

Innovative preventive measures are needed

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CLIMATE change mesmerises public opinion. More than 90% of Australians believe climate change is already occurring due to human action, and are concerned about its consequences. Scientists are uncertain about global weather trends, but the risk of climate change is real, and potentially catastrophic.

The risks include melting polar caps and a rising sea level, potentially obliterating nations such as the Maldives and Bangladesh; desertification with huge agricultural impact in Australia and Africa; extinction of coral reefs and plankton that are the basis of the world's food pyramid, and frequent droughts, fires, storms and cyclones.

This year, the Organisation for Economic Co-operation and Development estimated the economic damage that climate change could cause to major cities, starting from Miami with \$US3.7 trillion (\$A3.87 trillion) in real estate losses, and Shanghai with \$US2.3 trillion. Alaska is already sinking as its permafrost soil is melting, and all its towns are being relocated at a cost of \$US140,000 per person.

Public policy must find preventive measures. It is like insuring a house against fire. We are not sure it will happen, but it is prudent to insure against such a loss.

Prudence indicates we should be willing to pay 1-2% of the world's gross domestic product to decrease the carbon dioxide emissions that industrial society has caused in the past 60 years — about 25-30 gigatonnes a year. There is general agreement about the fairness of such an insurance "premium", and that 1-2% of the world's GDP would be reasonable to avert the worst scenarios of climate change.

My proposal is to extend the reach of the Kyoto Protocol after 2012, the first global agreement that limits the world's carbon emissions, in two ways:

- Create financial mechanisms that will bring the developing nations to limit emissions appropriately.
- Introduce existing technologies that capture and store carbon in a way that decreases carbon in the atmosphere and are thus called "negative carbon". The protocol became international law in 2005, and we need to extend it beyond its 2012 limit.

Today the Kyoto Protocol does not provide emission limits for developing nations, which will become the world's largest emitters.

The most prominent feature of the Kyoto Protocol is its "carbon market" that I introduced and wrote into the protocol, which trades now \$US50 billion a year and could become the world's largest commodity market.