

THERE'S A CAREER IN CARBON: ROGER CROFTS

MSC conference Crichton 15/09/10

1. What is low carbon all about?

- Dire warnings: Characterise the world: hydrocarbons less, GHGs more, population rising, emissions rising, water, disease food problems Collapse of society? OR it's all a scientific con: climate gate/IPCC mistakes etc
- New angle on sustainable development looking at the world, how we use earth's resources more effectively for human survival and well being without damaging the life chances for future generations.
- International through to local level and back

2. Requires multi-faceted approach combining research development demonstration and practical application

- Economics yes but especially new approaches: price for carbon? Market mechanisms, trading, offsetting, whole lifetime methodologies eg BSI Specification for carbon neutrality
- Technology yes foresight, development & implementation. Remember not just electricity or just energy but heat and transport technologies
- Environmental: cutting edge scientific research on causes and effects plus mitigation and adaptation
- Social: politics, policies local, national international; demography; life opportunities/lifestyles
- Behaviour: essential and neglected, understanding how humans in different groups act and react; communicating to everyone in ordinary language, influencing attitudes and changing behaviours
- Focussing on understanding, communicating, how to moderating effects of human activities on climate and on weather: amelioration and mitigation in practice

3. What are the career opportunities now?

- You have done the obvious: post graduate taught course in climate change and carbon management;
- Specific opportunities: changing the world through
 - (1) Improved decision making: better governance and leadership; new and improved politicians; more objectively based and well grounded in practice strategies/ policies
 - (2) engineering the low carbon world: planning, architecture, design and process engineering, transport modes and vehicles, all types buildings new and refurbished, smart technologies and exploitation of renewable resources,
 - (3) feeding the low carbon society: food production, soil fertility, animal nutrition, food miles reduction, health - eating behaviours and obesity,
 - (4) managing the natural environment: land and water
 - (5) educating and influencing people: all levels: do not forget importance of trades and service providers; greening the education process: teachers and students; improving health: green space
 - (6) scientific frontiers: cutting edge research through the Centres of Excellence being established by the Scottish Government
- What is the scale? Vast 10s thousands
- Skills needed: the well rounded citizen with common sense who can critically assess material, can draw conclusions, can influence others, can work collaboratively, can acquire knowledge and assimilate new material quickly and know how to use it; understands the basic science and the implications for the natural and human worlds; remember need to change attitudes and behaviour