

SUMMARY REPORT

GOVERNING INCLUSIVE GREEN GROWTH IN AFRICA (GIGGA)

**RESEARCH CHALLENGES AND
AGENDA ON GOVERNING INCLUSIVE
GREEN GROWTH IN AFRICA**

The report is a result of an 18-month ESRC GCRF strategic network grant (REF ES/P006671/1) on Governing Inclusive Green Growth in Africa (GIGGA). We would like to express our thanks to the ESRC for funding this research and to the Network members and advisory board whose commitment and contributions made our work possible.

It is widely acknowledged that the green economy has significant potential for delivering inclusive economic development in Africa. However, research on green growth in Africa is very limited, with the result that the dynamics of this potentially paradigm-shifting phenomenon are still poorly understood.

The Governing Inclusive Green Growth in Africa (GIGGA) Network was formed to respond to the Global Challenges Research Fund (GCRF) Strategic Networks call 2016. The aim of the Strategic Networks funding was to support novel, interdisciplinary and international collaboration between researchers and non-academics in order to identify substantive research agendas and shape the future direction of GCRF funding. The GIGGA Network brought together academic and non-academic stakeholders in order to develop a substantive and innovative research agenda on the governance of green growth in Africa, with a particular focus on the dynamics of equity, justice, and inclusiveness in the context of green growth initiatives.

This project aimed to develop a research agenda on governing inclusive green growth in Africa to inform future GCRF funding activity. Through a series of collaborative activities including stakeholder consultative workshops, word clustering analysis, systematic literature review, and mapping existing green growth initiatives in Africa, **we identified five interconnected key areas of challenge (the 'Five "I"s') where substantial research is needed** to better understand the current state, dynamics, prospects and limits of green growth governance in Africa.

Africa is at a crucial point position in its developmental history. After decades of widespread armed conflict and economic decline, it now has the fastest economic growth rate of any continent (The Economist, 2013). However, poverty remains widespread, inequality is high and increasing, much growth is still natural-resource-intensive and structural transformation is yet to occur, let alone take root.

We identified key research challenges (the 'Five "I"s') on the subject of governing inclusive green growth in Africa:

- 1 Infrastructural investment
- 2 Institution
- 3 Incentives
- 4 Innovation
- 5 Inclusiveness

In identifying these areas of challenge, we tried to avoid a restrictive conceptualization of governance or subscription to any given governance theory. Rather, following Hufty (2011) and Kooiman (2003). We understood governance as the process of interaction among actors involved in making and implementing decisions relating to a common problem (Hufty 2011; Kooiman 2003). Governance here is therefore a multi-dimensional concept, including (among other things) systems, polices, rules, authority, legitimacy, accountability, effectiveness and benefit-sharing (Biermann, 2007).

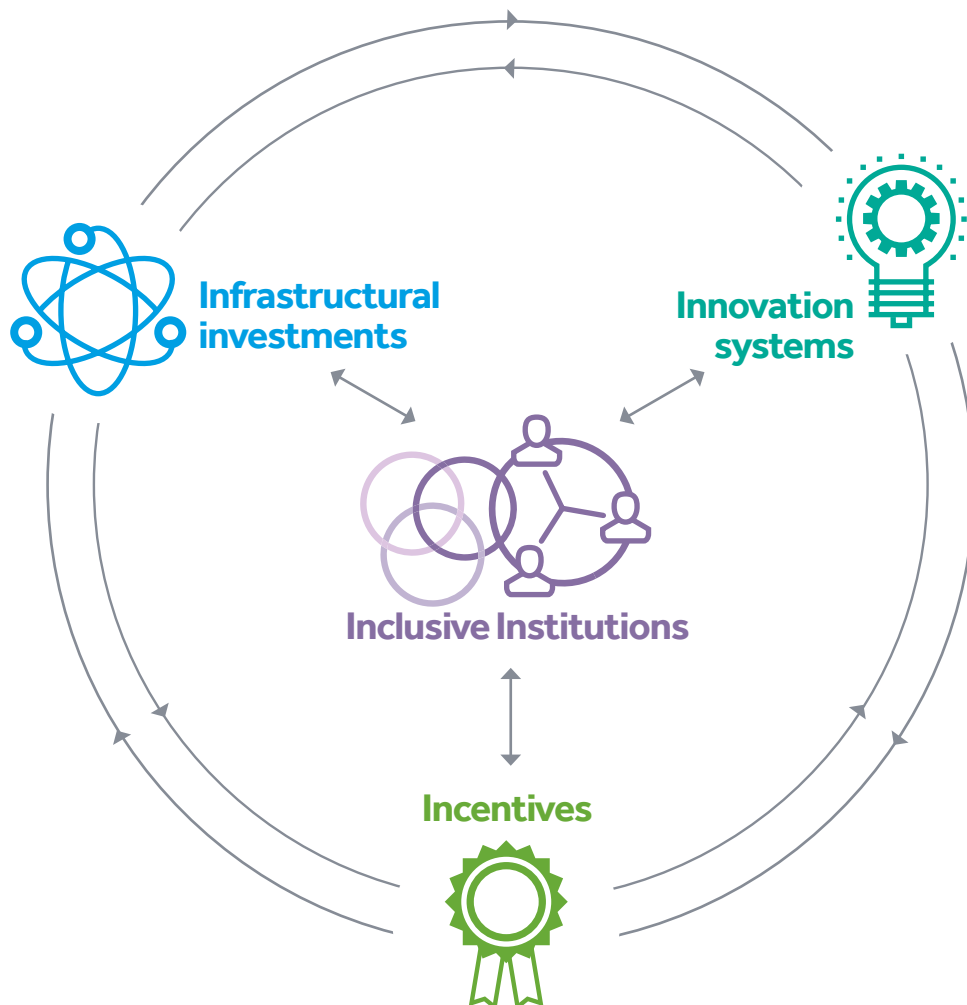
We see the five key areas of research challenge (the 'Five "I"s') as closely interrelated (**Figure 2**). Accordingly, we suggest that a comprehensive research agenda on the governance of green growth will need to address the five areas and, crucially, their interrelationships. However, we note the research priorities and needs of African countries in relation to each of the challenge areas will vary across countries depending on national circumstances.

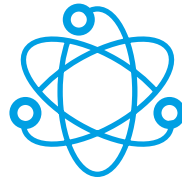
THE 'FIVE "I" S'

In our full summary report, we set out specific focal points for green growth development in each of the five key areas, looking at case studies where relevant and highlighting issues

raised in our stakeholder workshops. Here, we summarise our headline findings and list the key research questions arising from them.

Figure 2
Relationship of the 5 "I" s





INFRASTRUCTURAL INVESTMENT

A Huge Energy Access Gap Exists in Africa

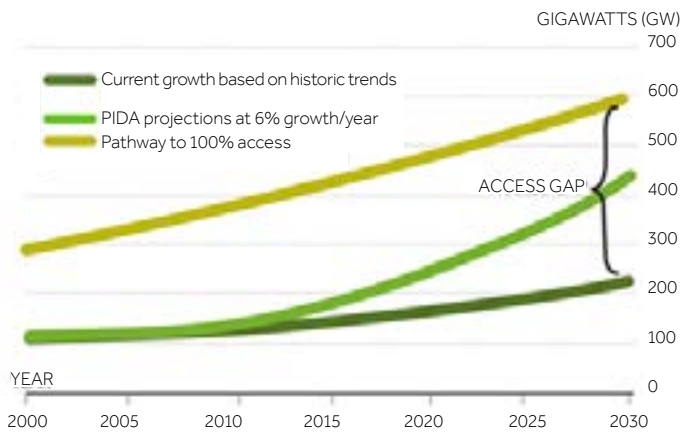


Figure 3

Africa currently has 147 GW of installed capacity and 250 GW is needed by 2030 to achieve universal energy access. This will require capacity additions to double to around 7 GW a year in the short term and to quadruple by 2030.

Source: Africa Renewable Energy Initiative (AREI) www.arei.org

African developmental status is perhaps best reflected in lack of infrastructure. Roads, bridges, rails, airports, water pipelines, housing, power stations, transmission lines and schools are all inadequate compared to the population and need. Access to electricity and clean water are also major issues, and the 'energy access gap' is a particular problem. On the positive side, there is no environmentally damaging infrastructure to 'overcome' on the way to a green economy. Finding new sources of funding is an important part of green development. It is important to understand and develop the elements necessary for green investment policy frameworks in order to assist governments in establishing and improving domestic conditions so that private and public investments in green infrastructure can be scaled up. Ensuring policy frameworks and reforms are supported by research, and guiding the use of limited public funds while also allowing and incentivizing private investments towards the delivery of climate change and local development plans, is urgently needed. At the same time, care needs to be taken that development projects intended as green do not have unintended consequences for the population.

Country	South Africa	Tanzania	DRC	Nigeria	Kenya	Ethiopia	UK
Land area (sq km)	1219912	945087	2345410	923768	582650	1127127	244820
Total rail line (km)	20986	4567	4007	4780	3334	681	15000
Of which electrified		-	858	-	-	-	8000

Table 1

The land area versus rail network lengths in selected African economies (km): The data for UK is included for comparison.

Infrastructural investment: Key Research Questions

- What infrastructural investment will most facilitate equitable green economy transformation?
- What are the most effective means to mobilise finance and political will for scaling-up green infrastructural investment?

Related questions include:

- Which green infrastructural investments provide the best value in terms of economic growth, return on investment, reduction of inequality, and other social, and environmental dimensions?
- How can Africa best facilitate green impact investment using traditional sources of funding such as FDI as well as innovative domestic sources such as pension funds, green stimuli; green bonds, and sovereign wealth funds?
- How can green budgeting and mainstreaming best be achieved?
- What are the most effective strategies for tackling the vested interests and lack of political will that risk locking government into pre-existing brown and less productive pathways?



INSTITUTIONS

While no single 'one-size-fits-all' model of governance can be held up as the gold standard, there is a strong consensus around the role and significance of effective, accountable, and inclusive institutions in promoting sustainable and equitable development. In most of the states making giant strides in greening, the push has come from strong political leadership usually from the highest political authority (in Rwanda and Ethiopia, for example). This confirms what is generally agreed in the literature: that political will at the very highest level is crucial to push low carbon development or green growth. However, the situation also raises a number of important questions about how sustainable current green initiatives would be without these leaders. Both analysis of the literature and discussion in our stakeholder workshops highlighted the problem of unsuccessful attempts to achieve coordination and the significant amount of conflict and tension that characterises such endeavours. Mainstreaming green development is also adversely affected by problems with coordination. A key research challenge in the area of green economy in Africa is the need to understand what makes a particular institutional arrangement work in one context and fail in another. In particular, how can deeply-rooted rules, norms of behaviour and laws be combined with a more formal and modern institutional framework?

Institutions: Key Research Questions

- What kinds of institutional arrangements can best serve the purpose of defining and facilitating a distinctively African-type inclusive green growth transformation?
- How may the required reforms best be achieved?

Related questions include:

- How can institutional coordination for designing, implementing and monitoring green growth initiatives be ensured?
- How can green economic policies and programmes best be mainstreamed into national development plans?
- What are the opportunities for leveraging the green agenda to strengthen African institutions for greater accountability, efficiency and transparency?
- What is the role of informal institutions in greening and how can formal and informal institutions best be integrated to serve the purpose of greening?

Institutions: A Case Study

Nigeria's Economic Recovery and Growth Plan (ERGP) proposes to use the country's vast natural resources to catalyse economic recovery (FGN, 2017). But promoting growth through depletion of resources could place an additional burden on the GHG inventory, and the inability to meet this commitment will further derail political and economic development. Nigeria's Nationally Determined Contribution (NDC) pledges to make an unconditional contribution of 20% below business-as-usual (BAU), consistent with current development trends and government policy priorities, and make a 45% reduction conditional on international support. Preliminary investigation based on NELCAL2050 projections showed the NDC did not take into consideration growth objectives, since 20% unconditional mitigation will reduce the carbon intensity by 2020 but cannot drive the Vision 20:2020 goal. Further sectoral analysis is needed in order to unpack the impact of NDC on ERGP, in order to highlight gaps in implementation and identify synergising potentials that could be explored in mainstreaming these interrelated policies.



INCENTIVES

Many African countries already have high-level policy and strategic green growth plans in place. However, many of these documents have not been translated into detailed, well thought-out policies for key sectors, with adequate incentives to discourage unsustainable growth practice and unlock green growth. Discussions in our stakeholder workshops pointed to many different factors. One was the lack of integration between green policies and national economic development plans. The other was the lack of ownership of green policies by national governments, including a failure to implement effective penalties to deter violation in relation to green policies. Research on what kind of policies and economic instruments work best – taxes, subsidies, regulations, voluntary tools, etc – will be important. Studies are needed to better understand the type, range and degree of incentives that can help unlock investment and change behaviour to move Africa to low carbon paths.

One prominent example of a mismatch green economy visions and incentives is the issue of large fossil fuel subsidies compared to tiny renewable subsidies (**Figure 4**).

Incentives: Key Research Questions

- What are the most effective regulatory frameworks?
- What are the incentive and fiscal reforms that will spur inclusive and transformational green growth?

Related questions include:

- How can grant, rebates and energy and carbon tax be best structured to stimulate green growth?
- How can harmful subsidies be phased out effectively?
- How is it possible to achieve a good mix of traditional 'command and control' measures (permits and fines, for example) with economic and voluntary tools (such as tariffs, certification, standards, PES and information and support tools)?
- How can natural capital accounting be improved and integrated into policy design in Africa?

Fossil fuels subsidies and climate finance in developing countries

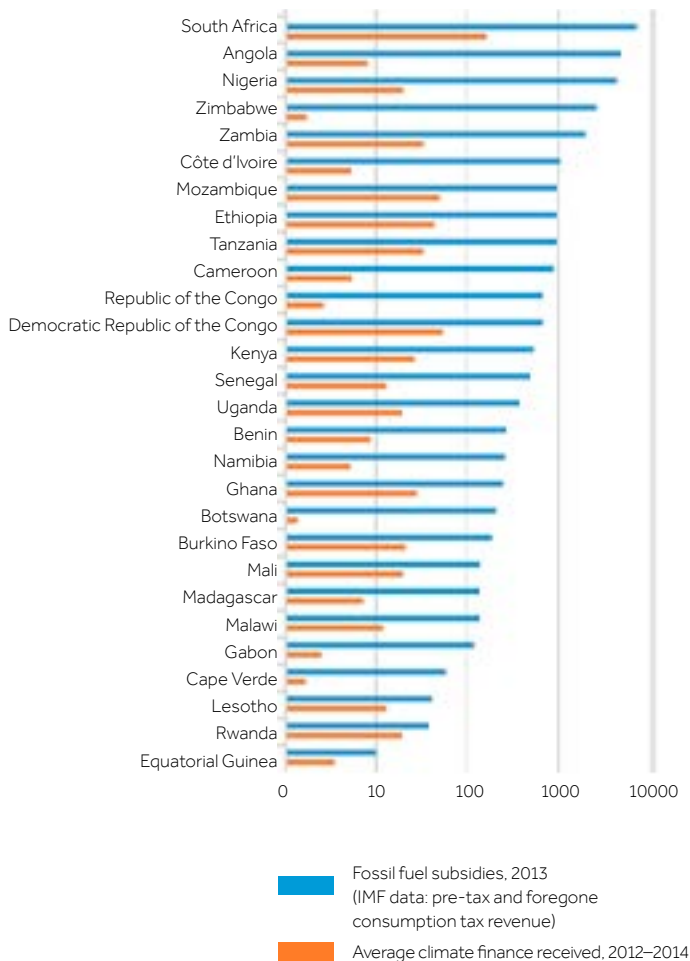
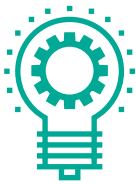


Figure 4

Fossil Fuel Subsidies and Climate Finance in African Countries

References:
 Whitley, S., 2013. *Time to Change the Game: Fossil Fuel Subsidies and Climate*. Overseas Development Institute, London. Available at: www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8668.pdf
 ODI and Heinrich Boell Stiftung, 2015. *Climate Funds Update*. Available at: www.climatefundsupdates.org



INNOVATION

Innovation is a crucial aspect of green economy transformation in Africa, but it is also an area of major challenge. Alongside suffering restricted access to capital and inadequate infrastructure, Africa is bound by poor human and technical capacities. Lack of or limited capacity is identified as one of the main barriers hindering the transition to a green economy in Africa (Harrison et al., 2015; AfDB, 2016). Concerted effort is needed to acquire the capacity for technological innovation in Africa. Extensive research on innovations systems, policies and practices must be carried out in order to shift Africa to a green growth trajectory. Agriculture is an area of particular importance, and there is a need for better understanding of the impact of climate change on agricultural productivity. Waste management is another area where innovation plays a crucial role and where collaboration between government and the private sector will be key. There is also a need to systematically develop the capacity for research on various aspects of the green economy in African universities and research institutes. Linked to this is the fact that research funding around green innovations tends currently to come from European countries, which means that research agendas and perspectives may be skewed to rich-world concerns.

Innovation: Key Research Questions

- What are the most effective mechanisms for design, delivering and sustaining national and private innovation systems?
- What are the capacities and culture that can drive the transition to a green economy?

Related questions include:

- How can green innovation hubs be effectively built and incubated?
- How can the diffusion of green technology best be promoted?
- How can indigenous technology be effectively promoted and developed?
- How can the capacity for research and policy development be increased?

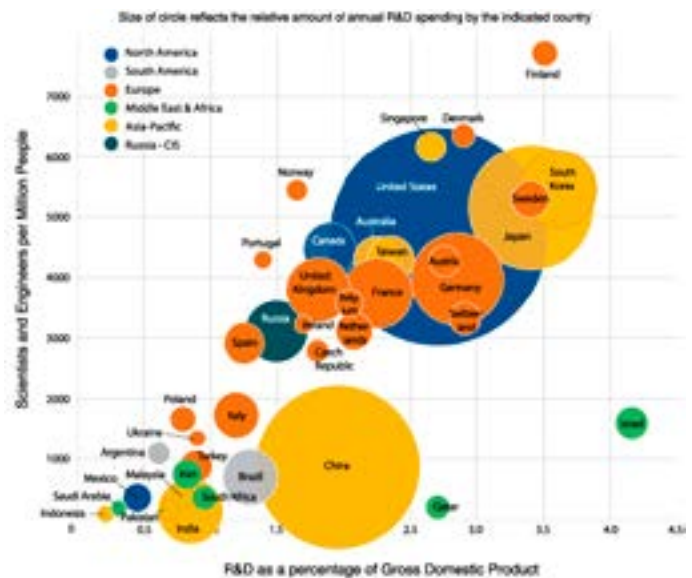


Figure 5

Culture of innovation in Africa is poor. The total spend on research and development as a percentage of GDP is very low in Africa compared to the rest of the world. There is need for greater emphasis on science and policy interface. There is also no clear framework for research cooperation between government and universities and no clear understanding of how research contributes to national economy.

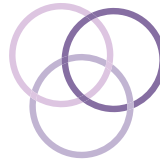
Source:

Batelle / Global funding of R&D 2014:

www.rdmag.com/article/2013/12/global-funding-rd?cmpid=related_content

Innovation: A Case Study

Improved cooking stoves (ICS) have long been identified as a promising option to reduce the negative impacts of cooking with traditional open fires. However, despite involving relatively crude technology, there are very few entrepreneurs that are delving into the manufacture of ICS in Africa. Instead, many African governments have resorted to massive importation of ICS, some of which do not meet local conditions and needs. In recognition of the role of access to energy as a cornerstone of economic growth and wellbeing, on Sustainable Development Goal (SDG) is ensuring universal access to affordable electricity by 2030. However, the latest results from the Global Tracking Framework show that the clean cooking sector has the slowest rate of progress when compared to three other areas of sustainable energy intervention – access, efficiency and renewable energy (Figure 6). With population growth in Africa outpacing supply and adoption, the gap in access to clean cooking is now actually higher than 2012. At the continental level, a number of African countries have called for more targeted research, capacity building, innovation, advocacy and context-specific policy.



Green economy development is not immune to the conflicts, power, and interest politics that characterise brown development or the process of industrialization more broadly speaking.

A green-light rail project or massive low cost housing to accommodate growing urban population may well involve the dispossession of peoples and the destruction of ecosystems. Development activities of any kind will produce winners and losers.

There is a need for more research on how the sometimes competing objectives of social and environmental protection on the one hand and economic growth on the other can best be negotiated and about the scale at which decisions are best made to ensure that green growth is truly inclusive.

INCLUSION

Africa is a largely non-inclusive society with the gap between the rich and the poor being one of the highest in the world (de Sherbinin, 2014). One of the original attractions of green growth was its emphasis on equity and social inclusion (Tschakert, 2016). Green energy initiatives in cooking and farming practices have a particular importance for poorer communities. However, not every green economy initiative will have positive implications for poverty eradication and the reduction of inequality within countries. Therefore, more research is needed on the impact of green growth developments on the poor and how current and future projects can be made more inclusive. This might include studies on how green technologies are impacting poor and rich communities. There is also a need for more research on how the sometimes competing objectives of social and environmental protection on the one hand and economic growth on the other can best be negotiated and about the scale at which decisions are best made. Corruption is a major issue in this area, at both government and private sector levels. While corruption in the energy and natural resource sectors is the subject of much scholarship, much of the focus has been on public sector corruption with very limited attention given to the role of the private sector. More research/funding needs to go into elements such as stakeholder processes, the nature of prior informed consent, rights, information disclosure, safeguards, ownership and access.

Inclusion: Key Research Questions

- How can participation best be facilitated?
- What kinds of participatory approaches bring the best results?

Related questions include:

- Who is making decisions and on whose behalf, and who is setting the priorities?
- Who is winning and who is losing?
- How can accountability and liability to local people improve environmental outcomes?
- How do we ensure that green incentives are inclusive?
- How are the voices of local people being reflected?
- What are the social, gender and environmental dimensions of green economy policies and programmes in Africa and what are the most effective means of ensuring justice and equity in the green economy?

Delivering the Research Agenda

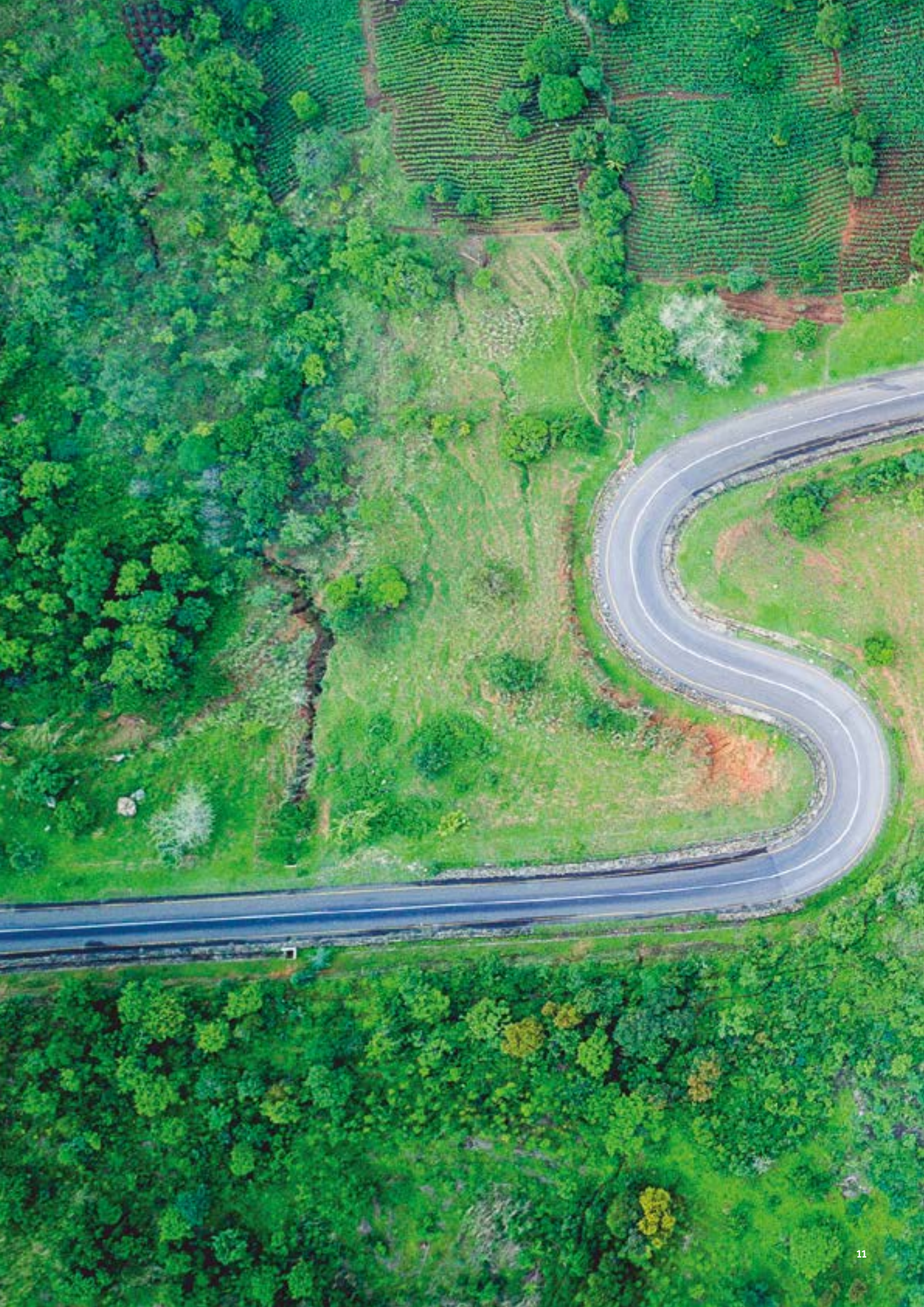
The 'Five "I"s' are interrelated and this means that interrelated research on the various aspects will be crucial for achieving a better understating the state of the green economy in Africa and the key opportunities and challenges going forward. At the same time, we think it is possible to pick and choose aspects to prioritize, depending on national circumstances and available domestic resource capabilities.

Research is vital to understanding the processes of green growth in Africa, but it is clear to us that research alone will not be enough to develop the green economy.

We conclude that a focus on inclusive institutions must be the priority. Each country must undertake a systematic assessment of its socio-political situation and decide on a green growth vision as well as the strategies and policies which will help it to meet its long term sustainable development aspirations. In turn, this will help to determine research emphasis and priorities. We suggest that constructing such a vision and determining priorities will require the engagement of societal actors in a normative debate about the future of the society its members want to construct.

Once a country has reached a shared vision on its green direction, it will need to commit to ensuring that policies and programmes are inclusive and promote social equity. The next step will be to construct incentives that promote green economy transition in such a ways that also promote social inclusion and equity. To have successful green growth strategies and green industrial policies, national governments must create institutional frameworks and invest in the production of knowledge. Complementing this, research and development funds have to be channelled to future-oriented and sustainability related sectors of the economy, and a fruitful coordination between public and private actors is needed.

The change process for society as a whole needs governance that sets appropriate framework conditions both nationally and internationally, at federal state and local authority level, and this means involving stakeholders fully.



GIGGA NETWORK MEMBERS

- Four UK universities
 - Academics from five countries in Africa and India
 - National and regional government institutions and departments
 - Four research institutes and policy think tanks across Africa
 - Top NGOs and civil society organizations in Africa
 - Private sector organizations.
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High quality research is urgently needed to underpin current and future green growth initiatives in Africa. Unfortunately this is lacking at the moment. The situation where 60% of research on green growth in Africa comes from Western universities is unacceptable. There needs to be urgent effort by African universities and their governments, as well as the UK government, to increase research capacity in Africa. //

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