

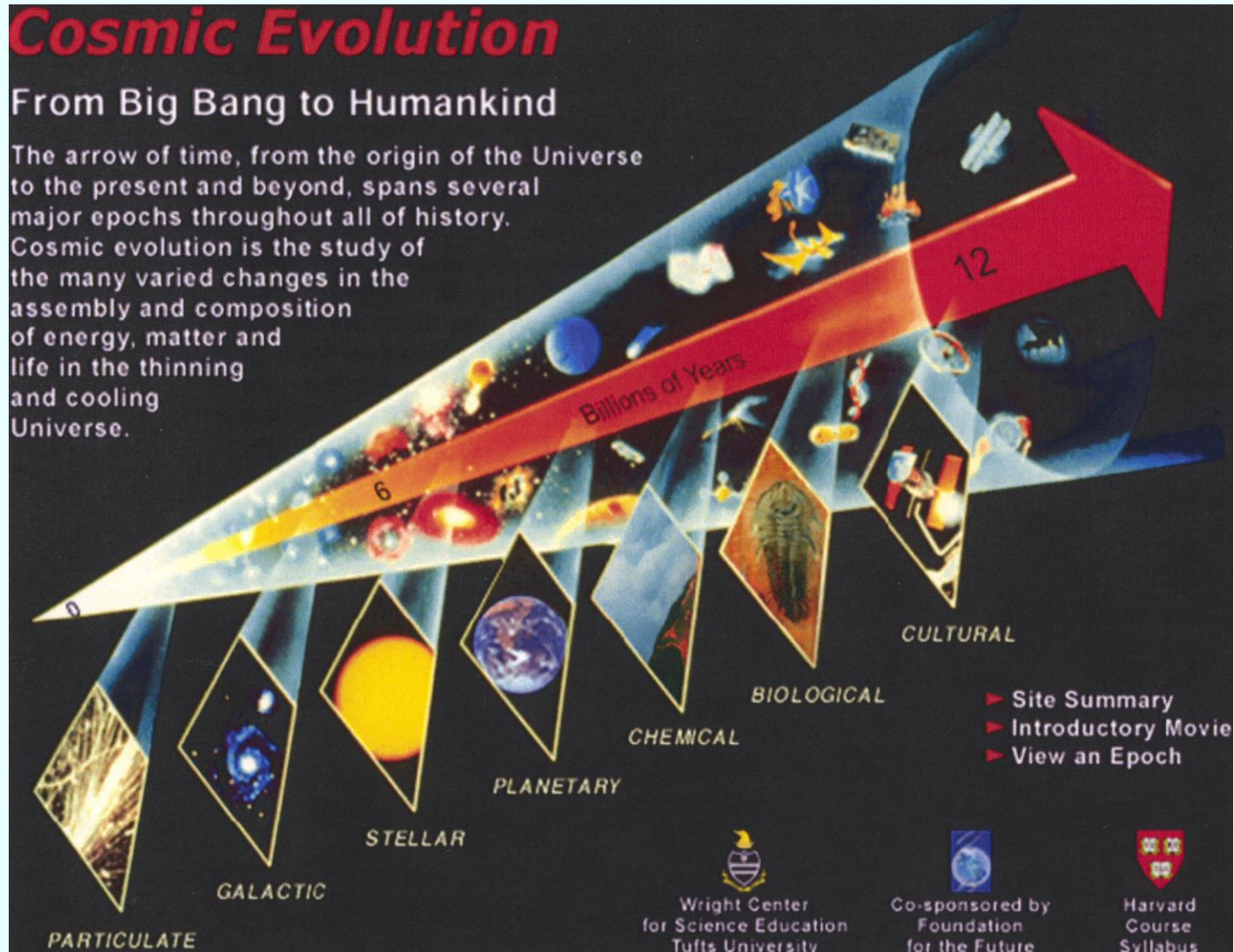
# Foundation For the Future

Bellevue, Washington USA

## Cosmic Evolution

### From Big Bang to Humankind

The arrow of time, from the origin of the Universe to the present and beyond, spans several major epochs throughout all of history. Cosmic evolution is the study of the many varied changes in the assembly and composition of energy, matter and life in the thinning and cooling Universe.



  
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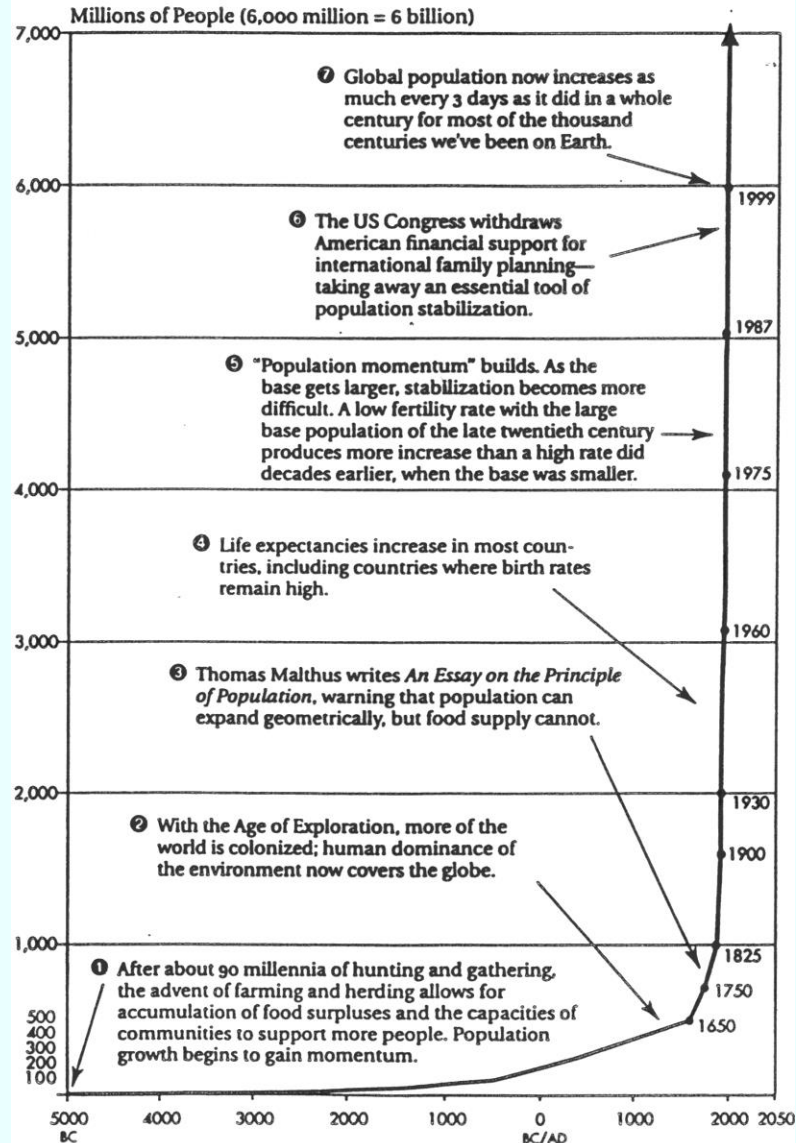
  
Harvard  
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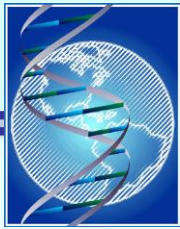


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## THE POPULATION SPIKE



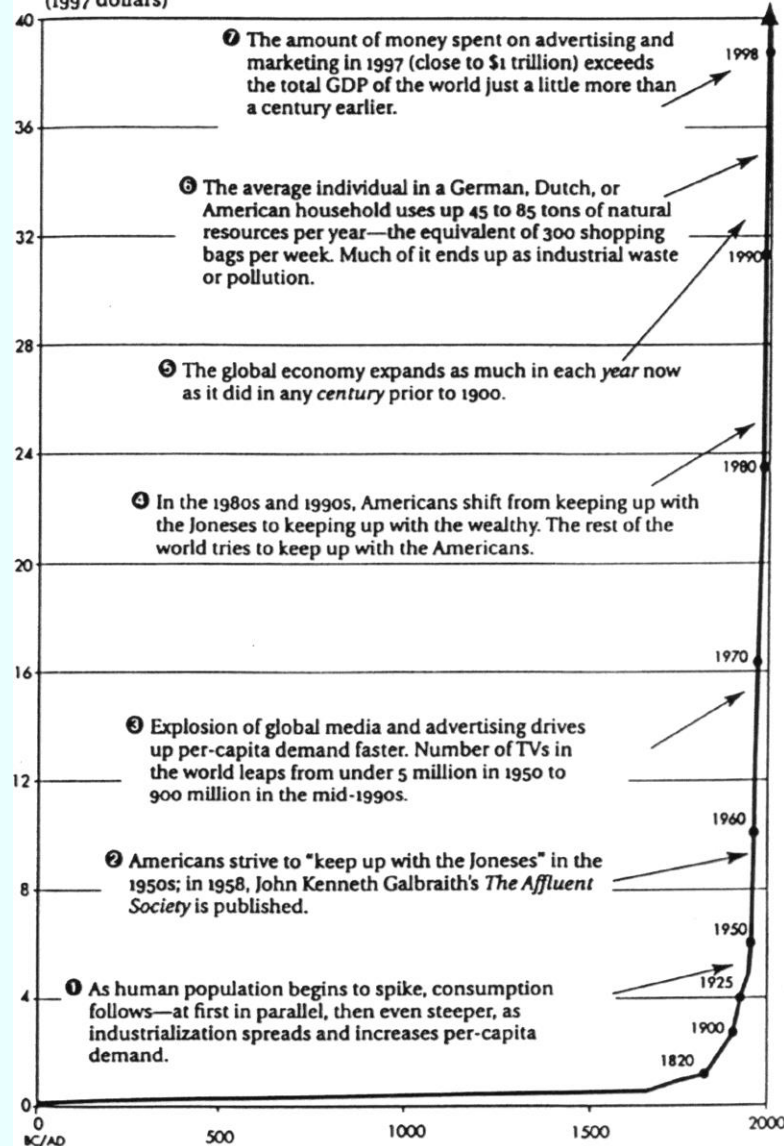


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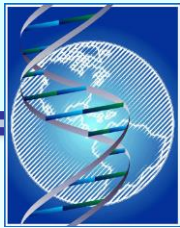
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## THE CONSUMPTION SPIKE

Trillions of Dollars of Gross World Product or Purchasing Equivalent  
(1997 dollars)



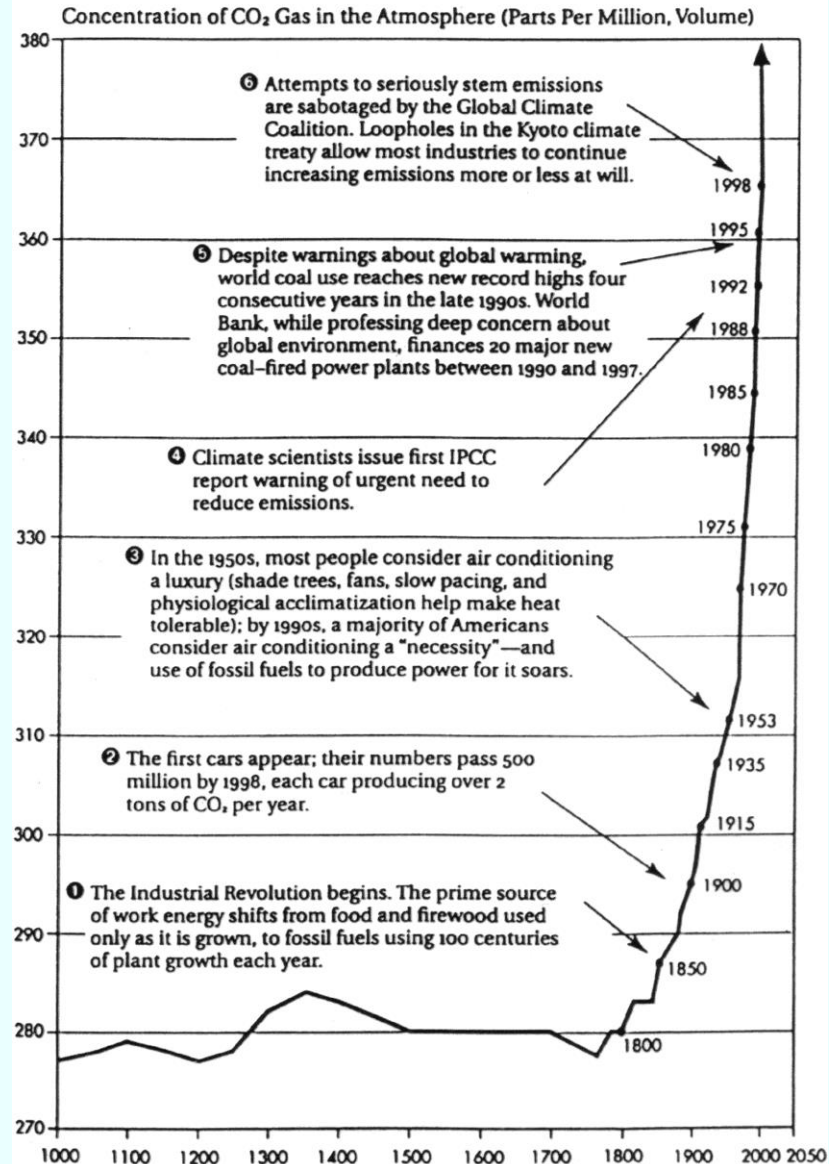


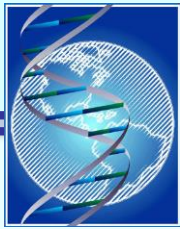


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## THE CARBON DIOXIDE SPIKE

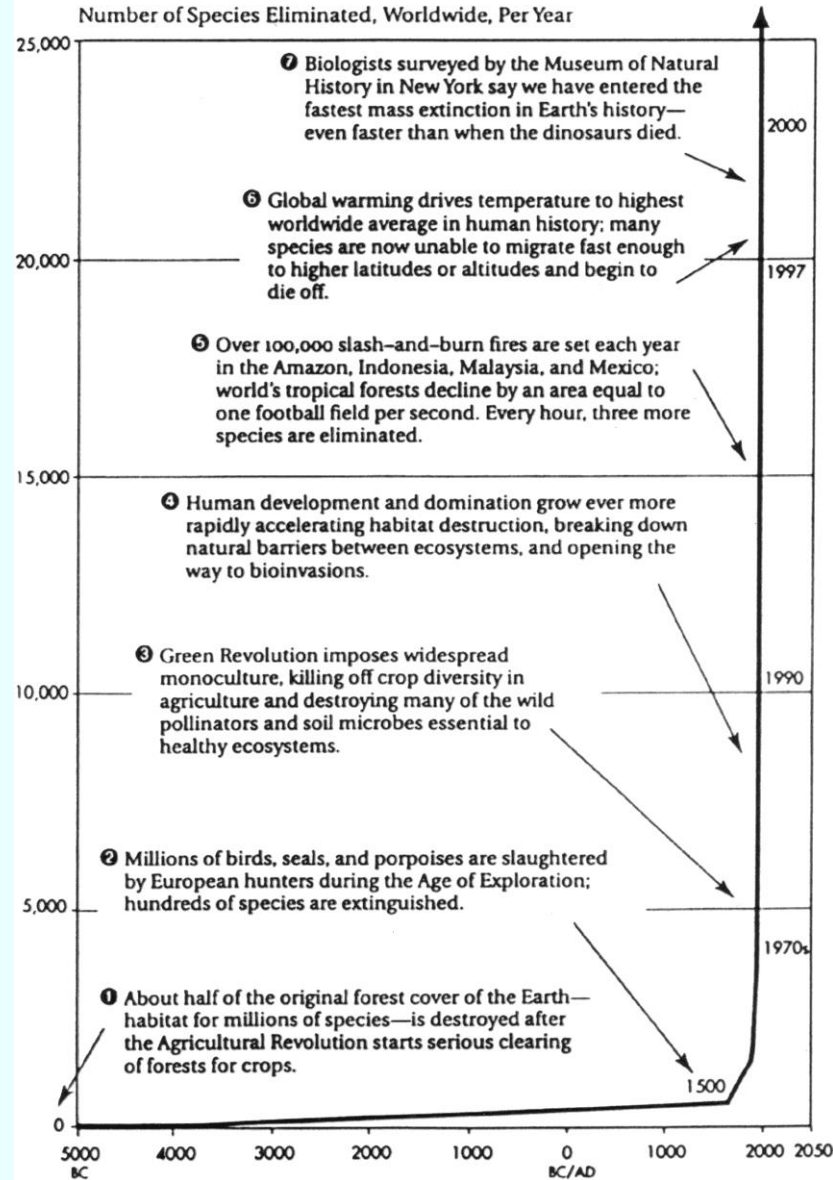


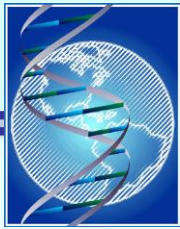


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## THE EXTINCTION SPIKE





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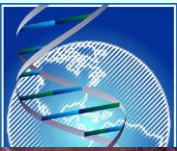
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# Our Changing Planet

The View From Space

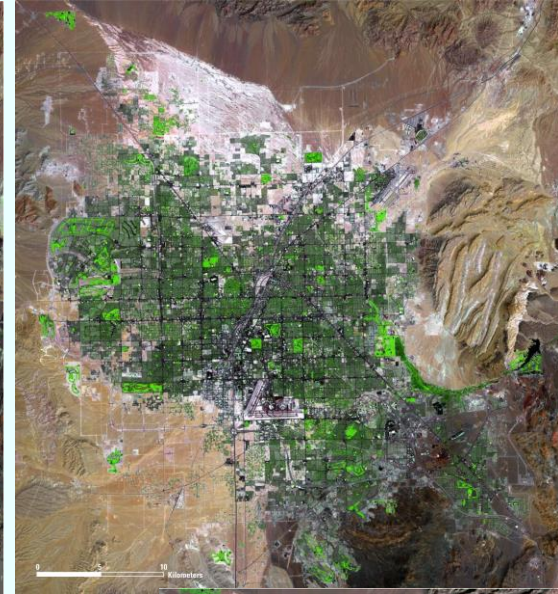
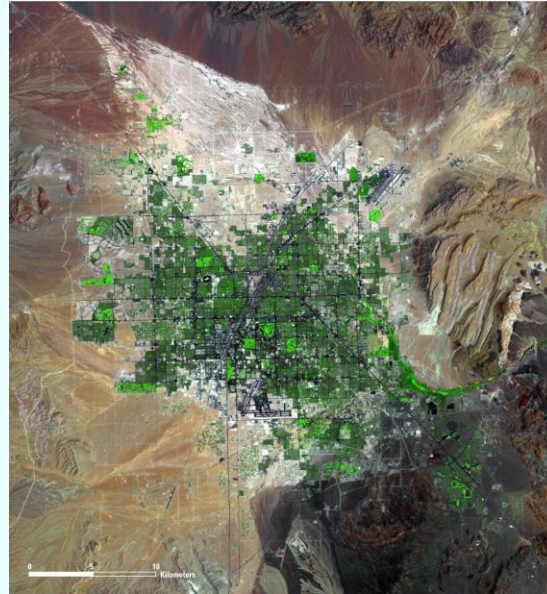






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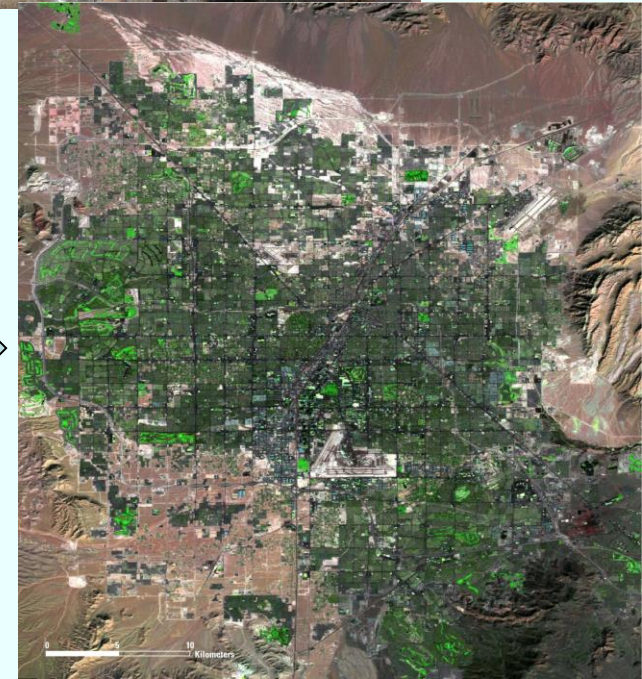


**May 1973 pop. 358,000**

**June 1991 pop. 937,000**

**May 2000 pop. 1,563,000**

**Feb 2006 pop. 2,013,000**



**Las Vegas Growth Over 33 Years**





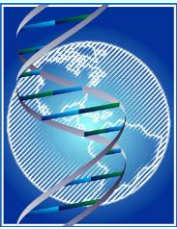
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# Bolivian Deforestation and Farming 1975 and 2000





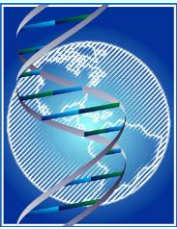


## Argentina Deforestation and Urbanization

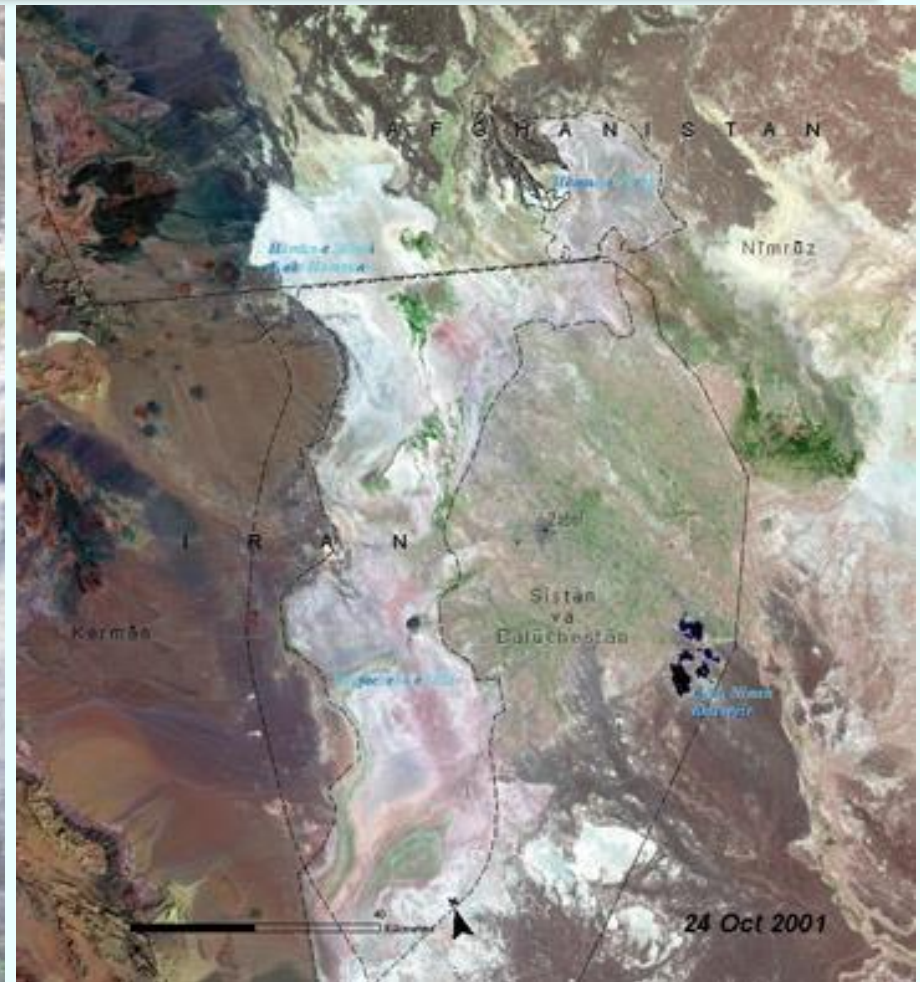
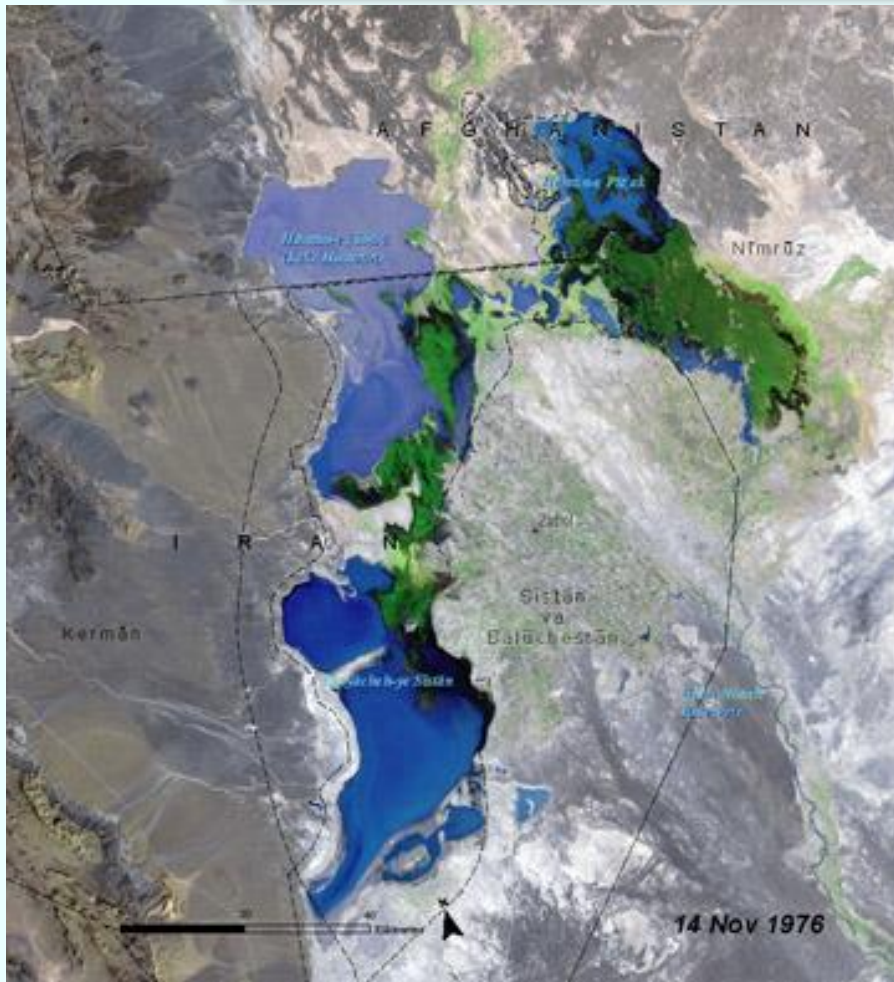


**30 Year Change - Space Images from 1973 and 2003**



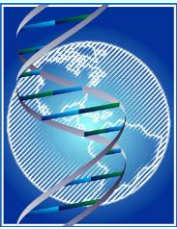


# Disappearance of Lake Hamoun, Iran/Afghanistan



**25 Years – 1976 and 2001**



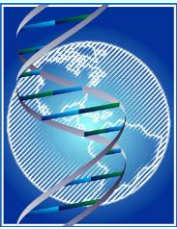


## Population Growth in Dhaka, Bangladesh



**From 1977 to 2000, Dhaka grew from 2.5 to 10.0 million  
By 2015 Dhaka will have a population of 21.5 million**



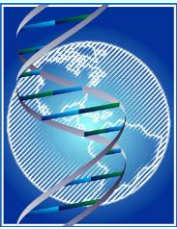


## Urban Growth of Santiago, Chile

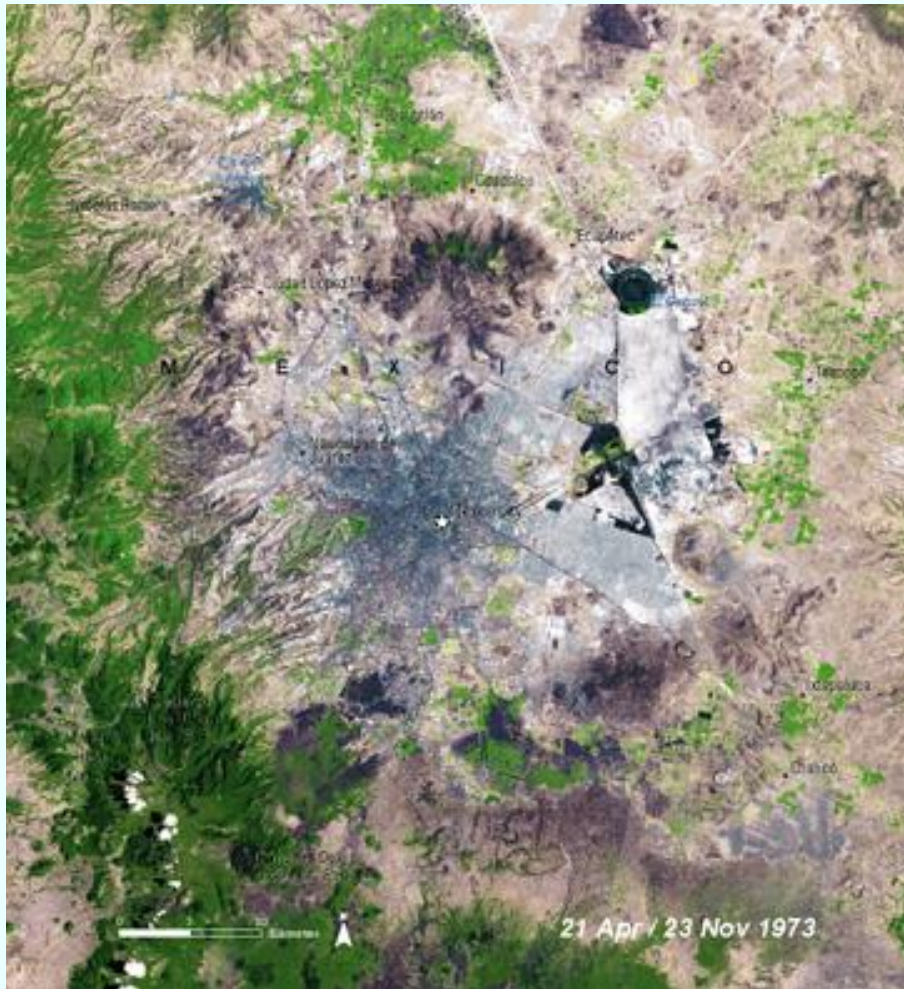


**25 Years – 1975 to 2000**





## Urban Growth of Mexico City



**6 million in 1973; 20 million in 2007**



SCIENCE & NATURE

## Looking Back on the Limits of Growth

Forty years after the release of the groundbreaking study, were the concerns about overpopulation and the environment correct?

By Mark Strauss

Smithsonian magazine, April 2012, [Subscribe](#)

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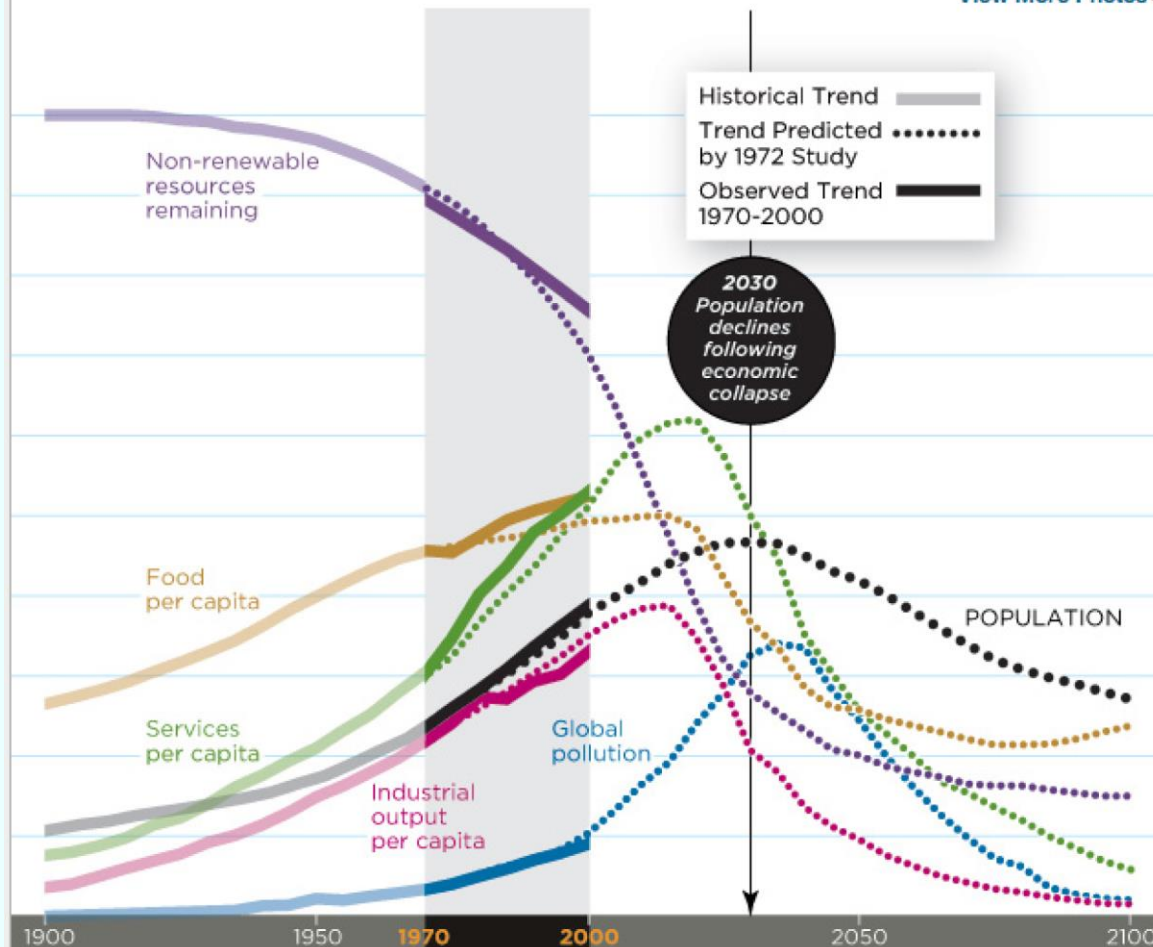
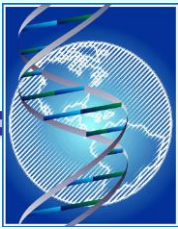


Chart Sources: Meadows, D.H., Meadows, D.L., Randers, J. and Behrens III, W.W. (1972)

Linda Eckstein



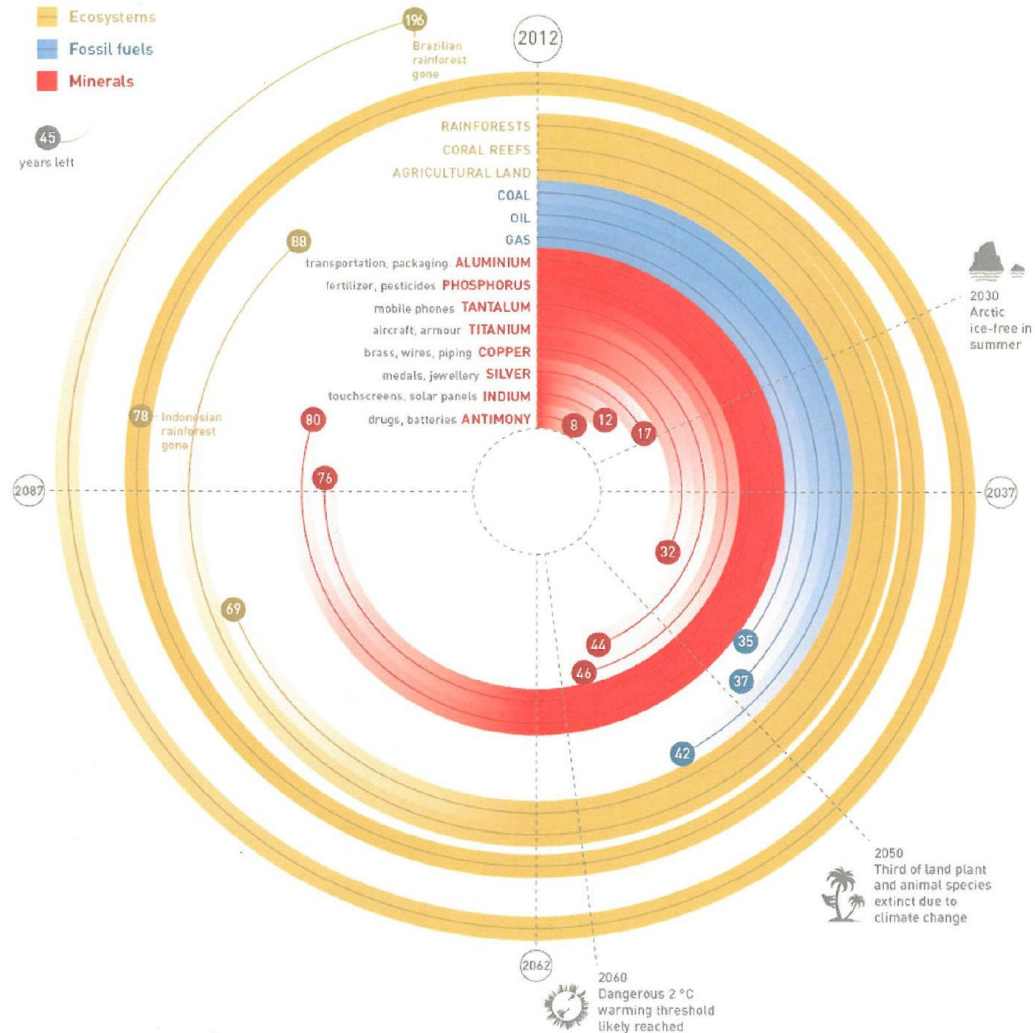


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## Stock Check

Estimated remaining world supplies of non-renewable resources



Sources: UN, TEEB, US Geological Survey, BP, Worm et al (2006), London Metal Exchange. Figures are worldwide. Living natural resources dates are worst-case based on published estimates. Minerals and fossil fuel data based on known reserves currently economical to extract, assuming fixed % increase in usage per year. No provision made for changes in demand caused by new technologies, discoveries of new reserves or market forces. Agricultural land means land suitable for rainfed cultivation net of other land usage. Thirty-year historic agricultural expansion rates are applied.