JOHN REX BEDDINGTON DCL

Mr Chancellor,

Perched on the foredeck of an ocean-going trawler, a wet and bedraggled land-lubber samples the day's catch. The vessel is deep in the South Atlantic Ocean, thousands of miles from home. It is perhaps not surprising that his interests are not primarily gastronomic at this point, as the vessel lurches on the ocean swell. He focuses squarely on the matter in hand – what is the proportion of young to old squid, and what are the implications for the next season's stock? This is the scientific background of Professor Sir John Beddington - a far cry from the dry corridors of Whitehall, where, since 2008 he has been Chief Scientific Advisor to Her Majesty's Government. As Chief Scientist, he advises the Prime Minister and the Cabinet on a weekly basis, and he has guided the nation through several crises – from swine flu to volcanic ash – and, most recently, those caught up in the Fukushima nuclear incident. Sir John is a highly-respected scientist, who, throughout his career, has been at the vanguard of the fight for sustainability – and long before this became a fashionable agenda.

Brought up in a small mining village in the Forest of Dean, John Beddington was the first in his family to study at university. Having won a scholarship to Monmouth School, his undergraduate studies were at the London School of Economics, followed by an MSc

in 1968. He then went to the University of Edinburgh to study the emerging discipline of Mathematical Ecology, and was awarded his PhD in Applied Population Biology in 1973. He developed his academic career as a Lecturer at the University of York in the Department of Population Biology. Already a Government Advisor, he took a Readership in Applied Population Biology at Imperial College, London in 1984, and was promoted to a personal chair some four years later. During this period he consolidated and expanded his world-leading research group.

His main research interests include the application of biological and economic analysis to problems of Natural Resource Management – a diverse topic including fisheries, pest control, wildlife management, the control of disease, agriculture and water management. His early work focused on the harvesting of large mammals, initially on red deer in Scotland, but later on Sei, Fin and Sperm Whales. A second area involved the interaction between prey, predator and parasite in arthropod populations, and particularly how to harness natural enemies to control insect pests. Thirdly, he advanced our understanding of the dynamic stability of harvested species, and the effects of culling on the whole ecosystem. With Lord May, he was the first to propose that harvesting would lead to population instability, published in the journal *Science*; and a few years later he provided the decisive evidence supporting his claims in the journal *Nature*. He went on to develop these ideas further, studying the interaction between species harvested at different levels of the ecosystem, including krill, seals, birds and whales.

Shortly after his move to Imperial College, he was asked by the Foreign Office to advise them on the long-term conservation of fish stocks in the territorial waters off the Falkland Islands, principally focussing on two species of short-lived squid. He devised a plan that would allow the sale of licences to national and international fisheries, whilst maintaining sufficient marine stock to ensure regeneration the following season. This worked so well that he was awarded a contract to manage their fisheries long-term, providing a steady source of income for his research group that enabled him to continue his academic work in parallel. Through his ecological insight, the Falklands fisheries have moved from strength to strength, and now have an annual turnover in excess of £700 million. Sir John's models have subsequently been developed to serve different ocean ecosystems across the globe.

In those pre-email days, his team usually worked late into the night, sending reams of fax across the globe. Often they were forced to leave their desks abruptly, catch a flight to the Southern Hemisphere, and then monitor the haul to ensure fair-play. His staff remained fiercely loyal, and he tirelessly looked after their interests in return. All of his students and research associates remain life-long friends, maintaining regular contact despite moving on to maintain fisheries in all four corners of the globe.

John has always taken a keen personal interest in his staff. When he took over as Director of the Imperial College Centre for

Environmental Technology in 1994 he insisted on meeting all 60 PhD students, and getting to know their projects in detail. In this way he developed a deep understanding of air pollution, energy policy, environmental health and water management. His breadth of knowledge expanded yet further when he became Director of the Huxley School, where he was engaged in geophysics, environmental engineering and mineral resources. He duly became a 'sustainability polymath'.

But despite the extent of his portfolio, he has retained his eye for detail, and, in particular, for balancing the books. On one occasion he carefully cross-examined a senior finance officer at Imperial College who presented him with a huge payroll bill for his unit. Despite considerable deliberation by the accountants, he was the one that spotted that the total did not match the salary-lines – rather it was the sum of their eight figure personnel identification numbers. Sir John, our Registrar assures me that no such error could ever happen at Newcastle University.

Despite his fascination with science and keen eye for numbers, Sir John is a highly cultured man. Deals are generally done over a good lunch with fine wine, and he has the rather dangerous habit of attending fine art previews – followed by a series of deliveries that would be displayed at home or at work. His warm personality undoubtedly played a key role in negotiations over fishing quotas, which, at times, were rather heated. Given the stakes involved, it is

not surprising that he has had one or two dangerous close-shaves. In the middle of one series of negotiations, he returned to his locked hotel room to find a stash of gold Krugerrands waiting for him. Needless to say, they did not remain in his possession.

John Beddington's understanding of marine ecology stood him in good stead when he became involved in negotiating global whaling quotas through the Whaling Commission. His sharp wit and astute understanding of people enabled him to see the hardcore financial drivers veiled in pseudo-scientific arguments – often presented by domineering world superpowers. His negotiating skills, gently, but decisively, shaped the consensus opinion. To put it bluntly, Lord May makes the point that, if any one individual 'saved the whales', it was Sir John Beddington.

Mr Chancellor, presented the Heidelberg Award for Environmental Excellence, a Fellow of the Royal Society of London since 2001, Sir John's peers assure me that, ultimately, his career ambition is simply to be an excellent scientist. With a string of *Nature* and *Science* papers to his name, he has more than proven his worth, and it is fortunate for us that he is directly tackling the sustainability agenda. Awarded the Companion of the Order of St Michael and St George in 2004, and Knighted in the 2010 Birthday Honours, he holds widespread international respect, and has shown the determination to shape contentious national and international policy for the common good. Despite his busy schedule, he has also

strongly supported Newcastle University over the years, and, particularly, what is now our School of Marine Science and Technology. I therefore ask you to award him an honorary degree, honoris causa.

Citation by Professor Patrick Chinnery