



E3G

Toward Low Carbon Resilient Economies

Implications for the Fast-Start
Finance Package

Monica Araya

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More information is available at www.e3g.org

Third Generation

Environmentalism Ltd (E3G)

4th floor, In Tuition House

210 Borough High Street

London SE1 1JX

Tel: +44 (0)20 7234 9880

Fax: +44 (0)20 7234 0851

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The author can be contacted at monica.araya@e3g.org

Executive summary

A low carbon transition is underway but current efforts do not meet the <2°C imperative. Accelerating the low carbon transformation will require new models of low carbon development; the faster countries experiment with these models the better. Innovation will also be needed to effectively respond to the impacts of climate change: geopolitical realities make the prospect of a <2°C deal uncertain making it wise for countries to build climate resilience strategies guided by a principle of **‘aim for <2°C, plan for 4°C’**.

A hybrid system of public and private finance is needed to provide incentives to leave behind business-as-usual growth and development formulas, and to mobilise capital toward low carbon resilient economies. The fast-start package in the Copenhagen Accord needs to deliver **higher value for contributing countries and recipients**. This would allow for moving beyond one-off efforts, which lead to marginal efficiency improvements rather than transformational change. A key priority for 2010-2012 is to demonstrate the feasibility of climate resilient development strategies.

Moving toward a transformative fast-start finance package has **operational implications** for donors, recipients, investors and multilateral development agencies:

Developed countries

- > Secure allocation of funds for a diverse set of countries (small, medium and large economies) to design detailed long-term transformative models of decarbonisation and resilience;
- > Allocate a portion of the funds for implementation of transformative sectoral or city-level projects (e.g. transport sector) even if they entail higher costs;
- > Adopt a portfolio approach to delivering funds to increase a ‘race to quality’ among providers of climate finance and learning from multiple mechanisms;
- > Balance the short-term need for ‘quick wins’ and the longer term benefits; avoid the current model of supporting one-off projects with little transformative potential (e.g. projects that focus on sourcing the ‘cheap tonnes of carbon’);
- > Switch to a model of engaged ‘low carbon partnerships’ that create opportunities for joint problem solving and longer term prospects for trust-building diplomacy. We need to move beyond stiff donor-recipient formulas.

Developing countries

- > Design pathways to decarbonise the economy (or at least key sectors) and build resilience to 2020 – underpinning the legitimacy of these strategies are transparent stakeholder engagement processes;
- > Invest in the design of, and public debate over, low carbon development plans (the 'what') that specify time-bound priorities and a specific financing route (the 'how');
- > Map out an institutional pathway for a country to lock-in structural change in priority sectors (e.g. blueprint for existing institutions or creation of new ones, dealing with incumbent interests) including mechanisms to assess and report progress publicly.

Private investors

- > Develop new low carbon investment vehicles, such as green bonds, to increase the learning about what works where;
- > Pioneer analytical tools and business models to map out strategic implications of climate change for their asset allocation – investors need to assess opportunities of moving toward a <2°C economy but also the risks of a 4°C world. No adequate empirical and analytical model exists in this area.

Development banks

- > Regional and national development banks aim to increase their role in climate finance but their lending still favours high carbon infrastructure; they could use the fast-start finance period to test mechanisms that de-risk low carbon investing in developing countries;
- > National development banks (e.g. KfW in Germany and BNDES in Brazil) in particular have accumulated on-the-ground experience that remains unknown in the international debate. A public good could be derived from the lessons learned from engaging the private sector within developing countries;
- > The World Bank's Climate Investment Funds (CIFs) are frontrunners in low carbon lending and could provide valuable lessons for the Bank and other development finance institutions. The World Bank needs a strategy to avoid the risk of CIFs becoming a one-off effort with little impact on the rest of the Bank's lending.

1. The transition to low carbon economies

A low carbon transition is underway but current efforts do not meet the <2°C imperative. This year more than one hundred and twenty nations put forward pledges to cut emissions and increase climate resilience in the context of the Copenhagen Accord. These pledges, however, are insufficient to deliver climate security.¹ To properly manage risk and protect vulnerable communities, climate strategies going forward must build on a new principle of ‘aim for 2°C, prepare for 4°C’. A step change is therefore needed to ensure that decarbonisation efforts are complemented with more aggressive actions to build resilience against the effects of climate change.

Discreet policy interventions will not be sufficient to transform growth and development pathways. To be consistent with the latest science, the global *energy* economy will need to be carbon neutral by 2050. Simultaneously, countries will need to make long-term investments in climate-proofing infrastructure, especially in the developing world, to avoid hampering development prospects. We need to start laying the foundations for these radical transformations. Industrialised and emerging economies need to develop roadmaps to 2050 for transforming all sectors of their economies. These strategies will allow countries to identify trade-offs, avoid lock-in to long-lived, high carbon infrastructure and maximise the economic and energy security opportunities.

1.1. Incentives for transformational strategies

A new generation of models of decarbonisation and resilience is required, and experimentation will be crucial for delivering robust national strategies. Given the current degree of experimentation, the next two to three years will be critical to demonstrate the feasibility of low carbon, resilient development strategies. The faster countries start the better. Incentives such as fast-start financing are not conditionality but rather an inventive approach to advance structural change and public-private investment.

¹ Rogelj, J. et al. “Copenhagen Accord pledges are paltry,” *Nature* 464, 1126-1128 (2010) doi:10.1038/4641126a <http://www.nature.com/nature/journal/v464/n7292/full/4641126a.html>

No mature *national roadmaps* for transformation exist yet but experimentation is on the rise.² Some prototypes are already being developed in South Korea, South Africa, Mexico, Guyana, Costa Rica, the UK and the European Union (Table 1). It will be critical that pioneering countries that see the benefits of moving quickly to a low carbon, resilient economy are able to move fast to seize the opportunities. A global public good is created by drawing learning from early experimentation that can encourage similar progress in other countries.

Table 1. Prototyping is on the rise (Examples from mitigation)

Country	Vision	Innovation
China	Low carbon zones to provide a laboratory for large-scale low carbon private and public investment. Europe-China collaboration to pioneer approaches compatible with Chinese institutions and development.	Low Carbon Zones build on 1980s Special Economic Zones (SEZs).
Costa Rica	Carbon neutrality by 2021 including 100 percent renewable energy target. Climate to be mainstreamed in foreign affairs and competitiveness agendas.	Economy-wide focus; beyond REDD focus.
Guyana	Shift toward low carbon development over a decade. Strategy and multi-stakeholder process designed through partnership with Norway.	Climate and development as reinforcing goals.
Maldives	Carbon neutrality by 2020. Climate change central development priority for government .	Island with focus beyond adaptation.
Mexico	Emissions peaking in 2012 and 50 percent reduction below 2000 levels by 2050. Establishment of low carbon development scenarios and priorities.	2050 time horizon; peaking objectives; investment platform.
South Africa	Detailed long-term mitigation scenarios. Assessment of growth potential of low carbon industries.	Stakeholder consultation; long-term planning.
South Korea	Plan to guide transition to low carbon economy. 80 percent of economic stimulus package going into low carbon measures.	Green recovery; public resources commitment.
United Kingdom	Decarbonise economy by 2050, subject the economy to carbon budgets and independent monitoring – three key periods are defined. 34 percent target by 2020 based on 1990 levels.	First legally-binding commitment to 2050.

² Governments have developed a set of policy tools to promote decarbonisation (such as energy efficiency standards for buildings and industry, and renewable energy incentives such as feed in tariffs and cap and trade systems) but what this point refers to is the lack of country experiences with respect to economy-wide transformative plans.

Despite country differences, some common lessons are emerging. Without systematic analysis of long-term decarbonisation, countries are less likely to address inertia and institutional barriers to change. Without a credible institutional pathway (e.g. dealing with political opposition from incumbent interests) the government will not be able to send credible signals that mobilise long-term investment toward a low carbon economy. Experience so far confirms that discreet policy interventions, for example, a feed-in tariff system or energy efficient program, will not be sufficient to achieve market transformation and structural change; these interventions will need to be embedded in a broader framework³ that builds on:

- > *Time-bound priorities:* South Korea's strategy provides a vision for green growth and development to 2050 to be implemented through five-year plans.⁴ The 2009-2013 plan specifies ten policy directions, and fifty core projects along three core strategies: climate change and energy; clean transport and green technology (identifying 27 key technologies). The government will invest \$83.6 billion representing 2 percent of GDP and the plan specifies institutional roles.
- > *Market transformation:* Experiences in South Korea, Mexico, South Africa, and the EU highlight that the challenge is not simply to put in place specific policies (e.g. feed-in tariffs or a cap-and-trade system) but to transform energy and transport markets in the long run. Structural change in fiscal and financial patterns will be essential in shifting away from market dynamics as usual.⁵ This will require far more transparency about national budgets and spending in order to quantify and eventually phase-out fiscal bias toward the high carbon economy (e.g. subsidies to electricity that outweigh any benefits accruing from discreet efficiency standards).
- > *Carbon budgets and monitoring:* The UK adopted a legally binding commitment to achieve a 34 percent cut in emissions on 1990 levels by 2020.⁶ A low carbon transition plan plots how the reductions will be met by setting 'carbon budgets' for each sector. To ensure transparency, progress is assessed by an independent commission that reports to the Parliament.
- > *Public participation:* Strategies that are negotiated behind closed doors will not survive in the long run. Transparency helps them win political support. South Africa has taken a participatory approach to developing long-term planning scenarios and

³ This national framework should build on measures that aim to achieve efficiency gains (specific programs that incentivise efficiency targets). But the point to emphasise here is that in the absence of a national framework marginal efficiency gains alone will not be enough to decarbonise the economy.

⁴ UNEP (2010) Overview of the Republic of Korea's National Strategy for Green Growth. April.

http://www.unep.org/PDF/PressReleases/201004_UNEP_NATIONAL_STRATEGY.pdf

⁵ For an in-depth analysis of decarbonising the energy sector to 2050 see www.Roadmap2050.eu

⁶ See the plan at: http://www.decc.gov.uk/en/content/cms/publications/lc_trans_plan/lc_trans_plan.aspx

drafting their long-term strategic plan. A national planning commission was recently created to design the strategy, encourage public feedback, and present the results to the Cabinet.⁷

1.2. The investment challenge⁸

The shift toward low carbon, resilient development requires a massive mobilisation of capital. The world will need to invest \$525 billion per year in addition to business-as-usual investments – about \$1 trillion per year – if we are to meet projected global energy demand through to 2030 *and* meet a 2°C target. This sum would be even higher if it included investments in climate resilient infrastructure around the world.⁹ The mobilisation of low carbon investment at this scale is unprecedented and requires a fast scale-up of capital, especially private.

Mobilising low carbon investment, however, encounters fundamental barriers, which are more pronounced in the developing world. Low carbon investments often entail *upfront payments* that tend to be higher in the *short-term* than those associated with high carbon equivalents thus keeping investors away (renewable energy plant versus traditional plant). Moreover, some of the low carbon technologies required also suffer from a *confidence gap*: often these technologies are less known and face obstacles to commercialisation and scale up (e.g. wave and tidal technology). Moreover, the feasibility of low carbon technologies may be *too reliant on government intervention* such as subsidies, renewable obligation contracts and taxes that are often short-lived. There is also an *aggregation challenge* often seen in the area of energy efficiency upgrades where a lack of coordination amongst users, investors, and government often derails potentially transformative projects.¹⁰ Furthermore, perceptions of *high operational* (e.g. conflict) *and country risks* (e.g. weak rule of law), combined with insufficient project scale, remain a fundamental barrier to low carbon investments in the developing world.

Transforming the investment landscape requires new efforts to ‘de-risk’ low carbon finance. Governments will need to lower and/or manage the risk to investors through, *inter alia*, long-term policy frameworks that provide clarity on cash flows and match investment timescales as well as public financing and guarantees. Other

⁷ <http://www.thepresidency.gov.za/nationalplanningcommission.asp>

⁸ This section builds on E3G’s paper by Holmes, I and Mabey, N “Accelerating the transition to a low carbon economy: The case for a Green Investment Bank.” (2010) <http://www.e3g.org/programmes/systems-articles/green-infrastructure-bank-green-bonds-and-policy/>

⁹ IEA (2009) World Energy Outlook 2009.

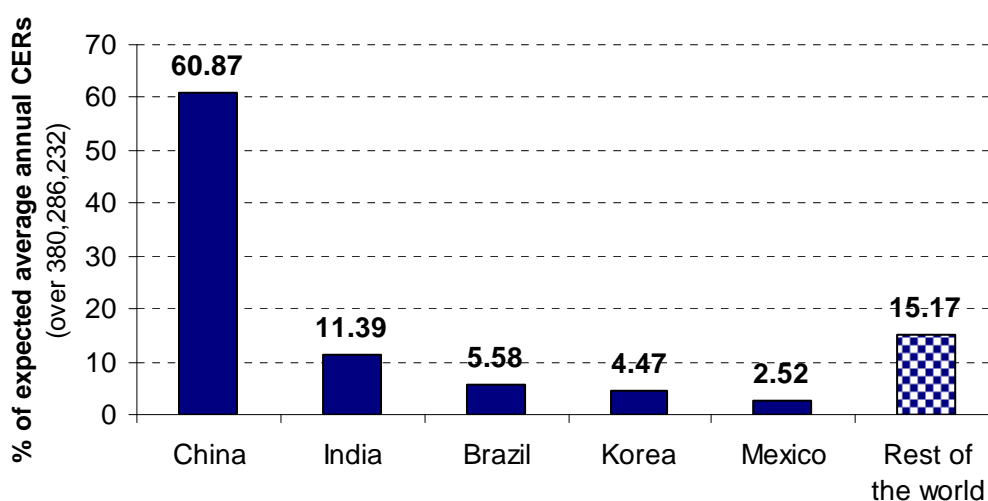
¹⁰ For example, in the UK energy efficiency improvements (improved windows, lighting and temperature control) involve millions of houses and commercial plants, which could add to more than £100 billion in investments.

incentives to investors such as paying higher prices or public sector grants could be used too. If investors are concerned about policy risk the answer is to remove the risk rather than provide ‘green cash’ to the investor. Because taxpayers and consumers will often pay for the costs of projects, it is critical to design low carbon finance schemes that avoid paying unnecessary rents.

2. Building a transformative climate finance system

> **The current model of climate finance is not fit for purpose given its inadequate scale and limited reach.** A majority of climate finance flows – about \$9 billion in 2009 - accrue from the Clean Development Mechanism (CDM).¹¹ While the mechanism has increased climate money flowing into developing countries, it tends to chase least expensive tonnes of carbon with little or no impact on the country’s economy and politics. Because CDM projects seek to reduce Kyoto compliance costs in developed countries, carbon finance tends to focus on the largest and cheapest abatement opportunities in big developing country emitters. As a result, CDM finance reaches only a handful of countries. As Figure 1 shows, five countries dominate the CDM market, with China alone generating most of the credits.

Figure 1 Five nations produce ~85 percent of CDM credits; China 60 percent of the total¹²



Source: UNFCCC statistics, Sept. 2010

¹¹ UNEP and Partners (2009) Catalyzing Low Carbon Growth in Developing Countries.

¹² UNFCCC (March 2010) Data used are the expected averaged annual certified emission reductions (CERs).

2.1 Key gaps

A step change in climate finance is required to tackle three fundamental gaps and reach the scale required: 1) Insufficient leverage of private sector capital; 2) inadequate response to adaptation programs; and 3) lack of reach in middle-income economies.

- > **The private finance gap:** No amount of aid and CDM finance will deliver the infrastructure that is required in the developing world to shift to low carbon resilient trajectories. Institutional fragmentation further undermines the effectiveness of the climate finance system. To best leverage private sector capital, key players including the UNFCCC, the World Bank, regional development banks and bilateral donors need to coordinate and be transparent. The goal is to promote the design of *prototypes*: testing new models that can scale up private capital flows going into the low carbon resilient economies.
- > **The adaptation gap:** Present climate finance mechanisms are failing to mobilise the capital required to fund adaptation projects at the pace and scale required. Least developed nations have identified needs in the order of \$2 billion under their National Adaptation Programmes of Action (NAPAs) but less than \$300 million has been delivered thus far through the adaptation fund run by the Global Environmental Facility.¹³
- > **The middle-income economies gap:** The current climate finance system does not work for middle-income economies.¹⁴ They are ‘insufficiently large’ to lure CDM investors (See Figure 1) and ‘insufficiently poor’ to be a priority of ODA flows. Colombia is a case in point: the country will need to invest nearly \$3 billion in the next years to decarbonise its transport sector and invest in energy efficiency. Most of the financing is expected to come from loans by regional development banks, with only about \$30 million expected to come from carbon markets and \$6 million from grants. Moreover, Colombia is highly vulnerable to climate change and will need adaptation financing, but international fundraising is difficult given the scarcity of resources flowing into adaptation projects and the need to give priority the most vulnerable nations.

¹³ Key challenges in adaptation finance also include unclear guidance and high transaction costs associated with preparation of NAPAs and applying for funding under GEF mechanisms, red tape, the delays in the operationalisation of Adaptation Fund and language barriers for documentation process. IIED (2009) Assessing the costs of adaptation to climate change: A critique of the UNFCCC estimates. By M. Perry et al.

¹⁴ These economies are mostly in Latin America, Central Asia and Eastern Europe. Lower middle-income group includes economies of \$976 - \$3,855 (2008) GNI per capita and Upper middle-income group \$3,856 - \$11,905 (2008) GNI per capita. <http://data.worldbank.org/about/country-classifications>

> **The transport gap:** Emissions in the land transport sector have one of the fastest growth rates and will need to be reduced if global mitigation efforts are to succeed.¹⁵ Emissions from transport remain outside the Kyoto Protocol and current climate financing mechanisms are inadequate to drive emission reductions at the scale required.¹⁶ The non-climate benefits of sustainable urban transport are far-reaching including cleaner air, better commuting and less noise. Despite net benefits accruing from these projects, in the short-term, clean transport measures entail high upfront costs which hinder investment. In Mexico and Colombia, for example, experience shows that the carbon crediting mechanism and climate aid funds have failed to mobilise finance toward this sector. Today, loans from multilateral development banks finance most of the sustainable sector initiatives in developing countries.

2.2 Innovative sources and institutional arrangements

Innovative sources are essential to tackling the scale-up challenge, but political barriers in key capitals delay progress. At Copenhagen, developed countries agreed to jointly mobilise around \$100 billion a year by 2020 to support mitigation and adaptation efforts in developing countries but the sourcing of this funding remains uncertain. New financing sources such as revenues from aviation and shipping (bunkers) regulation, the auctioning of emissions allowances in developed countries and the use of Special Drawing Rights (SDRs) can provide additional resources. Each innovative source faces political resistance in key capitals and a political pathway will therefore be needed to break the current deadlock. The informal UN Advisory Group on Climate Finance (AGF)¹⁷ is in charge of outlining possibilities and scenarios for each source. This Group creates the main political opportunity to go beyond an ‘academic’ assessment of potential sources. Instead the Group could deliver a game-changing blueprint for raising new climate funds under the current budgetary constraints in donor countries.

Scaling up low carbon investment may not be achieved unless new institutions are put in place. Countries will often need new institutional mechanisms or institutions to help engineer synergies between public and private finance. In the UK,

¹⁵ Land transport is responsible for 23% of global CO₂ emissions from fossil fuel consumption and 15% of all GHG emissions. See OECD/ITF (2010) Reducing Transport Greenhouse Gas Emissions: Trends and Data 2010. Also see www.transport2010.org

¹⁶ Bridging the Gap Initiative (2010) Reducing Emissions Through Sustainable Transport (REST) www.transport2010.org

¹⁷ Created in March 2010, the Advisory Group on Climate Finance includes Heads of States and Government, high-level officials from Ministries and Central Banks, as well as experts on public finance, development and related issues that are appointed for 10 months and are expected to produce a final report containing recommendations before the next Conference of the Parties to the UNFCCC in Mexico this December.

for instance, £800 billion to £1 trillion is required to 2030 to replace, upgrade and decarbonise national infrastructure — a scale of investment not seen in Britain since reconstruction after the Second World War.¹⁸ In 2010, a non-partisan commission proposed establishing a Green Investment Bank (GIB) to enable a *public-private investment model* that can tackle specific market failures and investment barriers in a way that will reduce emissions at least cost to tax payers and energy consumers. One of the objectives of a GIB would be to stimulate equity investments and debt capital flows to fund priorities identified by the UK Committee on Climate Change.¹⁹ As Box 1 shows, Brazil and Indonesia have also designed new institutional models that aim to mobilise new sources of low carbon finance.

Box 1. Scaling up through institutional innovation

Brazil's Amazon Fund: A new economic paradigm for Amazon region

- > In 2009 a decree established a new fund to combat deforestation with the goal to raise \$21 billion over 13 years. Norway disbursed around \$107 million in 2010 and a similar amount was pledged for 2011.
- > The donations support non-reimbursable investments and BNDES, the Brazilian Development Bank manages the Fund. For every contribution to the Fund, BNDES issues certified documentation identifying the reduction of CO₂ associated with the donation.
- > The Fund aims to make alternative investments and stimulate industries with a sustainable orientation that could become more lucrative than the cattle and timber industries which dominate the Amazons region.

Source: <http://www.amazonfund.gov.br>

Indonesia's Green Investment Fund: Beyond the aid model

- > A Green Fund expected to have 90 percent of the core funding from foreign governments that have expressed interest (Australia, France, Japan, Norway, UK and US) and institutional investors.
- > Renewable energy, agriculture and forestry are target areas.
- > Immediate focus on ways to scale low carbon investments and market deployment; rather than technology development.

¹⁸ Infrastructure UK (2010) Strategy for National Infrastructure.

¹⁹ Because the GIB would operate independently of Government, its liabilities are not to appear in National Accounts and the Bank would be able to provide independent advice to the Government. For more details see Green Investment Bank Commission (2010). Unlocking Investment to Deliver Britain's Low Carbon Future. .

- > The Government Investment Unit, a sovereign wealth fund will oversee the fund and will put \$100 million into it.

Source: Bloomberg-Business Week. Indonesia Plans \$1 Billion Green Fund to Battle Climate Change. January 26, 2010.

2.3. Cooperation for transformation

The creation of better cooperative models underpins successful low carbon policies and financing strategies. New formulas are needed to create political incentives to cooperate and facilitate joint-learning leading to *partnerships* as opposed to stiff funder-grantee relationships. [Box 2](#) outlines novel approaches that have emerged recently. Norway and Guyana have developed a trust-building framework around low carbon development. The Netherlands, Vietnam, Indonesia and the US seek to jointly identify common solutions to river delta regions. The design of low carbon zones in China ([Table 1](#)) resulted from collaboration with expert institutions in European countries including UK, Germany, Sweden and France and led to ‘reverse learning’: the concept, which was originally conceived as a prototype for decarbonisation in China, is now being tested in the UK through experimental low carbon economic areas across the country that act as low carbon innovation clusters.²⁰

Box 2. Toward transformational cooperation

- > Building a Low Carbon Development Strategy: Norway-Guyana Cooperation
- > Norway is to provide \$250 million by 2015 to support the implementation of Guyana’s Low Carbon Development Strategy. The Memorandum of Understanding seeks to test a new partnerships model between developed and developing countries with a focus on saving tropical forests.
- > Guyana will accelerate its efforts to limit forest-based emissions, and protect its rich rainforest. Norway provides financial support based on Guyana’s success in limiting emissions. The mechanism ensures national and international oversight of financial flows.

²⁰ Low Carbon Economy Areas (LCEAs) were introduced in the Low Carbon Industrial Strategy in April 2009, which also established UK’s Carbon Budget. It aims to establish UK leadership position in low carbon innovation and provide job opportunities. So far seven LCEAs have been set up in the UK, each specialising in key low carbon technology: marine renewables in the South West, ultra low carbon vehicles in the North East, advanced automotive engineering in the Midlands, built environment in Manchester, CCS in Yorkshire and Humber, hydrogen energy in South Wales, and energy efficient buildings in London.

Source: Official site at <http://www.lcds.gov.gy>

- > Solutions for delta regions: Alliance by The Netherlands, Vietnam, US, and Indonesia
- > Delta Alliance is an emerging international network devoted to supporting the design of responses to critical problems facing river delta regions: San Francisco Bay and Delta (California), Jakarta (Indonesia), Mekong and Red River Deltas (Vietnam), and the Rhine Delta (The Netherlands).
- > A central goal is to increase the efficiency and pace of responses to common problems through a network by providing information, expertise and supporting activities.
- > Funded by Dutch government.

Source: Official site at <http://www.delta-alliance.nl>

3. A higher value for the fast-start finance package: Implications

The fast-start finance package of the Copenhagen Accord offers an opportunity to move the climate finance system towards a higher value proposition for both recipients and providers of funding. A portion of the fast-start finance package needs to support experimentation allowing pioneering countries to demonstrate the feasibility of low carbon models for decarbonisation and resilience. Currently, there are no mature models of low carbon transformation to mobilise finance and encourage engaged collaboration toward the most innovative efforts in the developing world.

Contributing Countries

- > **Secure allocation of funds for countries that are experimenting with the design of long-term transformative model:** A portion of fast-start financing should support the design of economy-wide low carbon development strategies in at least 30 countries. Particular attention should be paid to countries aiming to include decarbonisation and resilience objectives within their national agenda.
- > **Allocate funds for implementing higher cost initiatives with a focus on infrastructure-oriented projects and transformative sectoral approaches:** A minimum of 20 percent of fast-start financing needs to support innovative initiatives and/or initiatives that are geared toward low carbon infrastructure.

- > **Keep a portfolio of delivery during fast-start period to increase competition and learning:** Donors would benefit from keeping all delivery options open to enable a new round of experimentation which would ensure institutional competition. Putting all the funds into one single delivery institution might hinder a much needed race to top quality.
- > **Balance short-term projects that deliver ‘quick wins’ and longer term transformative strategies:** Developing the right institutional infrastructure to sustain the low carbon transformation in developing countries will take time (and mistakes will inevitably be made). Most of the benefits will accrue after the fast-start period, but donors will derive higher value in the long-term from investing in transformative strategies which alter emissions trajectories rather than the short-term wins.
- > **Switch to a model of engaged ‘low carbon partnerships’ that create opportunities for joint problem solving and longer term prospects for trust-building and cooperation:** Fast-start financing can help develop partnerships with developing countries to jointly address the challenge of creating roadmaps, new markets, and institutional pathways. In addition to fast-start money, developed countries should double their R&D budgets by 2012, allowing at least 15 percent of this to promote cooperation with developing countries through joint activities and building innovative capacity.

Recipients

- > **Develop national (as well as sectoral and city-wide) decarbonisation and resilient strategies to 2020:** Countries will need to design *economy-wide low carbon strategies* that allow them to define robust policy prioritisation along with an investable platform. The aim will be to embed mitigation and adaptation projects into integral decarbonisation and resilience frameworks and moving away from one-off projects. Countries that are not yet ready to commit to economy-wide change should develop *sectoral approaches and/or city-wide initiatives*.
- > **Map out institutional pathways to overcome resistance and gain confidence in capacity to deliver change:** Countries will need to invest in designing institutional strategies that will enable them to implement their national plan. Often they will need to identify new mechanisms and institutions. To create domestic buy-in, institutional pathways will need to be guided by principles of transparency, accountability (to citizens especially) and seek stakeholder engagement. Making a switch to a low carbon development paradigm will produce potential winners, and it

is critical that institutional mechanisms are designed to deal with potential losers and opponents of the low carbon transition.

- > **Experiment with economies of scale and maximise joint learning through regional partnerships:** Often smaller countries are unable to attract low carbon investment and finance due to insufficient scale. They can proactively join efforts regionally by seeking common objectives and developing regional initiatives that allow them to gain scale, promote synergies and joint learning.

Institutional investors

- > **Lead and accelerate innovation in financial mechanisms:** A growing number of institutional investors want to be part of the low carbon economy but do not find the right investment vehicles or projects. Knowing what works and what does not will require much more engagement in low carbon finance and further experimentation with mechanisms, such as *climate bonds* – an idea advanced by progressive institutional investors.
- > **New analytical tools and business models:** The low carbon economy is redrawing the landscape of winners and losers within and across countries. Entrepreneurs and low carbon investors will need to speed up the design of analytical tools and business models to identify (and address) the fundamental implications of moving to a low carbon economy – and the risks associated with delayed or no action. Over-reliance on traditional analytical tools risks overlooking considerable political and scientific uncertainties that may pose risks for industries, geographies and technologies in the long run.

Development banks

- > **Towards a new framework for low carbon lending:** The World Bank's *Energy Review* in 2011 provides a timely opportunity for reassessing the current paradox in infrastructure and energy lending whereby low carbon investment moves forward within a lending portfolio that still favours the high carbon economy. A <2°C economy requires multilateral development lending to be oriented toward low carbon, resilient infrastructure; low carbon loans must go from niche to central focus of multilateral lending. In the coming months, the World Bank should specify how lessons learned from the Climate Investment Funds will be taken into account in the Energy Review of 2011. The bank should also include a decarbonisation schedule of their lending with the goal of moving to zero carbon towards the end of this decade.

- > **A reorientation of national development banks is needed:** These banks tend to have large balance sheets and by decarbonising their current lending they free up resources that can support domestic low carbon projects. National development banks could also provide advice to governments on the design of a financing route for national development plans and the leveraging of domestic private capital.

Concluding remarks

The politics of climate change have shifted significantly in the aftermath of the Copenhagen summit. A global economic downturn, fiscal cutbacks and reduced corporate access to capital will dominate the politics of the next three years in most countries. These economic conditions continue to reduce political support for action on climate change; especially at the international level. Lessons from 2010-12 will be critical for the design of the long-term climate financing system that delivers a higher value proposition. By the end of 2012, new structures will need to be in place to sustain rapid scaling up of climate finance to 2020. To ensure the highest level of learning and experimentation, some tolerance for risk and failure in 2010-2012 is needed among donors, as that is the key to build robust models for change. No one knows how to deliver low carbon climate resilient development on the ground and mistakes will inevitably be made. Climate finance must therefore support a plurality of approaches in multiple geographies to enable transformation and development analogues to learn from one another, and to deepen the transition to a <2°C resilient economy.