CHAPTER 7

POLICY RECOMMENDATIONS AND CONCLUSIONS

Africa's recent strong economic growth has not been matched by economic and social transformation, keeping the continent commodity dependent and reliant on the informal sector for jobs, with high inequality and poverty (ERA, 2014). Volatility in the prices of natural-resource and agricultural commodities has put at risk the economic and fiscal plans of many resource-dependent governments. Given the slowdown in the global economy over the past year and heightened concerns about financial stability, Africa's near-term economic growth is likely to be modest relative to its social development needs. The regions are also hit by different destabilizing factors, such as the severe dry spell in East and Southern Africa and security concerns (linked to political instability) in the Maghreb, Sahel, Horn of Africa and Central Africa.

Thus, turbulence in the global economy, worries about financial instability and Africa's vulnerability to these shocks give cause for a strategic rethinking of Africa's growth and broader development strategy.

As envisaged by recent Africa-wide strategies, economic structural transformation would permit a shift of resources into higher value activity—strengthening linkages with research and development and reinforcing regional integration—in a manner that supports greener growth. Green industrialization is the clearest route for Africa to pursue job-generating growth and develop high-value manufacturing and modern agriculture and services, which would bolster continental integration and promote sustainable development. Low-carbon development can trigger new investment opportunities and build the foundation to achieve a global economy that must keep average global warming to less than 2 degrees Celsius.

The past year has seen two landmark global agreements that align well with Africa's need to industrialize by generating greener, more inclusive growth. The first was the 21st annual Conference of the Parties (COP21) during the United Nations Climate Change Conference in Paris in December 2015. At COP21, all nations signed an agreement that—if the terms are carried out—will lead to a low-carbon economy and a shift away from fossil fuels. The agreement puts the global economy on course for a transformation of its energy systems, as all countries have pledged "to keep a global temperature rise this century well below 2 degrees Celsius and to drive efforts to limit the temperature increase even further to 1.5 degrees Celsius, above pre-industrial levels" (UNFCCC, 2015). All countries of the world have submitted plans laying out their intended contribution to achieving the global target of less than 2 degrees Celsius, and those plans will be subject to five-year review to ratchet up the ambition gradually. The second agreement—on the Sustainable Development Goals (SDGs), in September 2015—places equality, sustainability and universal basic needs at the heart of our common global economic strategy.

Green industrialization is the clearest route for Africa to pursue job-generating growth and develop high-value manufacturing and modern agriculture and services ...

Together, these global agreements set the stage for international and regional partnerships that can transform Africa's growth prospects.

Africa is blessed with abundant land, water, energy sources and natural capital, as well as a young and increasingly better educated population. Such

abundance, when combined with capital investment, can generate the prosperity, employment and sustainability needed to achieve the promise laid out in the African Union's Vision 2063. Some African countries are making good progress, with a focus on water, energy and agriculture, systematically building low carbon and climate resilience into their plans and decision-making. Many, however, have yet to focus on how best to join the post-2015 momentum in climate and sustainability and use it to accelerate their plans for growth, structural transformation and sustainable industrialization. This year, 2016, is the ideal time to redesign long-term growth plans to deliver green and inclusive industrialization.

A low-carbon economic pathway must be followed globally if the world is to keep the mean global temperature increase to less than 2 degrees Celsius. A perspective to 2050 and beyond means that all countries should plan the route to deep de-carbonization to achieve 80 per cent emission cuts by 2050 and net zero carbon by 2070 (Sachs, 2015). African nations have contributed very little to global greenhouse gas emissions, and perhaps should not, therefore, be expected to take the lead on low-carbon development. African countries can stand back and watch others take the lead in building a green economy—or they can benefit from their current low-carbon position and leapfrog the process. Following the latter strategy means that many African economies can get it right the first time; infrastructure does not have to be retrofitted to make it climate resilient, and high dependence on volatile fossil fuels can be avoided, bringing significant co-benefits for health and energy security.

Africa's move to greener industrialization is not just a step towards meeting global carbon emission targets but a precondition for the continent to achieve sustainable and inclusive growth. The "Intended Nationally Determined Contributions", prepared by each country in advance of COP21, offer the ideal framework for the practical steps to take over the next 5 to 10 years, aligning with long-term goals of de-carbonization, building climate resilience and delivering sustainable development.

Africa can explore many productive ways to achieve green industrialization—starting with existing enterprises. Because of current high levels of waste and inefficiency at the plant level, supporting business to become more resource efficient provides multiple opportunities for win-wins. National Clean Production Centres show much promise in this domain, and there is much to be gained from collaboration with the joint programme led by UNIDO and UNEP

Working at the higher systemic level offers big opportunities to leverage the greening of supply chains, infrastructure and energy generation. Government plays a central role in this process, which must take a long-term perspective, looking out to 2030 and beyond. Policy stability and effective public institutions are key to creating credible incentives for the private sector, be they small and medium-sized enterprises (SMEs) or major transnational companies. Achieving inclusive greening means overcoming major externalities that make for market and governance failures while investing in new technologies and the research sector. Although government must take the lead role, it cannot hope to design, fund and achieve a green and inclusive economy alone. Government needs to build strong, long-term partnerships with business, civil society organizations (CSOs), community groups, municipal government, and financial and research sectors, understanding what each constituency can contribute, and where its interest lies.

This report has explored the strategic opportunities presented by Africa's situation in the post-Paris and post-SDG world. Now is a critical moment to rethink what has been achieved and the conse-

quences for depletion of key resources, alongside Africa's slow record of translating growth into inclusive incomes and growth in jobs for the poor majority.

Chapters 1 and 2 revealed that Africa's double-digit economic growth of recent years rests on a weak foundation because of high levels of dependence on natural resources, for which the markets are volatile—especially oil, gas and minerals. Moreover, Africa relies heavily on the global economy, including for large and growing food imports, primarily because of low levels of regional integration. A strategic rethink across Africa's regions to achieve structural transformation should focus on building much stronger domestic and regional linkages, reducing impacts from climate change, and greatly improving use of renewable resources, particularly water and energy.

This year's report, with its focus on greening industrialization, continues the strong thematic approach of previous years' reports, which focused on how to achieve Africa's structural transformation and industrialization. The message of ERA 2016 chimes closely with the successful global meetings and agreements of 2015 and the traction gained in related global markets, such as renewable energy. Together, those global agreements and market shifts confirm a direction of travel for the global economy towards a low-carbon future based on green and inclusive growth. This conjunction of events—combined with Africa's limited industrialization, infrastructure, and low-carbon and sustainable development—provides an auspicious opportunity to mobilize Africa's leadership to be at the forefront of the economic transformations that all economies will have to follow.

This report has recognized the rising strain on all environmental resources as African economies develop and grow, and the need to generate better jobs and higher incomes for its citizens. Green and inclusive industrialization offers an ideal focus for addressing those challenges. Much of the impetus for green growth in other parts of the world has come from the need to cut greenhouse gas emissions. In Africa, however, for growth to be sustainable and inclusive, equal thought must be given to getting the best value from agriculture and its associated environmental base, and the extractive industries—oil, gas and minerals - which have been more of a curse than a blessing. Consider the impacts of uncertain and poorly managed water supply, on which life depends, and the rapid growth in fossil fuel–based energy demand. Well-shaped green growth measures can, however, offer good outcomes for all these challenges.

Worldwide, a growing number of countries have seen the green growth agenda not as an obstacle and a threat but as the next big opportunity for growth and transformation. They recognize that not only can green growth contribute to enhanced developmental outcomes, such as better health, and mitigate the harmful impacts of climate change and climate variability, but it also offers the potential to make growth more efficient by better use of scarce resources. Those countries stress the scale of co-benefits and synergies rather than trade-offs. Greening industrialization has the potential to create exports and jobs through developing green capital goods and services and, if designed with the needs of the majority population in mind, offers the promise of more inclusive patterns of development. It demands a shared approach to inclusion, green growth, industrialization and structural transformation, built on a model of regional integration that generates shared benefits for member countries. The concept of "decoupling" industrial growth from resource use helps to identify the scope for improving the efficiency with which these resources are incorporated in production. Evidence from a number of African countries shows that individual manufacturing establishments have been able to green their production in a way that has saved significant costs, ensured market access and increased profitability.

A valuable and systemic response to generating low-carbon industrial development would be for governments to set up eco-industrial parks.

The scenario analysis in Chapter 5 showed that the costs of not going down a green growth pathway are formidable and accelerate damage; a business-as-usual (BAU) approach to growth is quite clearly unsustainable. The bio-physical environment—land, water, soils, forests—will be unable to bear the stresses involved, while climate degradation will impoverish much of the rural population and drive people off the land. Although seemingly paradoxical, the economic strategy that pursues growth as an end in itself eats away at the very conditions that make sustained growth possible. A simulation analysis based on two modelling scenarios was conducted to show how the greening of growth helps avoid the very high costs of a BAU approach and is vital to ensuring that Africa's growth can meet its social, economic and environmental goals. A combination of bold measures and interventions is needed to shift growth to a more sustainable and inclusive pathway.

Through a series of case studies (Chapter 6), the report showed practical and successful experiences in the greening of individual establishments and of systems in a variety of African economies. In some cases the process has involved greening agendas that cut across sectors; in other cases they have spanned neighbouring economies, offering a regional perspective of mutual benefits stemming from improved and shared governance. The contribution made by a value-chain approach to greening is evident: the greening of a chain of suppliers rather than individual firms optimizes the opportunities for inclusive green growth. These case studies show that the greening of value chains requires coordination and governance that is, in different contexts, performed variously by lead firms, governments or other entities.

7.1 POLICY RECOMMENDATIONS

GREENING AFRICAN INDUSTRIALIZATION: FROM VISION TO TRANSITION

Turning a green vision into reality poses challenges similar to those in many other policy agendas. The breadth of the agenda for this transition is arguably greater, however, than that for any other that has faced African policymakers since independence. Simply put, continuing current trends along a BAU approach will prevent African economies from meeting their developmental goals. Such a BAU pathway will also challenge the very sustainability of growth. Marginal change in a few parameters will not be enough to shift resources to green growth—it requires a system-wide shift and a clear, consistent change in direction.

Given the enormity of this challenge, how can African economies bridge the gap between vision and reality? How can African countries make the most of their current low levels of carbon emissions per head, thinly spread infrastructural assets, and little value added for many of their commodities? Such attributes might be considered weaknesses in building a more sustainable and inclusive economy, but they can also be seen as strengths. Having less infrastructure means less investment is needed for its conversion to low-carbon and climate-resilient norms, fewer vested interests are dug into high-carbon activities, and current low levels of processing provide a lot of headroom for growth in value added. Africa's late industrialization offers many chances for leapfrogging to more effective, greener forms of industrialization that build on win-win synergies between inclusive growth and environmentally sustainable growth pathways (box 7.1).

THE PUBLIC SECTOR IN THE LEAD, WORKING CLOSELY WITH OTHER SECTORS

Responsibility for building a green, resilient economy lies primarily with government, as the collective vehicle for the interests of current and future citizens of the nation. Government must understand the nature of the challenges ahead, analyse the options, identify and plan with different stakeholders how best to achieve the outcomes they seek, and offer a platform and consistent policy to coordinate the actions of others.

The private sector is not very likely to do all that—nor should it be expected to. The different parts of business, government and civil society must work together, understand who is best placed to do what, and identify what market forces can and cannot achieve. Sometimes the tendency is to argue for either public or private measures;

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BOX 7.1 STEPS TO GREENING INDUSTRIALIZATION

1 *Develop a green industrialization vision and strategy.* Building on industrial policy frameworks, processes and institutions elaborated in ERA 2013, 2014 and 2015, the greening strategy must be comprehensive. As shown in this report, the green challenges are systemic, crossing national, sectoral and enterprise boundaries. The strategy involves changes not just in the pattern of resource allocation in the public and private sectors but also in the behaviour of Africa's citizens.

2 *Translate this vision and strategy into policies.* These include shifts in government regulation, expenditure and fiscal measures. Unless those policies incorporate sanctions, though—positive incentives and negative penalties—they will be mere statements of intent and unable to deliver what is needed.

3 *Make sure that policies are "joined up" and reinforcing.* Although this step relies on a policy agenda that cuts across ministries and sectors, it also has to recognize that currently governance is generally built on a framework of silos, sectors and national boundaries.

4 *Attune policy ambition to delivery capability.* This step is needed because African economies vary enormously, including in human skill endowments and state administrative capacity. Too ambitious an agenda may blunt the capacity to deliver anything significant. On the other hand, if the policy agenda is not ambitious enough and the approach taken insufficiently consistent, the green growth agenda will be undermined. Regional entities are well placed to provide alignment and coherence to this agenda, as well as support and learning for national governments.

5 *Involve the full range of stakeholders in the design and delivery of policies.* Otherwise policies are unlikely to move beyond planning documents and the statute book.

in practice, though, the most effective greening of industrialization will take place when an effective partnership is built within countries and across borders. That means clarity, confidence and consistency among key parts of government and nations. Intergovernmental trust and trust between government and many different partners—large and small—is essential. Besides partnering with civil society and business, government must engage citizens in new ways of thinking and acting, such as developing a shared understanding of and approach to the environment. Initiatives that target dissemination of citizen-level environmental stewardship, such as local economies that minimize waste and pollution, are necessarily core components of a green growth agenda.

The COP21 outcome, as a global agreement designed to be delivered through decisive national actions, provides an added spur for African governments to take the lead in bringing their stakeholders together. Building on the Addis Ababa Action Agenda, international public finance is being mobilized in the form of contributions to the Green Climate Fund and to multilateral development banks, for investment in climate related actions. The African Development Bank (AfDB), for example, has announced a doubling of its climate change funding.

The loud and clear statement of policy direction stemming from the Paris Agreement should also unlock substantial amounts of private finance and investment that can now be targeted towards low-carbon investments. The challenge will be for

African governments to attract private investment in a way that aligns with their own objectives and to ensure that this mix of public and private investment facilitates inclusive, sustainable growth that achieves rising incomes and middle-income status over the next decade.

Hence, a credible, long-term and ambitious strategy must be laid out by government—through its planning process—and linked to expenditure and investment targets. Recent years have seen the emergence of strong African leadership in this area, which has demonstrated the importance of combining vision with the capacity to make things happen in practice (Oqubay, 2015). This demands a consistent approach that maps out the pathway to be followed—recognizing the sequencing necessary to make progress along that path—and that understands the costs of inaction. There is no substitute for leadership at the highest level of government to ensure that greening becomes a systemic approach, drawing on and bringing benefits to all sectors of the economy.

Inevitably, some political interests will not want such changes. Not everyone will gain from the reorientation of the growth path, and many will have to be persuaded to shift from a focus on BAU today—with little thought for the cost to be borne by tomorrow's generations—towards a pattern of growth that delivers a more sustainable future. Thus, necessary reforms must occur in phases and the costs to particular constituencies must be addressed. No single measure exists for achieving this greening of structural transformation. The solution must comprise an integrated set of actions in the fields of policy, regulation, price incentives, infrastructural investment, and research and development. Government systems will need retooling to account better for costs and benefits related to environmental and social inclusion and to the collection of data required to track progress with implementation.

For those African governments wanting to make progress down this pathway, the good news is that they can learn much from the experience achieved to date by colleagues in neighbouring countries and continents. Multiple platforms and support programmes now are aimed at accelerating progress through shared learning, from which leaders can take heart—UN-PAGE, the Global Green Growth Forum, the Green Growth Knowledge Platform, and the Green Economy Coalition, to name a few. Such peer-to-peer learning offers much potential for toolkits, partnerships, policy support and training opportunities.

African countries have widely different economic portfolios, depending on their size, natural resource assets, climate and other natural endowments, historical and cultural connections around the world, and human and institutional resources. Consequently, the policy choices they face will also be diverse. As the world transitions towards a low-carbon economy, big questions will arise regarding the future value of fossil-fuel reserves; optimal rates of depletion for oil, gas and coal; and how best to invest public revenues generated from those resources. Fulfilling the Paris Agreement implies the phasing out of high-carbon fuels and hence the falling value of fossil fuel reserves. Public revenues from such remaining reserves thus need especial care to diversify economic structures, construct badly needed infrastructure and build the human capacities that will be central to the low-carbon economies of the future. At the same time, the collapse in oil prices in 2014–2015 places complex demands on African economies, on one hand reducing the short-term economic drivers to de-carbonize and diversify growth , and on the other hand, reducing the funds for oil-exporting economies to finance the necessary economic transformations.

INFRASTRUCTURAL INVESTMENT: BUILDING FOR THE NEXT GENERATION

LANDSCAPE, SOILS, WATER AND BIODIVERSITY

A large share of Africa's people rely on the continent's infrastructure of natural capital—its land, soils, water and biodiversity. This natural infrastructure supports fish, crops, trees, wildlife, grazing livestock and other products of nature. Low farm productivity means continued dependence on imports for basic foodstuffs across the continent, even though Africa's farmers have the potential to feed the continent's people and to supply overseas markets. Poor linkages between agriculture and urban markets often have blocked the growth that could occur through the processing of many agri-food products for domestic consumption, revealing substantial room for improvement.

Incentives to manage resources sustainably are limited, property rights are weak and insecurity is rising. Large land acquisitions for commercial agriculture have demonstrated for many farmers the fundamental weakness of their rights when faced with powerful domestic and international interests.

A "modern" agricultural sector is often assumed to be large and commercial. Much evidence, however, shows that Africa's herders and smallholder farmers, particularly mid-level farmers, are highly responsive to new technologies and better market opportunities.

Africa's forests and grazing lands are the major source of carbon emissions, estimated at one quarter of the continent's greenhouse gas emissions. Mitigation actions include reforestation, increasing the organic content of soils and landscapes, taking a watershed approach to managing water and large dams, and providing incentives to invest in rehabilitating soils and vegetation. There is much innovation in mitigation actions, such as shown by combining simple soil conservation techniques with securing firmer rights over farmland and grazing (Reij and Winterbottom, 2014). More resilient high-carbon landscapes can be built by combining a local approach to landscape management with access to decentralized funds, recognizing the centrality of investment in institutions that support the livelihoods needed in a climate changing world (Hesse, 2015; IED-Afrique, 2015).

A "modern" agricultural sector is often assumed to be large and commercial. Much evidence, however, shows that Africa's herders and smallholder farmers, particularly mid-level farmers, are highly responsive to new technologies and better market opportunities. African governments that have fulfilled their commitments to the Maputo Declaration, in which they pledged 10 per cent of government expenditure to agriculture, have seen benefits in higher yields and bigger harvests. Greater investment in agriculture by governments that have fallen well short of this 10 per cent target could generate not only incomes for farmers and food to feed the cities but also the raw materials on which to base a more substantial industrialization effort.

WATER AND ENERGY

As shown by the case studies in Chapter 6, huge difficulties remain in delivering basic services essential to long-term economic growth and development—"hardware" and "software". Continental and regional plans, such as the Programme for

Infrastructure Development in Africa, estimate that $360 billion will be needed over 2012–2040 to build the necessary water, transport and energy infrastructure to deliver economic growth. Everyone now recognizes that energy supply is the foremost infrastructural challenge needed for green industrialization. The African continent's inability to provide a secure, guaranteed supply of electricity to big and small users is an enormous burden (APP, 2015).

It was therefore timely that African governments launched a joint plan at COP21—the Africa Renewable Energy Initiative—which aims to add an additional 10 gigawatts of renewable-energy capacity to the African energy sector by 2020 and an additional 300 gigawatts by 2030. African households, businesses and individuals are hungry for energy and willing to pay for secure supplies. As experience from Kenya and South Africa shows (Chapter 6), opportunities abound for efficient, scalable and cost-effective renewable-energy generation and for more efficient use of generated power. When the regulations are framed properly, economies can attract considerable private sector funding to invest in energy infrastructure. The credibility of government, its regulatory and policy measures (such as feed-in tariffs and green procurement programmes), and better provisions for remittance of profits abroad are key to bringing in such funds.

Infrastructure for sustainable water use and management is also critical, with security of the water supply coming under ever greater stress in many countries. Some watersheds are already fully exploited, and others will need careful management of trade-offs between competing uses, while the shared benefits of doing so are made explicit to sectors and countries. At present, the win-win opportunities of moving to more sustainable patterns of water use are not as apparent as for renewable-energy provision. Identifying those benefits is possible, though, given that much of Africa's water scarcity is attributable to inadequate infrastructure and governance, meaning that water often is available in the wrong place at the wrong time.

Attracting the public and private sector investments needed to overcome the obstacles is a further opportunity for Africa to leapfrog in the greening process: investments in water infrastructure (both "hardware" in the form of dams and "soft" in the form of ecosystems) will be attractive if governance and regional integration are boosted.

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In all economies, infrastructural decisions require government to play a leading role, individually and in concert with regional partners. The scale of investment required and the long-term choices inherent in the location, design and construction of capital assets make such leadership a necessity. For example, given the expected phase-out of unabated fossil fuel use globally, governments must answer vital questions about the construction of large power generators and choice of fuels— oil, gas or coal. Some infrastructural investments demand that governments across a region engage in thinking about and planning new investments, such as big dams (in shared river basins) or regional power networks. Although much of the funding may come from multilateral

or private financers, government must provide guarantees of the broader policy environment so that investors are confident that their returns are assured and not exposed to policy risk.

The poor status of infrastructure is estimated to depress firms' productivity by as much as 40 per cent, while exposing people to high risks from flooding and from inadequate water, shelter and sanitation. Infrastructural investment has a long life and hence must be designed with future conditions in mind. For that reason, ensuring that major infrastructural spending draws on an understanding of likely risks from climate change and aligns with a low-carbon future is of increasing concern. The water and hydropower sectors are particularly vulnerable to rainfall patterns over the next 30 to 50 years. In a wet future, expanding hydropower capacity makes sense, whereas in a drier future, having built capacity that cannot be used owing to drought would be very costly. Because development decisions also place investments and assets at risk, a sensible step in all climate and development scenarios is to diversify energy supply by exploiting readily available renewable resources as widely as possible. Consequently, assumptions must be made about likely climate and development futures to factor those risks into design choices today (UNDP, 2011).

Decisions taken now will determine patterns of economic growth such as urbanization, energy consumption and industrial development over the next 30 to 50 years. Getting them right will avoid the risk that infrastructural investments lock in a pattern of production that maintains high-carbon and natural resource–intense systems, exposing people (and infrastructure) to the impacts of greater climate vulnerability. If chosen correctly, infrastructural investment can facilitate growth in new buildings, industry, mass transit systems and energy technologies and encourage the inclusion of renewable-energy systems in building and urban infrastructure design (NCE, 2014).

URBANIZATION

Urban development is a particularly urgent item on the infrastructure and investment agenda for government. The continent's population is forecast to more than double from 1.1 billion today to 2.3 billion by 2050, of whom more than half will be living in towns and cities. Such rapidity of population growth is a central concern and a great opportunity: by 2020, 24 of the world's 30 fastest growing cities will be African (FAO, 2012). Economic growth and urbanization are closely linked. Industry offers employment, whereas cities connect people, knowledge and innovation. Many urban inhabitants of middle- and low-income nations, however, suffer very large (and mostly preventable) health burdens from urban pollution and are increasingly exposed to the risks associated with inadequate planning, poor infrastructure and weak provisioning of basic services, which frequently leads to conflict. The main cause is a lack of capacity in urban governments for planning, food security, pollution control, waste management and environmental health. Few city governments have much finance to address those problems and ensure effective regulation. For instance, health burdens often are exacerbated in the substantial informal settlements that house more than 60 per cent of the city's inhabitants (APHRC, 2014). Urban areas have heavy concentrations of air and water pollution from transport, households, businesses and industry.

Greening African cities is one of the cornerstones of Africa's green industrialization and is a further opportunity to leapfrog the process. Cities bring together social innovation and critical skills, but they also need scaled-up infrastructure to ensure food, water and energy security. They are a focal point for fuelling green industrialization if designed in an inclusive manner—for both the poor and the better off.

Urban areas are also major centres of economic growth, accelerating industrial development with

skills, innovation and infrastructure. In Africa, a paramount task is that urbanization be greened—and quickly—through inclusive planning and implementation. Not doing so will result in lost opportunities and exacerbated stresses on urban populations, such as pollution and increased human insecurity. In the traditional model of urban expansion, industry often is pushed to city boundaries for practical reasons and to reduce the immediate impacts of pollution. Subsequently, increases in housing prices and jobs lead to the urban poor clustering around industrial areas or having to commute long distances. Thus, over time more people are exposed to higher pollution because industrial sites share the same neighbourhood as residential settlements and experience lower socio-economic development. The siting of industrial estates thus must be considered alongside social service provision, major transport links and energy and water systems.

As noted in 2014 by the High Level Panel of Eminent Persons on the Post-2015 Development Agenda, "cities are where the battle for sustainable development will be won or lost" (United Nations, 2013, p. 17). Consequently, attention must be paid to a wide range of municipal responsibilities, such as ensuring urban food security, especially for poorer neighbourhoods, establishing accountable and transparent means for acquiring urban land, setting urban land tax policy, securing municipal revenue streams for service delivery, inclusively planning new infrastructure, and protecting and greening public spaces. Clean air policies and integrated, green urban planning are key to reducing pollution and its adverse impact on human health, and to linking with wider energy choices, transport systems and industrialization options.

Monitoring performance and increasing compliance require data and information. Many local governments have few means to collect and process that data, however; hence some city governments work with federations of the urban poor and other civil society groups to draw on their skills, knowledge and perspectives. This model should be replicated. Mobile telephones offer an excellent way to "crowd-source" information about non-compliance with environmental standards, collect real-time data and access and provide information on extreme events, such as flash floods and wildfires. In the medium term, a reliable, simple system of data collection and indicators is important for African cities to identify their needs, plan their development and monitor their progress.[1]

THE POLICY TOOLKIT

LONG-TERM DEVELOPMENT PLANNING

Addressing Africa's pressing structural transformation and inclusive development challenges requires a coherent, integrated long-term development plan and associated frameworks. As emphasized in previous reports, to achieve better outcomes the development process has to be carefully planned. The changes to policy and practice required for promoting green industrialization and inclusive development are substantial and resources are limited, which means that thought needs to focus on how Africa can make better use of what it has.

Mobile telephones offer an excellent way to "crowd-source" information about non-compliance with environmental standards, collect real-time data and access and provide information on extreme events, such as flash floods and wildfires.

Decision-making cannot be left to market forces, nor can it rely on government acting alone. The interdependence of all elements can be dealt with better by creating a comprehensive development-planning framework rather than resorting to partial solutions. African countries and sub-regions have pervasive market and governance failures, so the information and coordination externalities involved in development can only be addressed when sectors, countries and stakeholders identify priorities and shared benefits, striking a balance between long- and short-term goals.

The interdependence of all elements can be dealt with better by creating a comprehensive development-planning framework rather than resorting to partial solutions.

The commitments in recent global and regional development frameworks offer tremendous opportunities to African policymakers for sustainable and green industrialization. The frameworks state the priority of tackling inclusion and environmental concerns. Exploiting the benefits of these initiatives, however, will require them to be integrated well within national planning frameworks. Africa's priorities are well reflected in the Sustainable Development Goals (SDGs), the Paris Agreement and the Addis Ababa Action Agenda, which should facilitate national buy-in and support for implementation.

Nevertheless, the broad scope of the SDG agenda—many goals, targets and indicators—means that policymakers will have to filter these components according to their own priority agendas while coordinating implementation of Agenda 2030 and 2063. At the same time, the inclusion of all nations—high-, middle- and low-income—in the SDGs may stimulate competition for an ever-shrinking pool of official development assistance. The Paris Agreement is conclusive on the amount of additional money needed to finance implementation although vague on where that money will come from. Policymakers in Africa must be mindful of these challenges and opportunities as they prepare for the transition to the new agenda.

MACRO POLICIES

Macroeconomic policy and the incentives driving it are key components of a green growth agenda. Beyond maintaining broad measures of price stability, predictable property rights and other macro policies that affect all investment, three fields of macro policy have particular relevance to the greening agenda.

The first is the pricing of water and energy. These two resources are critical inputs to the household and productive sectors. Their pricing not only affects the type and distribution of investment in the productive sector but also the distribution of income and patterns of social inclusion. Calling for higher prices that reflect the true environmental costs of these inputs is a politically sensitive issue, but it is a touchstone for green policy commitment. The "under-pricing" of water and energy can send adverse signals to users and severely distort consumption and investment choices.

For this reason (among others) several countries in Africa—including Angola, Egypt, Ghana, Kenya, Nigeria and Uganda—have sought to curb subsidies on fossil fuels (Whitley and van der Burg,

2015), incurring political pushback from rich and poor alike. In the short term, poorer groups will need protection from price increases (as when social protection measures are used to compensate for withdrawal of subsidies on fossil fuels, such as petrol and kerosene), but in the medium to longer term, firms and individuals need to move away from consumption of high-carbon energy. Key to making the case for subsidy reforms is to provide "clear, open and honest information on the scale of subsidies, their costs and impacts, who pays and who benefits, plans for reform, and complementary measures to be adopted" (op. cit.).

Equally, for decades, access to water often has been at little or no cost, especially for richer groups who can access water through piped supplies. By contrast, people living in informal settlements buy their water from street vendors, often paying prices more than 10 times higher. Water must be distributed more fairly to reduce waste and inefficiency and to offer incentives to conserve scarce supplies.

The second macro policy field concerns ways to address the adverse externalities arising from economic growth. A decisive approach is required that makes clear to producers their responsibility to internalize many of the costs of their operations that currently are externalized (such as effluent release into rivers and groundwater). Monitoring, regulation and sanctions of pollution incidents is the basic issue, along with measures to establish the norms, capacity and institutions to ensure a credible response. Pollution problems often are associated with informal activities, such as artisanal mining, that can generate much more destructive environmental spill-overs than activities of the formal sector. The informal sector must be brought into some form of government recognition, with the regulation of activity implied. Pollution outflows from many small and large industrial enterprises frequently are poorly regulated. Governments may be able to get better results through ensuring public access to information about standards and practice so that neighbourhood groups and civil society can add their voices to demand state action.

The third set of macro policy instruments is to achieve structural transformation. Typically, policy incentives and public investment must combine to steer the economy in specific directions to sustain appropriate forms of growth over the medium and long term (Chang, 2015). As noted by Oqubay (2015), the economic growth and transformation process has to be seen as shifting from one disequilibrium to the next, with the stresses and tensions so released helping to propel the structural changes. As we saw in Chapter 4, green structural transformation requires the development of systemic approaches to three types of green industrialization—moving out of polluting and out of energy- and water-inefficient sectors; decoupling water, energy and pollution intensity across the spectrum of productive activities; and expanding the green capital goods and services sectors. This systemic approach lies at the heart of green structural transformation.

Closely linked to it is the development of infrastructure that not only is green but that facilitates

... for decades, access to water often has been at little or no cost, ... through piped supplies. By contrast, people living in informal settlements buy their water from street vendors, often paying prices more than 10 times higher.

the greening of other sectors (such as off-grid infrastructure to enable decentralized growth of small and medium-sized enterprises). An additional and necessary accompaniment is to reorient research and technology organizations (including curricula in universities and other higher education institutions) to provide a suitable knowledge base for these broad pathways.

Most of this macro agenda is best pursued by national governments, with decentralized action led at the municipal and district levels. The systemic nature of much of the green transformation challenge, though, particularly for infrastructure, often requires cooperation across national borders. The United Nations Economic Commission for Africa, AfDB and the eight officially recognized regional economic communities (RECs) of the African Union—AMU, CEN-SAD, COMESA, EAC, ECCAS, ECOWAS, IGAD and SADC[2]—are well-placed to provide a platform for a coordinated response to the greening challenge.

Examples of shared concerns include food security, water management, transport infrastructure and regional power pools. Joint programmes within the RECs are critical to long-term management of scarce water resources, such as the many shared river basins in Africa and cross-border aquifers. The RECs also can help generate the flow of new ideas about investments and innovation, addressing capacity and technical deficits. The regional dimension is the connective thread that ties together new growth and sustainability, offering opportunities to learn and share experience with greening through strengthened regional integration.

GREEN POLICY INSTRUMENTS

Beyond macro policies are a raft of policies in each sector that will assist governments to roll out the green growth agenda. Those policies include establishment of eco-industrial parks, regulations for biofuel production and use, and feed-in tariffs, power purchase agreements, and green procurement programmes in energy. They also include technical support and training in fields such as geothermal energy, marine engineering and ecosystem management. Investment in better land management and integrated water resource management requires enabling institutions that provide secure rights to land, water and natural resources. In many African countries, property rights are uncertain, given the prevalence of legal pluralism, low levels of formal land registration, limited recognition by government of customary land rights, and weak rights associated with collective property, such as woodlands and pastures for grazing. If users are to invest in the long-term resilience of their lands and other resources, they need assurance that they will gain the benefits from such investment over generations to come.

BUILDING INCLUSION INTO GREENING INDUSTRIALIZATION

Africa's economic growth has not led to the broad spread of jobs, incomes and prosperity that many had hoped for. Although middle-class incomes and aspirations are multiplying for those individuals with the skills and education, a large and growing body of people have not reaped rewards from current growth patterns.

Designing policies and institutions requires making choices. Building a inclusive perspective into the way government provides support, funding and services can result in better distributional outcomes (box 7.2). Policies with that perspective emphasize the need to design processes that enable different groups to participate, recognizing the highly unequal access to power between the rich and the poor and between urban and rural groups.

BOX 7.2 DESIGNING POLICY AIMED AT GREEN AND INCLUSIVE DEVELOPMENT

1. *Focus on creating decent green jobs.* Seek out inclusive returns by considering local investments that create jobs with low energy, resource and financial costs, as alternatives or complements to capital-intensive, nationally driven investments. Identify opportunities throughout industrial lifecycles to boost job creation, as in renewable-energy programmes. Promote and enshrine skills upgrading and decent work in laws to increase the likelihood of such co-benefits. Explore opportunities in the informal economy, co-designing job creation with target communities.
2. *Recognize the limits of economic methodologies and market instruments.* Economic-valuation tools and cost–benefit analysis risk overlooking long-term value, distributional impacts and social and cultural goods and services. Market-based instruments such as cash transfers may provide safeguards, but their ultimate effectiveness depends on institutional capacity and accessible procedures being in place.
3. *Promote poor people's empowerment and address elite power.* Recognize power imbalances and ensure that policies and services are designed with and for local communities. Support the decentralization of natural resource access, use and governance to the community level wherever possible. Policies and services should recognize and address the influence of powerful elites and interests in blocking (to others) and capturing (for themselves) the benefits of green policymaking.
4. *Prioritize participation—especially of women and marginalized groups—in policymaking.* Policies should be co-designed with and for the target communities, especially women and vulnerable and minority groups. Develop participatory methodologies and invest in capacity building and education about greening. Provide specific skills training and childcare to help women benefit from opportunities in transitioning sectors, and promote equitable governance within the community.
5. *Support adaptive, context-specific and local policy approaches.* Recognize the influence of local sociocultural factors—not only laws and regulations—on the success or failure of interventions. Policies should be context specific (not "one size fits all") and capitalize on local opportunities. Successful outcomes often are achieved at local-authority scale by harnessing the dynamics and reinforcing the benefits of local change. Policies must be adaptive and flexible to changing circumstances and project outcomes.
6. *Consider spacing, timing and phasing.* The transition to a green and inclusive economy will not be smooth. Understand the geography of sectoral change: stranded assets, induced migration, job creation and losses and their associated opportunities and threats. Anticipate the timing of greening interventions, and consider phasing in policies to protect any communities vulnerable to changes in prices or regulations.

SOURCE: BASED ON RAWORTH, WYKES AND BASS (2014).

The box suggests multiple ways to broaden the benefits of a green policy agenda so that it builds on the knowledge and priorities of poor groups and provides them with better jobs, wider opportunities for training, and more secure assets and livelihoods. A conscious bringing together of the policy measures targeting inclusion and green industrialization can then deliver on all three policy imperatives of green growth, inclusive growth and industrialization (as shown in figure 3.4). Given the impact of climate change, attention must focus on building more resilience into land, food, water, shelter and energy systems so that damage from climate disasters does not reverse the gains of green, inclusive industrialization.

BUILDING PLATFORMS FOR LEARNING AND INNOVATION

International experience shows that the first critical steps in sparking innovation often are initiated by governments and other public bodies (Mazzucato, 2011). The key decisions in Africa's productive sector, however, are to a greater or lesser degree determined by the private sector—whether the large corporations, family businesses or many millions of small farms. The private sector, too, in all its diversity must be on board for the green growth journey.

The private sector, too, in all its diversity must be on board for the green growth journey.

Some lead firms that feed into final markets in high-income countries, for example, are already committed to greening their supply chains (although corporate policy visions are not always executed effectively). In some sectors, a key driver for greening is the pressure exerted by civil society groups. They often play an influential role in assisting producers, particularly small and marginalized producers, to develop their capabilities to take part in green growth.

Be that as it may, whoever initiates green innovation and implements greening in the productive sector will need help from universities and from research and technology organizations in a country's national innovation system. Hence, a critical component of the macro policy agenda is to develop a platform on which the public sector, the private sector, civil society groups and knowledge institutions can join together in greening growth. International experience shows that if the non-state parties are only brought into the picture at a late stage to implement government policy, progress will be patchy. They need to be involved in policy development—not just implementation—including within their own value chains.

National dialogues on what makes a Green Economy are important to kick-start local and national actions. Thus, for example, the Green Economy Coalition—a global network of diverse organizations from business, research institutes, trade unions, United Nations bodies and non-governmental organizations—has facilitated more than a dozen national, multi-stakeholder dialogues aimed at exploring how to build a greener, more inclusive economy (GEC, 2013). In Zambia a platform has been built bringing together the Ministries of Finance and of Lands, Natural Resources and Environmental Protection; the Organisation for Economic Co-operation and Development (OECD); and the AfDB; alongside civil society organizations and university researchers, to scope the local actions, policy measures and

funding opportunities that could contribute to Zambia's Inclusive Green Growth Strategy (Banda and Bass, 2014).

Software for greening industrialization requires continued investment in the skills, networks and institutions essential, such as health and education, innovation capacity, business connections, and information and communications technology. Institutions—although invisible—are critical for achieving collective action at local, municipal and national levels. Several universities have been connecting to entrepreneurs to create innovation hubs in which new business can be supported by the ideas and technical skills of the research sector. These hubs for "incubating" new entrepreneurs are key to bringing practical science and technology into a growing green sector. Also needed is investment in the quality of officials in the public administration and public sector management to ensure high standards for probity and to address tax evasion and illicit financial flows (UNECA, 2013; 2014). Investment in data quality and availability often is neglected, despite its importance. One option could be to draw on the skills and energies of civil society and crowd-sourcing data as alternative means to monitor the environmental performance of large firms, as has been demonstrated by Ma Jun and the Institute of Public and Environmental Affairs in China.

Investment in data quality and availability often is neglected, despite its importance. One option could be to draw on the skills and energies of civil society and crowd-sourcing data as alternative means to monitor the environmental performance of large firms, ...

ENSURING SYSTEMIC GREENING: SUPPLY CHAIN MANAGEMENT

Greening the value chain requires change throughout the chain—all chains are only as strong as their weakest link. To achieve such greening, countries have an opportunity to learn from extensive global experience of supply chain upgrading in the industrial sector. Essentially, supply chain management was pioneered in the Japanese automobile industry in the 1960s and 1970s, which subsequently diffused widely through most industrial and service sectors, as well as in agricultural value chains (Kaplinsky, 2005). The central idea of supply chain management activities is that individual firms (or links in the chain) need assistance in adjusting to new forms of organization, both within their operations and in the way they relate to other firms.

Once firms see the benefits of upgrading their production processes, it becomes autonomous and dynamic. Government must provide the incentives that induce the upgrading and the support for training programmes to develop those capabilities, both within supplier firms and in the business services sector. Government support for efficiency improvements in the South African automobile sector provides a useful model of what can be achieved in a chain-greening programme. The key step was the demand from the lead auto assembling firms that all parts of their chains should upgrade. Then the government gave initial support for the business services sector to work with suppliers to help them meet the new requirements of the lead firms. These business services were subsidized in the early years of the programme, but once supplier firms saw the financial benefits of upgrading, it became self-financing.

The lesson for supply chain greening in value chains is therefore that governments induce this chain upgrading through subsidies, which then tail off as the greening begins to finance itself. Small firms, particularly in the informal sector or headed by women and other disadvantaged groups, may require greater incentives, and much can be learned from attempts to promote inclusion in Africa's horticultural global value chains.[3]

THE REGIONAL DIMENSIONS OF GREENING INDUSTRIALIZATION

Greening industrialization and the broader growth pathway have strong regional dimensions, with the RECs providing a foundation to support the structural transformation in five areas.

First, countries in each region face many common challenges that benefit from joint research, learning, reflection and coordinated action. Second, as described earlier, many shared resources cross boundaries and require a collective approach to be managed as a system, such as aquifers, wildlife, river basins and forest resources. Third, economies of scale and connectivity offer huge benefits in certain industries and areas of service provision, especially energy. Fourth, infrastructural investments make much more sense if planned regionally, such as transport links for enabling landlocked nations to access seaport facilities. Finally, differences in ecology and climate systems at a regional scale offer good opportunities for countries to specialize in specific areas of farm produce and processing for wider regional markets and distribution. An obvious example is West Africa, spanning humid, tropical coastal regions that produce oil palm, coffee, pineapples and bananas to the dry grazing lands and irrigated agriculture of the Sahel, which generates meat, rice and sugar.

FINANCING GREEN INDUSTRIALIZATION

Massive financial resources are needed to green Africa's industrialization. In the short term, it is likely to cost more than investment along BAU lines. No detailed figures are available for the continent, but global numbers give a clue: the New Climate Economy Commission reckons that, globally, the net incremental infrastructure investment needed for a low-carbon transition up to 2030 could be just $4.1 trillion if the investments are done well—equivalent to a 5 per cent increment over BAU. According to the NCE (2014), "between public and private sources, there is already sufficient capital available to finance a low-carbon transition. However, the ambiguity, inconsistency and lack of predictability in policy settings creates high government-induced uncertainty, especially for long-lived assets." Hence, establishing predictable regulation and associated policy are critically important in providing confidence to investors in low-carbon activity.

Financial resources will come from a mix of remittances, green bonds, diaspora bonds, domestic revenue, foreign investment, municipal finance, international climate finance and other sources. The signal to curb or even end fossil fuel dependence potentially releases a large source of predictable green finance. Fossil fuel subsidies around the world amount to approximately $600 billion a year. Some of that money could be diverted—through reforms to such subsidies—to finance the green agenda.

To make the best use of this mix of financial resources, some countries have set up a national funding mechanism that can receive climate-related finance and allocate funds to low-carbon and climate-resilient investments. The United Nations Framework Convention on Climate Change (UNFCCC) and the Green Climate Fund encourage countries to establish direct access modalities,

such as "national implementing entities," to act as the principal conduits for global climate funds (Rwanda's National Climate Fund offers a good model). As of mid-2015, 20 countries had reported their entities to the Green Climate Fund, including 5 from Africa—Kenya, Namibia, Nigeria, Rwanda and Senegal. Given the fund's potential scale of financing, a vital task is for other African governments to register their agencies or government structures as recipients and managers.

The private sector has long been seen as an important source of climate finance, and there is now much greater focus on bringing sustainable development and green growth to the heart of corporate governance. An array of initiatives are emerging, alongside guidelines for green reporting and accountability mechanisms. Earth on Board, an embryonic initiative supported by the World Business Council for Sustainable Development (WBCSD) and the Cambridge Institute of Sustainability Leadership, aims to target corporate governance in multinational companies and those working in countries that urgently need to embark on green growth pathways.

Led by South African judge, Mervyn King, the King Reports have provided stimulus to corporate boards to change the way they govern. Although developed in South Africa, with implementation under the watchful eye of the Johannesburg Stock Exchange (JSE), the King reports are globally renowned and hence can influence corporate governance around the world. King III, the latest of these broadened the scope of evaluating ethical corporate behaviour, and has elevated "sustainability" to constitute the primary imperative not only for private firms, but also for public entities, non-profits, and civil society organisations. The report argues for a transformational shift in the way public and private entities integrate notions of sustainability within all facets of operation, and insists on new benchmarks for annual evaluation and reporting of non-financial performance indicators, for the benefit of consumers and shareholders.

Good news from growing global experiences—for example in leveraging private investment with relatively small amounts of public finance—can reassure countries embarking on the green agenda. Equity and debt financing by public institutions, especially development banks, has been a crucial catalyst of private investment, as have green bonds, feed-in tariffs and publicly sponsored insurance schemes that cover political and currency risk (Zadek, 2013). Moreover, middle-income countries are emerging as a rapidly growing source of green finance. Recent growth rates from investments originating in non-OECD countries (which grew from $4.5 billion in 2004 to $68 billion in 2011) surpassed similar investments by OECD countries in 2012. In 2013, China's investments in renewable energy at $56.3 billion exceeded Europe's for the first time (UNEP, Bloomberg New Energy Finance, and Frankfurt School-UNEP, 2015) and the Asian Infrastructure Investment Bank (AIIB) will be a new potential source of investment for Africa.

African countries face differing financial opportunities and constraints. In middle-income nations such as South Africa, public resources raised through bond issues and fiscal measures can

The report argues for a transformational shift in the way public and private entities integrate notions of sustainability within all facets of operation, and insists on new benchmarks ... ... for the benefit of consumers and shareholders.

provide funds for key infrastructure and delivery of public goods in which the private sector is unlikely to invest. As noted by UNEP's Inquiry into the Design of a Sustainable Financial System (2015), public funds will inevitably be limited. Instead, governments will have to find ways of accessing private capital at scale, "with banking alone managing financial assets of almost US$140 trillion and institutional investors, notably pension funds, managing over US$100 trillion, and capital markets, including bond and equities, exceeding US$100 trillion and US$73 trillion respectively" (p. xiii).

Access to low-carbon energy could follow the model of mobile phones, with prepayment cards as a means to ensure cost recovery for investors.

In low-income countries, with their limited domestic resources, multilateral development banks and international development finance will likely continue playing a key role in funding infrastructural investment. Access to low-carbon energy could follow the model of mobile phones, with prepayment cards as a means to ensure cost recovery for investors. Curbing illicit financial outflows and promoting domestic resource mobilization are also critical.

Translating those developments into investments for Africa requires change at four levels.

AFRICA NEEDS TO TAKE CONTROL OF ITS ECONOMIC STRATEGY AND SET ITS OWN AGENDA

In seeking to benefit from green industrialization, African countries must determine their financing and green agendas with a view to attracting investments that target job creation, greater income generation and local content, while reducing resource scarcity. In doing so, Africa must look to its primary development partners and its own fiscal spending. For decades, African countries have relied heavily on traditional OECD Development Assistance Committee country support, and certainly those donors are major drivers behind green growth and climate change mitigation. Growing evidence, however, indicates that the BRICS countries (Brazil, Russia, India, China and South Africa) are taking the lead in investment, particularly in developing Africa's resources and infrastructure.

For example, the New Development Bank (NDB), often referred to as the BRICS Development Bank, is a multilateral development bank operated by the BRICS countries. NDB is an alternative to the existing United States– and European-dominated World Bank and International Monetary Fund. Alongside the new Asian Infrastructure Investment Bank, the New Development Bank could provide Africa with increased opportunity to manage the financing of its green growth agenda. On the home front, most African countries need to make adjustments to their fiscal arrangements and policies, with support from their RECs, the AfDB and regional development banks.

AFRICA NEEDS TO PLAY A DECISIVE ROLE IN REFORMS TO INTERNATIONAL TRADE AND FINANCE RULES TO ENCOURAGE GREEN GROWTH TRANSITIONS

The World Trade Organization has been largely silent in global climate negotiations, including COP21. Africa has demonstrated that it can have

a strong and collective voice in the UNFCCC negotiations. The continent developed and evolved the African Common Position on Climate Change, mandated by the Committee of African Heads of State and Government on Climate Change and the African Ministerial Council for the Environment and implemented by the African Group of Negotiators. The position statement has helped to ensure that the interests of African countries are well represented in the global climate deal, and it shows what might be possible in influencing the international trade regime if African countries work together well on issues such as export subsidies. Equally, some of the current trade rules, supported by international development finance institutions, block the opportunities for industrial and economic gains from green investment and should be lobbied against. Progress must be made in high-carbon sectors, such as aviation and maritime transport, in which, to date, a global approach has been blocked.

FINANCIAL MARKETS NEED TO TAKE A LONGER TERM VIEW, WITH COMBINED MARKET-LED ACTIONS AND CLEAR, CONSISTENT POLICY

Much can be done to include environmental risks in credit ratings and ensure fuller disclosure of how investors price natural resources, such as water, carbon and energy. Again, inspiration can be drawn from an increasing wealth of experience. The CDP (called the Carbon Disclosure Project through 2012), designed to stimulate disclosure of environmental risk, launched a project to raise business awareness of water-related risk. In 2015 more than 617 institutional investors representing more than $63 trillion in assets supported this project (CDP, 2015).

Further, the reinsurance sector, led by major firms such as Munich Re Group (active in Africa) and Hannover Re, is heightening awareness of climate and natural-disaster risk. Through robust actuarial analysis, these institutions are able to understand the cost of these and related risks. Africa has the emerging Africa Risk Capacity facility, an insurance risk pool that aims to capitalize on the natural diversification of weather risk across Africa. This allows countries to manage their risk as a group in a financially efficient manner to respond to probable, but uncertain, risks. Nonetheless, as advanced countries' financial sectors remain largely resistant to reform, Africa's challenge will be to stimulate global reform while promoting reform in its own financial markets.

WHATEVER THE SOURCE OF FUNDING, PUBLIC AND PRIVATE FUNDS MUST REACH DOWN TO THE DECENTRALIZED LEVELS OF GOVERNMENT THAT CAN IDENTIFY MORE CONCRETE INVESTMENTS

Whether in building climate resilience, designing low-carbon energy systems, or practising sustainable landscape management, local voice and knowledge must be able to shape investments. Recent work in northern Kenya, Mali, Senegal and Tanzania demonstrates the great value to be gained from working with local government to harness local initiatives and institutions for designing resilient investments (Hesse 2015). Hence, government has to ensure that national funds operate according to clear guidelines for sharing resources allocated to local governance and implementation.

7.2 CONCLUSIONS

If African governments are to achieve structural transformation and sustainable development through greening industrialization, the state needs to play the leading role in setting out this agenda, providing leadership at the highest level, and offering a clear, credible and consistent policy framework. To shift from a business as usual pathway demands more than marginal changes to policy, investment, resource allocation, and the overall pattern of incentives. A step-change is needed not only in the vision and strategy laid out by government, but also in the quality of the partnership offered to the private sector, both small- and large scale. It requires a systemic approach across sectors, stake-holders and scales so the principal drivers of change are aligned behind a low carbon growth pathway. While this agenda might seem complex and difficult, there are good models being followed already in Africa, and neighbouring continents from which to seek inspiration and practical guidance.

Earlier chapters in this Report show that much of this can be achieved with win-win outcomes. But this will not always be the case, and painful choices and trade-offs will be inevitable. However, as seen in Chapter 5, greening of industrialization is a crucial and necessary requirement for growth to be sustained, not just in the long term but increasingly in the short and medium term as well.

African countries have the chance to take a forward role in achieving the structural transformation they seek, greening their economies, generating jobs, and showing the responsibility they take for long-term stewardship of the earth.

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7.4 ENDNOTES

1 ERA 2017 will focus on urbanization in Africa and consequently address these issues and policy options in much greater depth.

2 The eight RECs are the Arab Maghreb Union (AMU); Common Market for Eastern and Southern Africa (COMESA); Community of Sahel-Saharan States (CEN-SAD); East African Community (EAC); Economic Community of Central African States (ECCAS); Economic Community of West African States (ECOWAS); Intergovernmental Authority on Development (IGAD); and Southern African Development Community (SADC).

3 http://www.capturingthegains.org