

The Benefits And Costs Of Waiting: Early Action Versus Delayed Response In The Post-SRES Stabilization Scenarios

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This paper analyzes the economic impact of mitigation policies that lead to stabilization of CO₂ concentrations at levels of 550 and 450 ppmv, respectively. We successively use each of the four new IPCC scenarios as a baseline. We analyze the impact of two different mitigation paths to the same long-term stable concentrations, which we call early action versus delayed response. The two issues that determine the advantages and disadvantages of early action are the timing of the entrance of new regions into an agreement and the development of the emission price, once all countries participate. The mitigation path is intertemporally efficient if most of the mitigation takes place after all countries have entered an agreement and if the real emission price increases over time with a growth rate equal to the real interest rate. The impact on global utility depends on the dynamics of the emission price. The emission price, for its part, depends on (1) which of the IPCC scenarios is chosen, (2) on the ultimate concentration rate, and (3) on the timing of the scenarios. The distribution of the income effects over regions depends mainly on the regional assigned amounts agreed upon in the agreement.

Key words: Climate change, IPCC SRES scenarios, Macro-economics, Stabilization, Intertemporal efficiency