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Telecommunications and the Growth of Environmental Markets

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There is a rapidly growing need for technologies that will enable the monitoring of the world's natural resources and urban assets, and the managing of exposure to natural and man made risk. This need is driven by continued and geographically disproportionate urbanization, the inherent vulnerability to risk therein and the stress placed on natural resource capacity. For example, consider that about 74% of the world's population in developed countries lives in urban regions that are tectonically active, near the coast or within river floodplains. The growing need for environmental management technologies represents an enormous opportunity.

An innovative global financial infrastructure will be needed to effectively implement these technologies. The complexity of economic issues regarding the threat of global warming, climatological impact on the world's agricultural yields, and catastrophic losses incurred from natural events such as wind, hurricanes and floods, is witnessed in world markets. This infrastructure must include innovative instruments for risk transfer, capital pool formation and equity participation, and growth of credits and commodities trading. Entire sectors are being forced to rethink industrial operations and plant reinvestment, as in the case of controlling hydrocarbon emissions for example, or increasing crop yields, to financial management in property and casualty reinsurance. Market acceptance and growth of these financial instruments will depend critically on the routine gathering of data on underlying assets and liabilities and the distribution of relevant information to market makers worldwide.

The viability of global environmental and financial markets will depend on the continued growth of the telecommunications industry. There is a decisive need for a global network that provides real time information anywhere in the world that can be used, for example, by the insurance and financial communities to model and assess risk, and to mitigate and rapidly index losses; by the investment community to manage capital and assets; and by governments to monitor environmental degradation and provide credit certification. The demonstration, validation and commercial operation of technologies that target emerging environmental markets will require the participation of the industrial, investment and financial communities along with multidisciplinary science and engineering. Telecommunications will be a major player.

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