

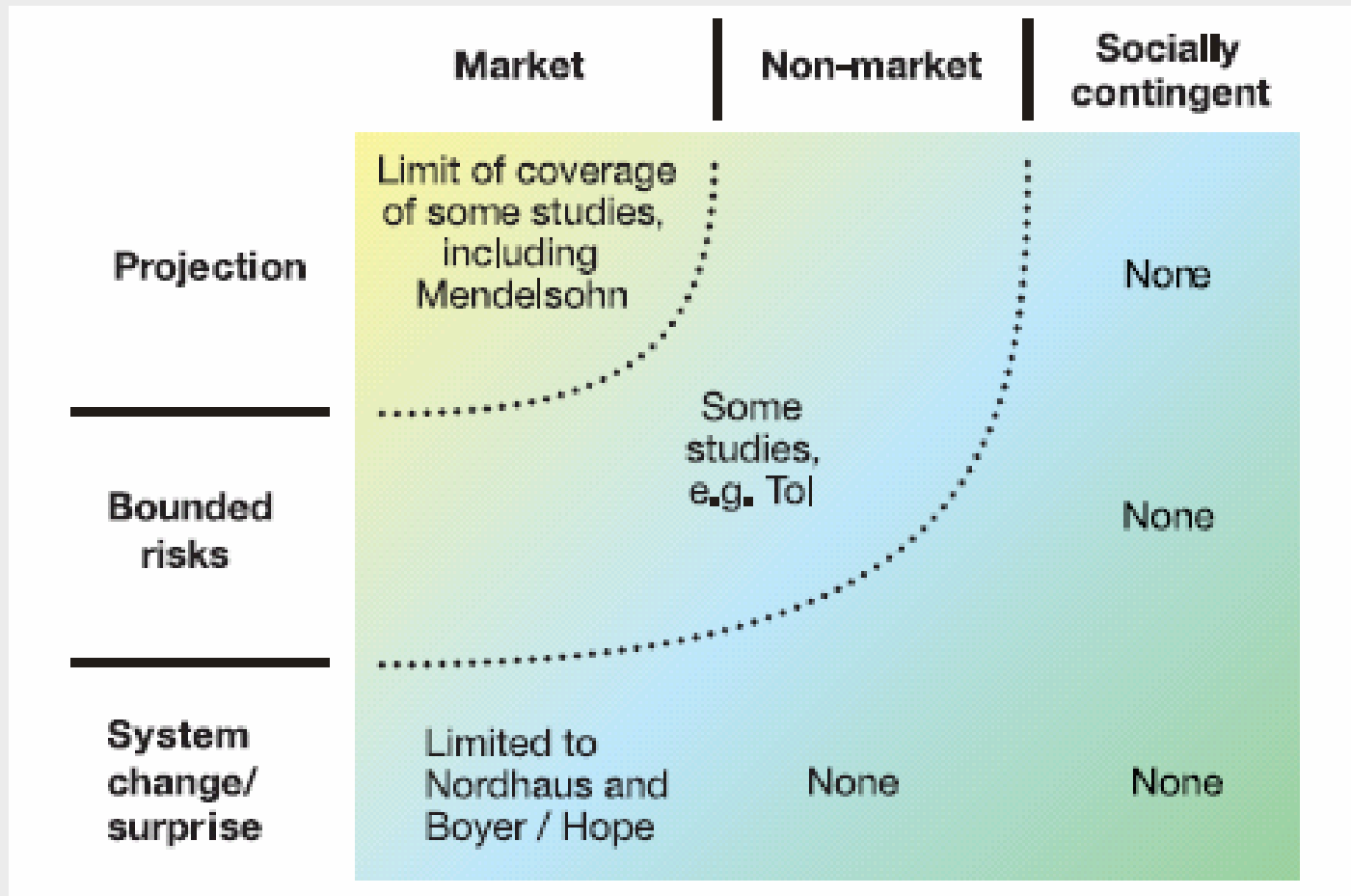
Climate Change Impacts, Adaptation and Vulnerability: Implications for Business

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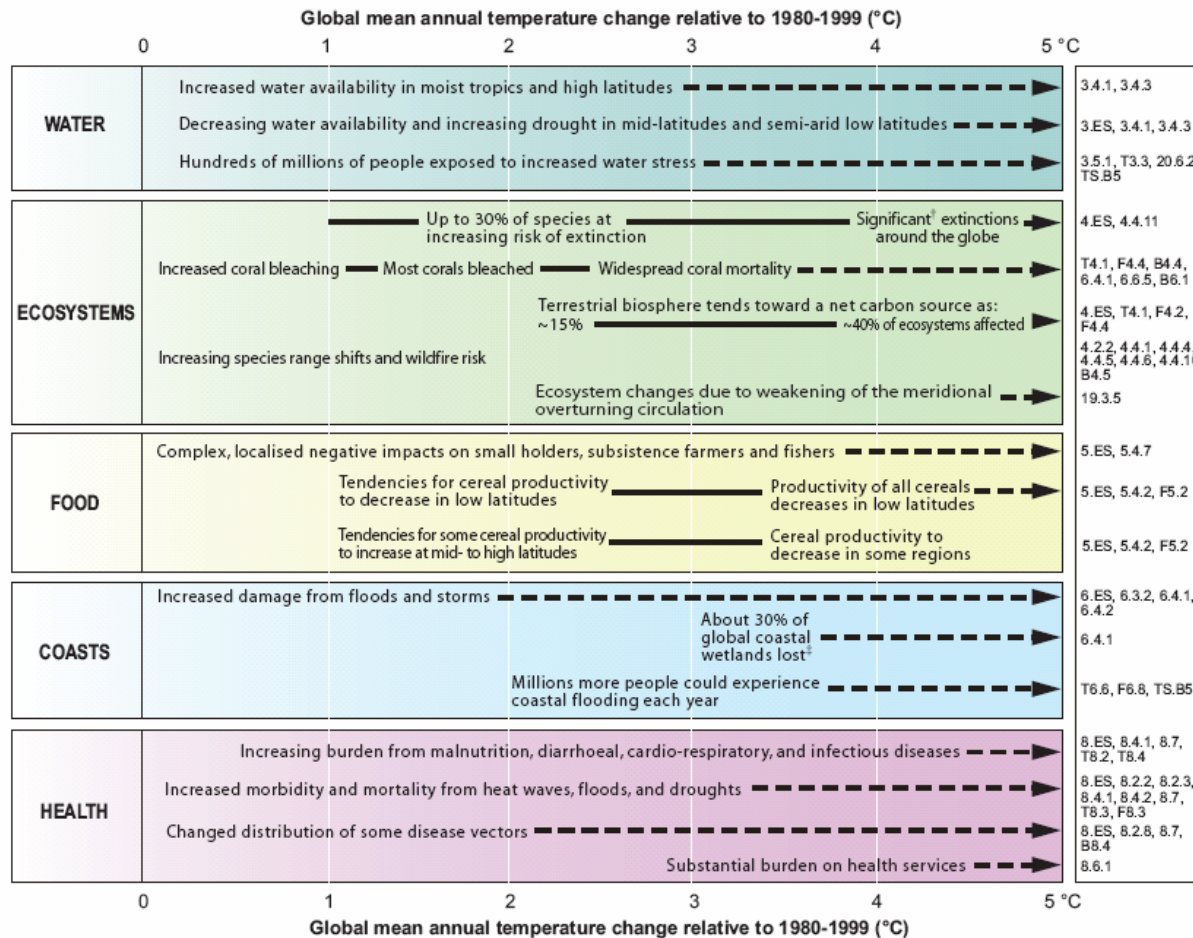
IPCC

19th September, 2007

Categories of climate change impacts



Climate change impacts at increasing temperature



[†] Significant is defined here as more than 40%.

[‡] Based on average rate of sea level rise of 4.2 mm/year from 2000 to 2080.

Possible Impacts of Climate Change: Africa vs Europe

Africa:

“Projected reductions in yield in some countries could be as much as 50% by 2020, and crop net revenues could fall by as much as 90% by 2100”

“The population at risk of increased water stress is projected to be between 350-600 million by the 2050s”

“Between 25-40% of animal species in national parks in sub-Saharan Africa will become endangered”

Europe:

“Winter floods are likely to increase in maritime regions and flash floods increase throughout Europe”

“Crop productivity is likely to increase in northern Europe and decrease along the Mediterranean and in South-eastern Europe”

“Winter tourism in mountain regions is anticipated to face reduced snow cover”

Additional population at risk of hunger

Millions

	Scenario			
	A1	A2	B1	B2
Europe	0	0	0	0
North America	0	0	0	0
Australasia	0	0	0	0
Africa	157	200	23	89

Source: IPCC Working Group II Report. Figure 20.5

Major factors causing uncertainty in the social cost of carbon

Parameter	Importance	Nature of judgement needed
Climate sensitivity	100	Scientific
Pure time preference rate	66	Ethical
Valuation of non-economic impact	57	Ethical / Individual preference
Equity weighting between rich and poor: elasticity of marginal utility of income	50	Ethical
Climate change half-life	35	Scientific
Valuation of economic impact	32	Economics

Source: IPCC Working Group II Report. Figure 20.2