

SUMMARY OF THE LECTURE

The Economics of Stabilizing the Global Climate and Sustaining the World's Food Supplies ... While there's still time

A linked systems perspective on the challenges

By

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Climate, Economic Development and Food have emerged in public discourse as major topics of intensified concerns, potential geo-political tensions, and individuals' rising sense of uncertainty and pessimism regarding their own future and that of their children and grandchildren. It is therefore fitting that these are major themes for EXPO 2015. Yet, grappling with them is not easy.

Policy discussions and political debates about how to respond to these sources of worry, however, have acquired greater urgency while being shaped – quite understandably, yet nonetheless unhelpfully – by a confusing mixture of alarmism about impending environmental catastrophes and ensuing socio-political chaos, on one hand; and, on the other hand by sanguine assurances that there is no real warrant for taking hasty and costly action. While the reality of the prospective “threats” has become increasingly difficult to deny, their magnitudes and proximity to the pressing social and political issues of the moment are very uncertain, encouraging hopes that their materialization may well lie far in the remote future. The effect of this mixture of thoughts only contributes to the sense of “crisis”: societal state characterized by the growing recognition that serious, complicated problems have arisen -- indeed, some among them potentially posing existential challenges, without there being any comparable sign of emerging agreement on the nature or even the existence of responses that will be feasible and effective.

In this situation, a necessarily brief lecture should try at least to impart to you the following three “calmingly positive” messages:

- There already does exist a “portfolio” of diverse technological options and institutionalized mechanisms, and still others that readily may be designed to utilize market-based private incentives and means of managing coordinated publicly funded programs. These could deliver timely transformations in the global regime of production and distribution that curtailed the emission of greenhouse gases (GHGs) sufficiently to stabilize Earth's climates so as to leave the global mean surface temperature (GMST) in a range that is viable for the anticipated world population.

- Assigning priority to that formidably complex and temporally extended undertaking is justified by recognizing the critical involvement of the climate system in the long-run sustainability of human access to nutritionally adequate food and potable water, both of which are essential foundations for the maintenance of life and are requisite for sustaining societal prospects of greater material welfare, and people's well-being in the fulfillment of their individual human capabilities.

- The daunting problems of mobilizing and effectively allocating global resources for the transition to a low-carbon global economy, while securing the food supplies and the possibility sustainable post-transition economic development and rising welfare for large populations within the human community, are conceptually more manageable when that are approached by “thinking-in-time” and sequencing separable sub-problems so as to form a critical path to the completed transition. For this it is essential to understand, among other things, the key natural and social sources of feedbacks that can arise from the linkages among the interdependent dynamics of climate system, the global macroeconomic system and its energy and food and water supply sub-systems.