POVERTY ALLEVIATION
A ROLE FOR TECHNOLOGY AND INFRASTRUCTURE?

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Speech

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Thank you, President Prodi. Thank you, Minister Gentiloni. Good morning to my friends Alessandro Ovi, and ladies and gentlemen.

I don't want to intrude too much before the main events, but I thought I could speak briefly from a perspective that is important to MIT Technology Review and to MIT, which is the impact of climate change upon poverty alleviation. At four-hundred parts per million of carbon in the atmosphere, we have already seen 1.5° warming since pre-industrial times. Lord Stern, the British economist, predicts that we are almost certainly locked into 2° warming by the end of the century. And if we continue with business as usual, extracting all the fossil fuels that are in reserve, we are looking at as much as 4°/6° warming. So already at 1.5° warming we have seen three times as many extreme weather events, defined as droughts and the like. And at 3° of warming we would see fourteen times as many extreme weather events. And at 4°/6° of warming, well actually we don't know – we don't know what would happen.

Climate change and extreme weather events hit the very poorest, the most marginal populations in the world, the hardest. The herder who loses one or two cows to famine and to drought may feel little choice but to sell the rest of his livestock at very low prices: the only prices he can get to feed his family. And the family may survive the crisis, but they will have lost productive-economic assets they relied upon. Assets that would pay for the children to attend school and were helping the family move out of poverty. The children lose the advantage of an education and the herder has lost the economic base to build from and it becomes increasingly unlikely that he can increase his income. Escaping the poverty trap becomes almost impossible and the effects can last for generations.

A recent study, over 25 years, of how salts in the Indian province of Andhra Pradesh found that 14% of the households were able to escape poverty, while 12% became impoverished. And of those who did slide into poverty, 44% cited extreme weather events as the main cause.

Now, technology has essentially created the problem of climate change, but technology can also help. And that's because while a variety of policy prescriptions have been proposed, they are all very expensive both politically and in terms of their absolute economic cost. For instance, economists often talk about placing some kind of price on carbon emissions, capturing what we call the "negative externality". But it's unclear how much carbon would have to be captured and at what price, to make a real difference. Economists have also proposed ending or phasing out subsidies to fossil fuels. At the moment the world spends around $550-billion a year on fossil fuel subsidies.

Technology can essentially reduce the cost of these difficult policy prescriptions, even if the hard decisions remain. So, for instance in Africa, rather than investing in expensive fossil fuels, we can begin to stand up small, cheaper solar micro-grids. Or a brand new technology called CRISPR-Cas9, which allows geneticists to edit the individual nucleotides of plants, can create new cultivars that can withstand drought or blight.

I think over the next day we will hear from a variety of speakers about the different ways in which technology can give us more runway because it's not just that climate change is going to effect the existing populations. We have a very short space of time in which to draw the bottom billion of the world's population outside of absolute poverty. I should declare that MIT has an immediate interest in all this, which I would like to announce today. October 5th through 8th, MIT will begin a new event – an event like the World Economic Forum – on the MIT campus called Solve. And I invite all of you to join. Solve is a great convening. Solve will invite folks like the people in this room and people from all over the world to come to MIT to debate what the best policy and technological prescriptions are.

It's a curious fact that in many cases we know, more or less, what the technologies we want are that might lift the bottom billion out of poverty. We broadly know the technology prescriptions and yet for a variety of reasons we do not make progress. Sometimes that's because there might be a little missing piece of technology which needs to be funded. Sometimes it could be bad policy. Sometimes it might be insufficient social support. But MIT plans to make a difference and I invite you all to join me at MIT, beginning on October 5th. Thank you very much.