

## **Australian Scientist John Harrison to Announce Profitable Solution to Global Warming at Indian UKIERI Concrete Conference**

*The Indian concrete industry can take a world lead in reducing carbon emissions by capturing CO<sub>2</sub> to make synthetic carbonate aggregate. The sequestration potential and value of associated carbon credits are enormous. Indian cement production for 2012 was approximately 250 million tonnes and growth rate are high with estimates varying in the range 7 – 13%. For every tonne of cement used approximately 8 tonne of aggregate is required making the total sequestration possible around 1.7 billion tonnes without including the reduction in emissions as a result of point source carbon capture. At 350 Rupee per tonne of CO<sub>2</sub> this equates to over 500 billion Rupees, a figure that will rise rapidly as European prosperity returns.*

February 28, 2013 (FPRC) -- John Harrison, the managing director of TecEco Pty. Ltd, and the inventor of carbonating magnesium cements and the concept of a carbonate build environment to solve global warming will be keynoting Conference 3 on Thursday 7 March 2013 at the coming UKIERI conference at the Dr B R Ambedkar National Institute of Technology Jalandhar, India to be held between the 5th to 8th Mar 2013.

Mr Harrison will announce at the conference a new process for profitably manufacturing synthetic carbonate aggregate utilising wastes such as bitterns from salt manufacture, magnesium rich oil process water and point sources of CO<sub>2</sub> such as from cement or lime manufacture. Mr Harrison says 'the potential to solve the problem of climate change of the new technology is huge because of the volumes involved and because it is easy to profitably implement on a widespread and massive scale. Indian and other governments only need to insist on a minimum content of concrete containing synthetic carbonate aggregate before issuing building approvals. It is good for the concrete industry as well because the amount of concrete used would increase.'

The climate and composition of the atmosphere has been controlled by life for at least 2.5 billion years and probably longer. For thousands of years humans have had a strong influence and since the industrial revolution we have been rapidly altering the atmosphere by causing CO<sub>2</sub> levels to rise and oxygen levels to fall. Most scientists agree that the rise in CO<sub>2</sub> levels is responsible for the climate change caused by a gradual overall global warming.

Although significant sequestration could be achieved with capture of CO<sub>2</sub> from cement and lime kilns the problem which has not been solved until now has been what to do with the massive quantities of the gas. To meet this challenge Mr Harrison, the managing director of TecEco Pty. Ltd. has developed Gaia Engineering that will sequester huge amounts of CO<sub>2</sub> as synthetic carbonate. TecEco his company plan to use it with or without other wastes incorporated to manufacture aggregate or as feedstock for making cheap reactive magnesia using their new kiln. The company's carbonating cements announced by New Scientist magazine in July 2002 utilise reactive magnesia and would also be produced and used in the process.

TecEco Pty. Ltd. is a much plagiarized and copied 'green' start-up company founded in in 1999 by

Mr Harrison who is a scientist, economist and accountant to research, develop and deploy sustainable technologies. The company has successfully developed its reactive magnesia – Portland cement blends and is now raising capital to develop its new Gaia Engineering process. TecEco Gaia Engineering technologies for making synthetic carbonate aggregate and cements are potentially very profitable and unlike other options for cheaply solving the global warming problem being explored there are no legacies for future generations to deal with. The process is profitable not just because of the carbon credits involved but because the output will be sold in an insatiable and very large market for cheaper, better building materials.

The rapid deployment of Gaia Engineering technologies will avoid environmental catastrophe and help revitalise the global economy. For corporates and financiers there is the opportunity to make money. For governments there is the opportunity to cheaply solve the global warming problem without negative economic impacts or long term legacies.

The company is manufacturing small scale plant in containers. Two are required for a working implementation, one for the continuous capture of CO<sub>2</sub> and the other for the production of reactive magnesia using a new kiln design developed by Mr Harrison. Scaling is achieved by repetition.

Mr Harrison said that he chose to announce the technology in India because the country was now the second largest cement manufacturer in the world and had a dynamic growing economy as well as good cultural and religious values in relation to the environment.

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### **Keywords**

[Sequestration](#)

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