

Food Security and Climate Change A Call for Commitment and Preparation

Leaders from all over the world will meet shortly in Copenhagen for the UN Climate Change Conference. We call on them, as they seek agreement on a global response to the challenges of climate change, to recognize and address the specific threat that it poses to the world's food security.

The negative impact of climate change on agriculture, and thus on the production of food, could well place at risk all other efforts to mitigate and adapt to new climate conditions. The magnitude of change now being forecast, even in relatively optimistic scenarios, is historically unprecedented, and our agricultural systems are still largely unprepared to face it.

Farmers will encounter problems they have never before experienced: much greater weather variability, higher average temperatures, increased numbers of extremely hot days, shorter growing seasons, much greater moisture stress, added salinity from salt water incursion and irrigation systems, and new combinations of pests and diseases.

Getting agriculture ready for such dramatically new growing environments is not a trivial matter. No one should assume that success is guaranteed. For agriculture to adapt, crops must adapt, but there is no "climate change gene," no single characteristic, that can ensure that they will retain, much less increase, their productivity in new climates. Concerted adaptation efforts will be required crop-by-crop, country-by-country and internationally.

Crop diversity is the raw material for crop adaptation. This diversity, primarily found today in seedbanks, contains the traits that plant breeders and farmers will need to incorporate into tomorrow's resilient, climate-ready crop varieties. Agriculture—and people—cannot do without it.

Current institutional and financial arrangements, however, are inadequate to guarantee conservation of this priceless resource. Indeed, diversity is being lost – diversity that almost certainly holds the key to future crop adaptation. Moreover, the time required to integrate new traits into crop varieties can be a decade or more. We cannot wait for disaster before initiating action.

Fortunately, ensuring the availability of crop diversity is entirely feasible technically, financially and politically. Small investments made now will soon generate enormous and recurring benefits even if climate change is far less pronounced than is now widely anticipated.

No credible or effective agreement to address the challenges of climate change can ignore agriculture and the need for crop adaptation to ensure the world's future food supplies. We urge countries at the Copenhagen Conference to give due attention to crop diversity conservation and use as an essential element of the commitments they will make for climate change adaptation.