

1 WHAT IS CLIMATE COMPATIBLE GROWTH?

Climate-Compatible Growth (CCG) is a £38m UK ODA-funded research programme helping developing countries take a path of low carbon development whilst simultaneously unlocking profitable investment in green infrastructure, opening up new markets and supporting delivery of the Sustainable Development Goals (SDG).



CCG takes a holistic and cross-sectoral approach to addressing climate compatible and inclusive growth in low-income countries.

CCG research will deliver:

- A robust and effective evidence base that informs decisions;
- The tools and decision support frameworks needed to create climate compatible and sustainable economic infrastructure. CCG ambition is driven by strong and enduring national and international partnerships and co-creativity.

National Research partnerships in developing countries support integrated planning units



with latest evidence to inform decision-making for Climate-Compatible Growth.

International Research partnerships crowd-in research and evidence from key global institutions; development banks and financiers, private sector companies and third countries.

CCG partnerships aim to help lenders, investors and governments identify appropriate low-carbon development pathways, and to access the best policy, regulatory, market models and risk mitigation options to implement them.

2 WHAT PROBLEM DOES CCG ADDRESS?

Left unchecked, climate change would cause major economic, social and environmental damage. It presents a serious global security threat that includes disruptions to food systems, water resources, health and ecosystems. Developing countries are at most immediate risk. Due to low resilience and adaptive capacity, the impact of climate change hits harder.

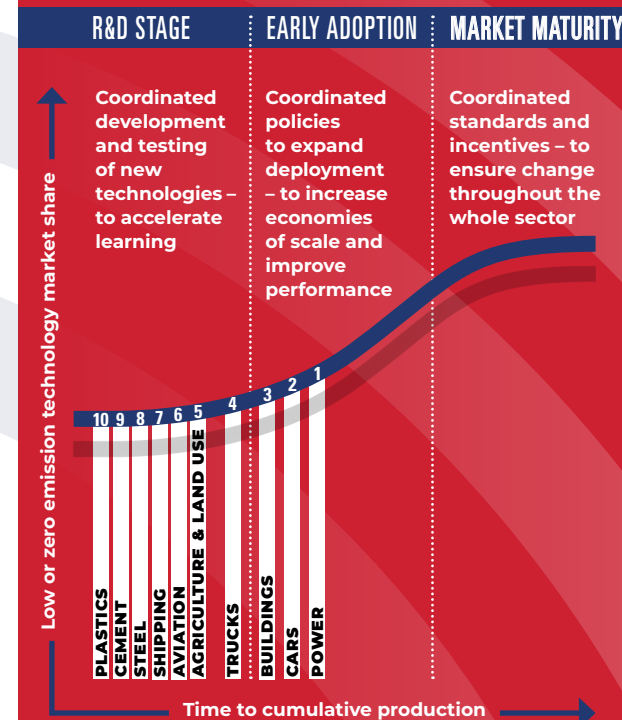
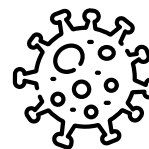
With strong policy action and leadership, the worst outcomes are avoidable and appropriate evidence based action can simultaneously accelerate climate compatible development. Power generation and transport are two significant sources of emissions. Striking progress has already been made to reduce the costs of carbon-free electricity and transport. Compared to coal, Renewable Energy based electricity such as solar and wind are much cheaper during times of production - and their costs and the costs of storage and flexible demand is falling fast. Where available, hydro, can be consistently cheaper all year round. While measures to increase energy efficiency are cheaper still. However inappropriate market design and slow enabling technology development is not fast enough to realise the direct and indirect benefits of efficient, clean energy infrastructure. Appropriate market structures are needed. Large amounts of investment capital need to be re-directed

to emerging and new sector technologies. CCG can help address these issues.

COVID-19 is a major and immediate health and economic emergency. As countries emerge from lock-down, evidence suggests that one of the strongest actions that they can take to stimulate inclusive economic growth is to target stimulus spending and fiscal policies towards clean technologies and practice. This will need decisive leadership to shift direction. Stimulus plans in many developing economies are taking a 'business as usual' approach, with major planned investments in new coal. These are at high risk of being uneconomic compared with cheaper low carbon options, and locking countries into high carbon, high cost, development pathways.

The UK is taking a global lead with policy commitments to net-zero emissions, a world-leading delivery of offshore wind, and world-class research in batteries, smart grids, energy efficiency and electric vehicles. CCG provides the means to change the way Governments and development institutions identify, prioritise and invest in new low-carbon development pathways. CCG will sustain and accelerate global action beyond COP26 through deep, effective and long term partnerships.

CCG is about providing the right evidence at the right time on how developing countries can respond best to the low-carbon transition against a backdrop of COVID-19 economic recovery and rapidly transforming technological and economic landscapes in energy, transport, industry and other inclusive economic growth sectors.





INTERNATIONAL COOPERATION



With each cycle, new technologies improve and increase their market share, and the industries producing them increase in number and influence.

3 CCG CAN CHANGE THE 'RULES OF THE GAME'.

CCG aims to break away from siloed thinking to strengthen the foundations for infrastructure decision-making by:

- **SHIFTING FINANCIAL FLOWS:** Finding new methods, evidence and tools to change the way that major infrastructure policies and investments are made.
- **OPENING NEW MARKETS AND JOBS:** Unlocking investment opportunities in green infrastructure, opening up new markets for jobs and inclusive economic growth.
- **MAKING GREEN TRANSITIONS POSSIBLE:** Developing and embedding best-practice for energy and transport infrastructure planning, financing and management to support new financial and business model innovations.
- **BUILDING TOMORROW'S CHAMPIONS TODAY:** Using national, regional and international partnerships, set a demand-led research agenda that responds to the specific needs of country decision-makers and investors and with them push evidence into practice.
- **CREATING SPECIAL, IMPACTFUL AND POWERFUL RELATIONSHIPS:** With international partners CCG is gathering momentum and high level buy-in.

■ RESEARCH EXCELLENCE IS AT THE CCG

CORE: CCG draws on top-level academia built around a partnership of world-class universities, all with a track record of impact excellence. Their combined interdisciplinary skill base, that includes the global south, provides the deep insights needed to deliver the technological, economic, behavioural, political and financial research that fuels the CCG low-carbon growth agenda.



■ **CLIMATE IMPACT AND OPPORTUNITY FOR GROWTH HAS NO BOUNDARIES:** CCG tools can be applied to all geographies and adapted for all settings. Many of the world's fastest growing economies that offer greatest potential to lock in green growth are also the poorest and can be found in Sub-Saharan Africa and Developing Asia. They are also some of the most vulnerable to climate change. CCG can support these countries in adopting economically attractive, green and also resilient policies.

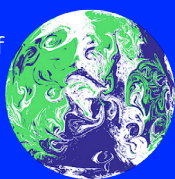
4 CCG IN ACTION

With a focus on energy and transport core CCG research covers:

- **SYSTEM DESIGN** - understanding if and how physical systems and infrastructure need to change as a result of decarbonisation.
- **SYSTEM INTERACTIONS** - understanding how wider infrastructure systems interact; how these interactions may evolve in future and how risks and uncertainties can be managed.
- **ECONOMICS, REGULATION AND MARKETS** - helping decision-makers at regional, national and sub-national levels realign incentives, understand and manage risks and opportunities.

CCG researchers have already been developing leading-edge methodologies to stimulate green, and profitable COVID recovery in the energy sector. CCG researchers have undertaken peer-review of climate focus in COVID recovery investment packages and stand ready to share this expertise and learning.

CCG provides a platform to push research into practice. The CCG platform provides jointly developed open data, research uptake material and analysis of the long-term impacts of transition planning and investment decision-making. CCG operating



**UN CLIMATE
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UK 2021**

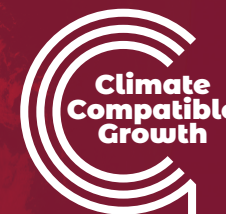
IN PARTNERSHIP WITH ITALY

principles would ensure that materials used to co-create national investment plans would be available to international partners, technical cooperation programs and researchers.

CCG has available research funds that can be used to respond to context-specific needs of local decision-makers within national partnerships. Research funds are also available for co-funding with other international programmes and initiatives with complementary objectives and to run challenge and other competitions to support R&D, technology and innovation. For example, CCG is already supporting partner countries prepare country briefs for COP26. CCG research is also working to promote inter-regional power sector cooperation and trading by exploiting smart green grids.



Growing Global Partnership



PARTNERS | MANAGEMENT | CONTACT | UK AID

Get Involved CCG Partners are ready to cocreate the enabling environment needed to turn Paris' pledges into growth inducing actions. CCG engagement, education and cocreation platforms are ready to scale, adapt and reproduce for long term sustainability. Prospective partners are encouraged to get in touch so that the collaborative network may grow even further.

The CCG partnership is managed by Loughborough University. Collaborating partners include academics from Imperial College, Open University, KTH, University College London, The University of Cambridge and The University of Oxford.

■ **To find us on social media use #CCG**

■ **To reach the CCG management team and to get more details on the CCG research programme and findings, or for technical support or guidance contact the CCG Helpdesk at ccg.enquiries@lboro.ac.uk**

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