Innovation to resolve climate change

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Climate change could be resolved by modifying the global agricultural system to absorb 10 billion tonnes of atmospheric carbon annually. The technology for achieving this has been under development for some thirty five years.

Plants are already absorbing thirty times man made emissions but also returning a similar amount by the decomposition of organic waste. Decomposing vegetation is the single largest source of atmospheric carbon. It only requires some 3% of this flow from decomposing carbon to be diverted and embedded into agricultural soils to resolve climate change.

This can be achieved by a two stage process. 'Harvesting' land is dedicated to the capture of organic material. Low productivity land would be converted to fast growing trees which could be pruned, forest and urban organic waste can supply the input organic material. Some farm crops such as sugar cane, bananas, fruit trees etc already produce significant volumes of organic material. This is transported to 'embedding' land, typically existing cropping land, where the microbiology has been modified to embed the carbon into the soil, specifically largely replacing bacterial decomposition by mycorrhizal fungi by initial inoculation followed by maintaining moisture and oxygen levels.

Ten billion tonnes would require an area of some two million square kilometers for harvesting and one million for embedding. This large land area is available in the rapidly developing countries. China could act as the lead country in establishing the process.

There are significant secondary benefits, food productivity and reliability is increased, water and nutrients are used more effectively, and farmers would receive an additional income stream, (helping to remove the conflict between developed and developing nations.)

The next critical step is to develop a simple method of quantifying the carbon absorbed to enable carbon trading. This research can be undertaken by many scientific institutions for example the farmland irrigated research institute in XinXiang China has agreed to undertake this formal scientific work, however funding is needed.

Despite all those years since the Rio and Kyoto summits atmospheric carbon is increasing at an even faster rate. Focusing on small scale or financial schemes, such as wind mills and solar power will not resolve climate change we need a grand scheme capable of absorbing large amounts of carbon. We need advocates who will take this grand scheme to the United Nations conference in South Africa this year.

More information is available on my web www.waterright.com.au

If you think you can help or would like to be involved or could suggest another person who may like to be involved with this project please contact me.

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