



# THE ENVIRONMENTAL FOOD CRISIS

**THE ENVIRONMENT'S ROLE IN  
AVERTING FUTURE FOOD CRISES**  
A UNEP RAPID RESPONSE ASSESSMENT



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In 2008 food prices surged plunging millions back into hunger and triggering riots from Egypt to Haiti and Cameroon to Bangladesh. Whereas fuel prices, which also surged, have fallen back sharply food prices remain problematic with wheat, corn and soya still higher than they were 12-18 months ago.

In order to understand the factors underpinning the food crisis and to assess trends, UNEP commissioned a Rapid Response team of internal and international experts. Their conclusions are presented in this report launched during UNEP's 25th Governing Council/Global Ministerial Environment Forum.

Several factors have been at work including speculation in commodity markets, droughts and low stocks. The contribution of growing non-food crops such as biofuels is also discussed. Importantly the report also looks to the future. Was 2008 an aberration or a year foreshadowing major new trends in food prices and if so, how should the international community respond?

The experts argue that, unless more sustainable and intelligent management of production and consumption are undertaken food prices could indeed become more volatile and expensive in a world of six billion rising to over nine billion by 2050 as a result of escalating environmental degradation. Up to 25% of the world food production may become 'lost' during this century as a result of climate

change, water scarcity, invasive pests and land degradation.

Simply cranking up the fertilizer and pesticide-led production methods of the 20th Century is unlikely to address the challenge. It will increasingly undermine the critical natural inputs and nature-based services for agriculture such as healthy and productive soils; the water and nutrient recycling of forests to pollinators such as bees and bats.

The report makes seven significant recommendations. These include real opportunities for boosting aquaculture and fish farming without intensifying damage to the marine environment alongside ones highlighting the opportunities for minimizing and utilizing food wastes along the supply chain right up to consumers.

In response to the food, fuel and financial crises of 2008 UNEP launched its Global Green New Deal and Green Economy initiatives: food is very much part of the imperative for transformational economic, social and environmental change. We need a green revolution but one with a capital G if we are to balance the need for food with the need to manage the ecosystems that underpin sustainable agriculture in the first place.

This report will make an important contribution to the debate but equally it needs to trigger more rational, creative, innovative and courageous action and investment to steer 21st Century agriculture onto a sustainable Green Economy path.



**Achim Steiner**  
UN Under-Secretary General  
and Executive Director, UNEP

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# SEVEN OPTIONS FOR IMPROVING FOOD SECURITY

## OPTIONS WITH SHORT-TERM EFFECTS

- 1** *Regulate food prices and provide safety nets for the impoverished.*
- 2** *Promote environmentally sustainable higher-generation biofuels that does not compete for cropland and water resources.*

## OPTIONS WITH MID-TERM EFFECTS

- 3** *Reallocate cereals used in animal feed to human consumption by developing alternative feeds based on new technology, waste and discards. This could feed nearly the entire projected population growth.*
- 4** *Support small-scale farmers by a global fund for micro-finance in developing diversified and resilient ecoagriculture and intercropping systems.*
- 5** *Increase trade and market access by improving infrastructure, reducing trade barriers, enhancing government subsidies and safety nets, as well as reducing armed conflict and corruption.*

## OPTIONS WITH LONG-TERM EFFECTS

- 6** *Limit global warming.*
- 7** *Raise awareness of the pressures of increasing population growth and consumption patterns on ecosystems.*

***“We need to introduce energy efficiency in the food chain like we have done in the traditional energy sector.”***





***“By seven options, including developing alternative animal feed with new technology and the use of waste, we could feed the entire population growth and help protect biodiversity, ecosystems and the entire platform of life and food production on this planet.”***