3C-SEI Partnership Programme

Overview

3C – Combat Climate Change is a business leaders’ initiative endorsed by the top executives of close to 70 of the world’s largest corporations. Founded in 2007 by Lars Josefsson, at the time CEO of the Swedish energy company Vattenfall, the 3C group seeks to support the establishment of a global agreement on climate change and to mobilise companies and business leaders across the world to contribute knowledge, resources and leadership to this common goal.

In 2010, the 3C group and Stockholm Environment Institute (SEI) formed a partnership to produce cutting-edge, in-depth research at the intersection of climate policy and business. Throughout a two-year partnership programme, SEI will provide research within three thematic areas, targeting technology development, resource constraints, and financing of climate change mitigation. Within each of these areas described below, one major research project is being carried out. Workshops and seminars are also organised during the programme, linked to the research and gathering input from participating companies.

Enabling the development of technologies required to reach a low-carbon economy

Numerous road maps, pathways and scenarios have been developed to describe the transition to a low-carbon economy, and what technologies and technical systems are compatible with, for instance, a 2°C target. Indeed, it appears that there is a joint vision emerging among key stakeholders about the overall need for this transition. However, the implications for the industrial economy, institutions, governance and markets are far less explored, and opinions diverge significantly on specific technologies required, prospects for economic growth, and policies to enable this transition.

Most of the existing exercises are held at a general level, either economy-wide or sectoral, but the role, characteristics and performance of individual companies are still not clear. This study focuses on the necessary requirements for selected key technologies to be developed and commercialised, and the various structures, policies and other incentives needed to enable this development. Linking governance analysis and technological innovation systems analysis, the project looks at these policies and other incentives, at different scales, regions and for different types of companies. The project was initiated in the summer of 2010, and will be completed during the first half of 2011.

Resource scarcity, climate change, and the low-carbon economy

Climate change is expected to impact on resource scarcity, but its subsequent implications for business remain relatively poorly understood. Somewhat ironically, the demands for low-carbon technologies are themselves increasing the consumption of limited resources – for example, lithium for renewable batteries and rare earth metals for batteries and magnets in low-carbon vehicles and wind turbines. Other resources increasingly in demand as a direct consequence of the drive for low-carbon technologies are biomass for fuels, plastics, and chemical feed stocks. As the world responds to the challenge of mitigating climate change, while also seeking to adapt to it, the coupling between limited resources and the economy can be expected to grow.

This project assesses the state of knowledge about the resources that would underlie a low-carbon economy, focusing in particular on rare earth metals and biomass; identifies strategies for businesses and governments to respond to the challenges of a transition to a low-carbon economy that relies on finite non-renewable resources and limited renewable resources; and assesses how business activities might interact with other sectors that use finite and limited resources. The project started in the autumn of 2010 and is expected to finish in the third quarter of 2011.

Trade and financial flows related to climate change mitigation

The global discussion of climate policy has been hampered by a lack of clarity about ‘flows’ – especially flows of traded goods and potential flows of financing for mitigation...
of emissions. Political discussions have failed to maintain distinctions between physical emissions, the ‘embedded’ emissions in goods that are traded internationally, and the options for internationally financing reductions associated with these emissions. This research will analyse global trade patterns and the share of emissions related to internationally traded goods, and consider the environmental and economic effects of different trade policy options. The research will also look at how various financial flows from flexible mechanisms, development banks, and through direct funding can address emissions and be coordinated with trade policy. The base of the research will be a mapping of emissions sources, trade flows, and relevant trade agreements between select countries. This mapping will facilitate improved understanding of the options for trade policy and financing solutions. The research project within this thematic area is planned to start in the beginning of 2011 and continue over a year.