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## SUSTAINABLE DEVELOPMENT, SUSTAINABILITY, CLIMATE CHANGE AND BEYOND†

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### 1. Objectives of this presentation

- Get a good understanding of the relationship between natural resources, our society and natural ecosystems.
- Learn how people perceive differently the environment and natural resources.
- What is Sustainable Development and ‘Sustainability’?
- Delve into the real message of fatalistic statements and how they operate.

### 2. Our Economic system and the Environment: Some current facts

- 70% of the overall energy utilised by USA comes from oil or gas.
- UK had 30 million cars in 2004.
- Some fisheries are getting exhausted or significantly diminished.
- In some areas, water tables are decreasing –North of India and China.
- Mexico City, Industrial China and Santiago of Chile have very bad air quality.
- The global average of people travelling in cities p/car is 1.2 .
- Only 5% of the power utilised to move a car is the power that moves the driver.
- A good number of species are currently exposed to extinction: E.g., Tigers, Bilby, Great White Sharks, and the list can continue.
- Australia leads the world, together with the USA in emissions p/capita.
- Australia relies more than 80% in coal burning to produce energy.

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\* While Warrane College accepts responsibility for publishing these papers, the opinions expressed in these papers are those of the authors. Enquiries should be directed to the Master, Warrane College, UNSW, PO Box 123, Kensington, NSW 1465, Australia.

† An after dinner address at Warrane College on 5 August 2009.

### 3. Energy efficiency p/US\$ of GDP: Climatic alert?

- Extreme and more often Climatic phenomena such as the New Orleans (2005) and Honduras (1998) hurricanes; or like the strong winds that devastated woods and buildings in France (1999); and finally, like the year 2007 very uncommon extreme floods in UK and Central Europe.
- Are we; perhaps; witnessing an alteration of the global natural ecosystem?

### 4. Is this image realistic? (Spit Bridge) 2006 vs. 2100): Natural Climate Change?

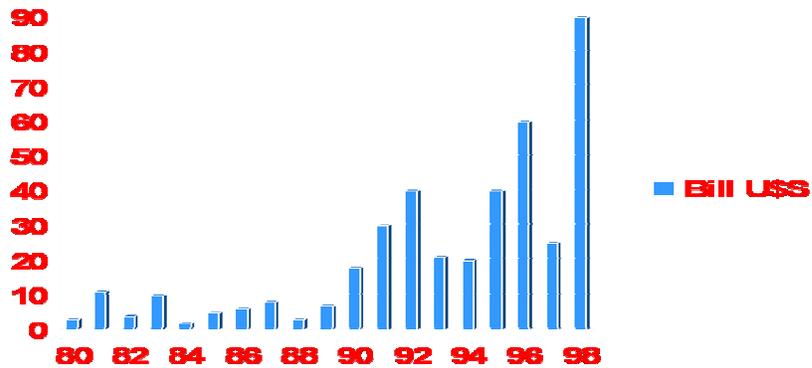


- 15 millions years before now, ice did not exist at the Poles.
- 18.000 years before Scotland was covered by a 5 Km thick layer of ice and the Oceans level was 130 m lower.
- Data taken from ice shelves demonstrate that in one decade our planet is capable to change around 20°C of temperature.
- Around 10,000 years ago climate got stabilised, as it is now.
- Vikings occupied and cultivated barley in Greenland during the Middle Ages. Not randomly the name 'Greenland'.
- Between the years 1430 and 1850 the Planet passed through a 'little ice age'; that only affected some regions.
- Temperature has risen around 0.6°C the last 100 years.
- In Greenland, temperature has risen 1.5°C the last 30 years; some people have restarted with potato and barley crops.

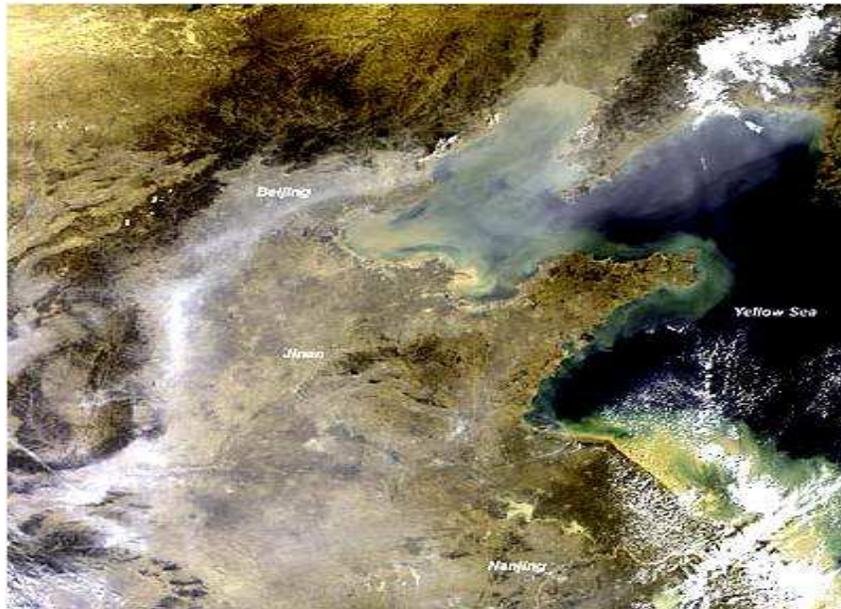
### 5. Financial losses caused by Climatic events, Munich Re (1980 to 98): Externalities of the Economy – (EoE)

- 'An EoE occurs when the activities of one person/institution affects consumption and/or production rates de of other person and/or institution; and these effects are not fully priced or valued by the market'.
- Real costs of transport in the UK -1993- Different perception of Natural Resources and the Environmental issues
- *Water*: The perception of this resource is completely different in areas where is abundant compared with areas with water scarcity. Australia, Saudi Arabia vs. Canada or France.

- *Car usage*: In cultures such as the Australian and the North American; to have a car is almost part of human nature. In other countries such as Netherlands and India, it is something secondary.



**Satellite photo (Regional Pollution from fossil fuel usage -China)**



- *Australian Aborigines* never had a word to describe ‘waste’. They utilised everything and never wasted resources.
- *Nuclear Energy*: France, a tiny territory for Australian patterns, depends more than 80% of its energy on nuclear power. In Australia, nuclear energy is almost a sin against nature.
- *Whaling* is perfectly accepted in cultures such as the Japanese or some Nordic countries; whereas in the rest of the world it looks like a sin against nature.

**6. Our image: Nuclear energy -truth and myths-**

- Raid over Dresden (WWII), France, The Sun, Bikini Atol, Our body, Nuclear medicine and Climate Change triggered mainly by fossil fuel overuse (Truth).

- Chernobyl, Hiroshima, Nagasaki, Toikamura, Three Mile Island, Death, Mutation, Terrorism and Radiation (Myths).

### **7. But, what makes this so difficult?**

- Very high levels of uncertainty
- The need for a multidisciplinary approach for decision making
- We all participate in some way; it is basically a global and utterly multistakeholder & culturally diverse topic
- The Public arena is, pessimistic, scared and misled

### **8. Let's define Sustainable Development...!!!!**

- Intra-generational Equity
- Inter-generational Equity
- Conservation of Biodiversity
- Precautionary Principle
- 'Full price' Principle
- Connectivity
- The Information Principle
- Multidisciplinary Decision-Making

### **9. Some thoughts (not mine)**

- '...the best way to take advantage of their ignorance and to exploit their irrationality for the pecuniary benefit.....capitalism is dead, consumerism is king' Huxley, 1959 (Brave New World Revisited).
- 'Planet Earth has all the necessary resources to satisfy all human needs; but not human greed'. Mahatma Ghandi.
- 'All great truths start as a blasphemy'. George Bernard Shaw.
- 'Pollution it is not, as we are so often told, a product of moral turpitude. It is an inevitable consequence of work' (Lovelock, 1979)

### **10. Conclusion**

- Whatever you waste today will have an impact in some way and somewhere on other people;
- Our society is still depending on the natural ecosystem;
- All stages of the Economic cycle are important: raw materials extraction, production, consumption and waste management; and
- Enhance Environmental awareness, wiser use of resources, improve Economic efficiency and diversify sources of resources lead to ensure a stronger Economy and long term civilisation.

### **References**

- Allan, S. *et al.* 2000. *Environmental Risks and the Media*: London & New York: Routledge.
- Ayres, R. 1998. *Turning Point*: London: Earthscan.
- Hill, M. 2004. *Understanding Environmental Pollution*: Cambridge: Cambridge University Press.
- Huxley, A. 1959. *Brave New World Revisited*: London: Chatto & Windus.
- Lovelock, J.E. 1979. *Gaia A new look at life on Earth*: Oxford: Oxford University Press.
- Smith, M *et al.* 2005. *Greening the Build Environment*: London: Earthscan.
- Tietenberg, T. 2004. *Environmental Economics & Policy:4<sup>th</sup> Edition*. Reading, MA: Pearson Addison Wesley.