fertilizers and also saw a 40 percent water savings, a 23 percent reduction of input costs, and a 68 percent increase in income.**

Organic farming can feed the world's poor, while at the same time addressing fundamental issues of poverty and environmental degradation. The world needs to reorient itself towards small scale, locally adapted agriculture as a viable solution instead of large scale techno fixes that benefit a few.

A must read, **State of the World 2011: Innovations that Nourish the Planet** is available in summary version in the Google Document here and is available for purchase from the World