

CLIMATE CHANGE AND WORLD FOOD SECURITY

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It is an honour and pleasure to address such a distinguished audience, on behalf of the IPCC.

But such pleasantries are over-shadowed by the urgency and scale of the challenge we face, and the misery facing humankind if we fail to meet this challenge.

I will address here the issue of climate change and food security. There are four points I wish to make.

Firstly, some of the recent shortfalls in food output have been due to weather, especially drought in southern Europe and Australia. This is not the main cause of food shortage at present, but it is a contributory factor. For example, maize output in Europe this year was a quarter down on normal.

Secondly, some of this drought, especially in Australia may (though this is not clearly demonstrated) represent an early signal of global warming; that is, it may be attributable to increases in greenhouses in the atmosphere. If this is true, then these kinds of effects may be expected to occur with increased severity in the future.

Third, policies to encourage biofuels production have unexpectedly reduced food output due to land switches from food to industrial crops.

Thus climate change, both through its impacts and our policy has, in combination with more important factors such as increasing demand and stagnating production, had a global impact of availability of food.

Fourth, what about future climate change? The IPCC in its Fourth Assessment last year has projected important increases in drought risk in some parts of the world, a trend expected to become apparent in the coming two decades. These include: increasing drought intensity in southern Europe, western Australia, southern Africa, Africa north of the Sahara and the Middle East, and central western USA. The first two of these (western Australia and southern Europe) are important food exporting areas. Climate change is, overall, likely to reduce food production potential, especially in some already food-short areas.

What can we do to meet this challenge? Two things: Firstly, we can reduce GHG emissions. An 80 per cent reduction on current levels by 2050 would avoid most damaging effects on food potential. Currently discussed targets of 50 per cent are not enough to avoid serious impacts such as a billion extra people short of water.

Secondly, we can invest more, now, in adapting farming to climate change, especially to drought. This means drought proofing crop farming through: irrigation, especially drip feeding, breeding drought-proof crops (either by traditional means or genetic modification), and changing to crop types more suitable to dry regimes.

And we need to reduce the general vulnerability of people most exposed to changes in food availability: the poor, the marginalised, the young and the elderly. Often this can be achieved by improved general welfare: increasing income, improving healthcare, extending available utilities such water and electricity. Meeting our agreed Millenium DevelopmentGoals is therefore a very effective way of reducing vulnerability to climate change.

To conclude, climate variability now is a factor behind current food shortage (though not the main cause of it); some recent droughts may indeed have been partly caused by increasing GHG concentrations; the IPCC projects increasing future drought in important food-producing regions; thus it is likely that climate stresses on food production will increase in the future.