

## **THE 'PATRICIA CLARKE' PUBLIC LECTURE HARD CHOICES FOR TOMORROW'S WORLD**

**Professor Lord May of Oxford OM. FRS.**

The Society held its 4<sup>th</sup> Public Lecture at the Sundial Theatre, Cirencester on Wednesday 31<sup>st</sup> January before a capacity audience.

The Chairman said the lecture had been named the Patricia Clarke lecture to honour the Society's most scientifically distinguished member, Professor Patricia Clarke FRS. He was delighted to introduce Pat to the audience.

Professor Lord May began by looking at some of the major issues facing the world. He gave details of human ecological footprints, population growth and ecological sustainability, citing problems of disease, climate change, availability of food and water and loss of biodiversity. He examined population growth over the last 400 years and believed the planet had probably reached a tipping point during the last decade of the 20<sup>th</sup> century.

The human race had changed from hunter-gatherers via agriculture to industrialisation. The effects of urban diseases, such as smallpox and measles, had checked this process during the 17th and 18th centuries. Later, science had brought better health and the world's population had increased from 1 billion in 1830 to a forecast 9 billion by 2010. Many people had died from infectious diseases often related to animals e.g. smallpox. Today we are faced with the problems of HIV/Aids and Avian Flu.

Professor May showed that Sub-Saharan Africa would be a major cause of world population growth. A worry was the enormous growth of urban conurbations, particularly in the developing world. The proportion of the population living in cities has increased from 10% in 1700 to a projected 67% by 2010.

Over the life of the Planet there have been marked fluctuations in average temperature, but in the last 175 years of industrialisation, atmospheric carbon dioxide has risen from 20ppm to a projected figure of over 400ppm by 2050. This is likely to produce an average temperature increase of at least 3 degrees Centigrade by the end of the century. Prof. May believed we can only accommodate this effect by making major changes in lifestyles, worldwide, especially with regard to the burning of fossil fuels.

A growing problem, which would worsen because of global warming, is that of water shortages. Already 29 countries have a water deficit.

The World will have to adapt to a different diet and there would need to be more global sharing of resources, but above all we need a cultural change.

Answering questions, Lord May said that the most serious problems were population growth and global warming but he believed the human race would survive.

*Given on the 31<sup>st</sup> January 2007 at the Sundial Theatre, Cirencester College.*