



FSD NETWORK COLLABORATIVE PROGRAMMING

CLIMATE CHANGE

Options paper

February 2020

1 Introduction

At the heart of FSD 2.0 is re-orienting financial sector development towards much greater real economy impact and ultimately supporting the achievement of the UN Sustainable Development Goals (SDGs). While this will build off an existing substantial body of work on financial sector development across the FSD Network, what this represents is a significant evolution in approach. FSD 2.0 also calls for an organisational evolution of the FSD programmes across Africa into a more cohesive network. At the heart of this is working more closely and intentionally together. In determining our collective priorities for the future, the FSD 2.0 meta-narrative identified the need for a focus on sustainability.

Among the most pressing issues which threatens a sustainable future for Africa is climate change. The FSD Council was unanimous in its resolution at its inaugural meeting in September 2019 that the potential for collaborative working on climate change should be explored as a priority. It is scarcely possible to overstate the importance of tackling climate change to achieving sustainable development in Africa. Finance is increasingly recognised as critical to climate change with growing calls for action here by global policymakers and regulators. The preliminary case for action by FSD looks strong – there is growing demand for work across a range of market development activities from policy and regulation to innovation. It is a priority for many countries in Africa, DFID globally and most country offices – the last clearly evidenced by the inclusion of climate finance in the plans for most FSD programmes over the next five years (captured in the annexes to the DFID Business Case addendum).

This paper seeks to determine the practical options for a collaborative FSD network programme to support financial system developments which address the challenges and opportunities presented by climate change across Africa. It does not seek to provide a detailed plan for how a collaborative programme should be delivered and the specific activities to support. At this stage it is necessary to first review the case for working in this area and doing so on a collaborative basis. A decision is needed on whether to proceed. Then in preparation for prospective substantial investment in developing a programme we need to determine some basic questions of scope and approach. The investment required to establish credible programming will be substantial. Given the novelty of this area to the FSD Network it will involve engaging expertise to provide critical know-how and the building of new partnerships. The prospective scope of work is enormous and there are many organisations and experts already working in the field. FSD needs to be clear on what additionality it could offer here. This isn't an argument for avoiding the topic (probably implicitly how we have looked at in the past) but rather looking for clarity on what we do.

The first part of this paper reviews the background to the subject. While far from comprehensive it looks to frame some essential preliminaries before turning to the prospective impacts from financial system development work. The following section then very briefly reviews the current positioning of the FSD Network before turning to the crux question of the potential for FSD collaborative working. The concluding section summarises key questions which need to be addressed now and sets out some practical next steps.

2 Background

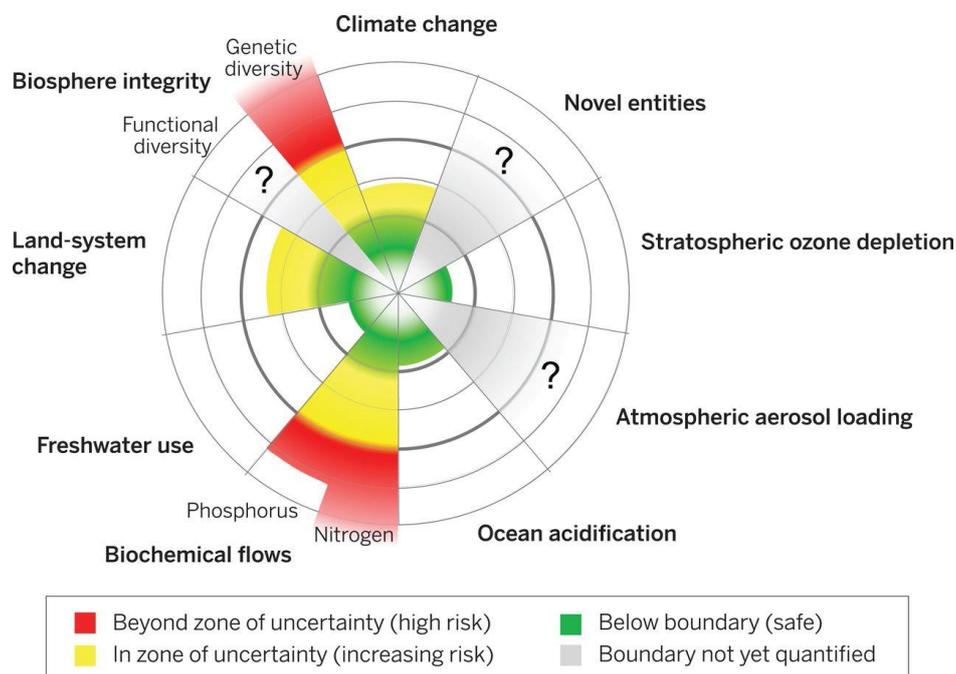
Climate change and environmental threats to sustainable development cover a huge range of issues. This brief scene setting does not represent a systematic review of the current state of knowledge but

simply picks up some key points which need to be considered in framing how the FSD Network could address the subject.¹

2.1 Scope

A major scope question needs to be addressed: is the focus solely on climate change and the problems anticipated for humanity created by rising temperatures as a consequence of greenhouse gas (GHG) emissions. From the perspective of Africa’s development priorities this appears to be too limited. Steffen W. *et al* (2015) put the case for examining multiple ecological systems. In addition to climate change – ocean acidification, chemical pollution, nitrogen and phosphorous loading, freshwater withdrawals, land conversion, biodiversity loss and air pollution all represent major threats to human development. The relative urgency of these various issues is uncertain.²

Figure 1: Planetary ecological boundaries



The argument for taking a broader perspective here is that the changes needed in the economic system (and its financial sub-system) ultimately need to be able to address all these constraints to sustainable development. Any one of these issues has the potential to create irreversible and catastrophic changes in ecological systems. There are serious concerns – for example – associated with biodiversity loss (for example, the impact on agriculture of reductions in crucial pollinator species – notably the honey bee). It is also important to highlight the obvious interconnections here. To take an obvious example, land-system change and particularly deforestation has direct impacts

¹ There is already a very considerable body of literature on finance relating to environmental sustainability covering formal global and national policy, regulation, analysis and practitioners work alongside academic literature. A comprehensive literature review has yet to be undertaken. Such a review does need to be undertaken at an early stage in the planning process to ensure that we are building on what is already known in the field. Intriguingly it wasn’t possible to readily find a synthesis review of the state of knowledge on green finance or climate finance. This may simply reflect the challenge of sifting material in a new area which is characterised by a considerable number of tactical (rather than strategic initiatives). Given the enormity of the topic and apparent absence of any easily adoptable strategic framing it is essential that this review is clearly directed towards addressing the practical questions the FSD Network faces.

² For example, freshwater withdrawals at a global level are currently within what Steffen *et al* refer to as the safe zone. However, in regions which are characterised by water scarcity the level of threat may be much greater. Furthermore, projections on demand for water alongside indications that *existing* climate change will produce more droughts suggest that the position could change very quickly.

on the absorption and storage of carbon dioxide, the most significant GHG associated with climate change as well as local freshwater systems.

The impacts of some of these other factors may have a more immediate impact on livelihoods than climate change as a result of greenhouse gas emissions and be more susceptible to local action. There are a number of instances where sustainable land use attracts immediate engagement from local communities given the much shorter-term impact on livelihoods than climate change. It is also instructive to note that the UK – one of the global leaders in the area – has taken a broader perspective. Its recent major government policy paper³ which sets out a series of policy commitments relating the financial sector in support of the UK's long-term 25-year Environment Plan. The term green finance is therefore used for the remainder of this paper to address the broader agenda but without explicitly assuming that the scope will broaden. This is one of the key options which will need to be determined.

2.2 Environmental change and Africa's future development

The significance of environmental change to Africa's development ambitions is huge. Baarsch *et al* (2020) in a recent analysis concluded that the majority of African countries have already experienced average annual losses induced by climate variability of between -15% to -10% in GDP per capita growth over the 1986-2015 period.⁴ There is a clear consensus across the global development and scientific communities that the continent's sustainable development ambitions will not be achieved without tackling the current depletion of environmental systems. While Africa as a region has thus far contributed the least to the destruction of these systems, it is the most susceptible to the projected impacts. In short it is the tragedy of the commons at a planetary level.⁵

At an economic level negative impacts are projected to arise from reduced economic opportunities, impairment of existing assets or significantly enhanced risk and uncertainty. There are a number of sectors where there is a very clear and direct to impact such as agriculture or hydroelectric power generation. These in turn may lead to second round impact from the effect on the potential national growth paths. Finally changes in global markets and international regulation resulting in a shift in relative prices – prospectively reducing the value of some major natural resources (such as oil).

Aside from the negative impacts there are prospective opportunities. Trade in carbon offset offers the prospect of exploiting existing natural endowments. For example, the preservation of bush and forest creates income generation by selling the carbon credits under the REDD+ scheme.⁶ Shifts in global demand favouring lower net energy products and services may create greater opportunities in some sectors. A high-profile controversy illustrates this. Careful analysis showed that it was end-to-end more carbon efficient to produce green beans in Kenya with a high solar endowment for the European market even after accounting for emissions from air transportation. The growing awareness of environmental, social and governance (ESG) issues has translated into massive growth in demand worldwide for investments which contribute to constructively addressing sustainability challenges in or at least meet minimum ethical standards. Green bonds have been developed to address this demand. Finally, the need to base production on new greener approaches may provide

³ UK Department for Business, Energy and Industrial Strategy (2019) *Green Finance Strategy: Transforming Finance for a Greener Future*, HM Government: London

⁴ Baarsch, F. et al (2020) The impact of climate change on incomes and convergence in Africa. *World Development* 126 <https://doi.org/10.1016/j.worlddev.2019.104699>. See also UNEP (2016) *Global Environment Outlook 6: Regional assessment for Africa*, UNEP: Nairobi

⁵ According to UNCTAD, 26 of the world's 40 most climate vulnerable countries are in SSA. 6 out of 8 existing FSDs are in that group of 40 (only SA and Nigeria are not), while 4 of the 5 new FSDs are in that group (only Ghana is not) – WAEMU is included, because 5 out of 8 WAEMU countries are in the 40.

⁶ REDD+ stands for countries' efforts to reduce emissions from deforestation and forest degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks.

potential for some advantage for late adopting countries, being able to leapfrog avoiding the write-down costs on legacy investments.

A major concern from a development and humanitarian perspective is the vulnerability of poorer households. There is strong evidence that the impacts of adverse environmental developments fall disproportionately on the lower income. Many of the poorest households in Africa depend directly on rain-fed agriculture which is likely to be directly impacted by climate change and other changes to fragile ecosystems. These households frequently have limited ability to respond to changing environments and the necessary investments and risk management tools to protect their livelihoods.

2.3 Mitigation and adaptation

Responses to environmental challenges are usually divided into two elements. First, **mitigation** – how can environmental impact and especially carbon emissions be reduced? Second, **adaptation** – how will households, communities, businesses and countries adapt to the change which are already happening or expected to happen as a result of existing processes. It is worth noting that a distinction is frequently made between adaptation - the *process* of adjustment to actual or expected environmental change and its effects and resilience - the *state* of social, economic and environmental systems to cope with a hazardous event or trend or disturbance

Mitigation at first sight seems less directly relevant to Africa which has the lowest per capita GHG emissions of any continent. In the context that climate is a global public good, the incentives for rapid action in Africa are relatively muted. It leaves the continent in the uncomfortable position of being prospectively among the most vulnerable regions of the world to climate change but the least able to act to reduce the impact. However there is a direct and shorter feedback loop in other areas which may raise the immediate salience of mitigation measure for African communities.

Deforestation which leads to disruption of natural water sources can rapidly adversely impact smallholder farmers in the vicinity of forested watersheds. Avoiding deforestation in the first place (mitigation) could be far more effective than adapting to the loss of water. There are multiple other forms of conservation which are relevant here. Preservation of Africa's genetic diversity for example underpins its tourism industry (and notably its reliance on Africa's unique wildlife endowment) and agriculture (insect pollinators are crucial to crop production).

Furthermore Africa implicitly aspires to be on a sharp upward trajectory of resource use.⁷ If Africa finally gets on the growth and development path sought it could rapidly increase its emissions and start to become a significant contributor of global GHG while the industrialised countries are simultaneously reducing emissions substantially. There is a need to be concerned about technology lock-in. Decisions made about long-term infrastructure investments today have huge implications for Africa's future impact on the global environment (and especially carbon emissions) and its own development potential. If, for example, Africa is locked into high carbon forms of production it risks undermining its own competitiveness. The depletion of environmental assets can have a direct impact – erosion of soil quality can result in lower agriculture productivity, reduced biodiversity compromises the attractiveness of tourism and it will be hard to attract scarce skilled labour to cities with poor air quality. Global regulation, consumer preferences and increased transparency will result in environmental externalities becoming directly or indirectly priced into products and services.⁸ The political economy problem of stranded assets is potentially huge.

⁷ China moved from a position of being a relatively minor emitter of GHG to the world's largest source within fifteen years.

⁸ The argument that because Africa has not thus far contributed significantly to the current global stock of GHGs results in an entitlement to emit to the level of the early industrialising countries is neither consistent with any credible jurisprudence nor global realpolitik. Rather it provides a case for the world's developed economies to assist the emerging world in both adaptation and mitigation. This point appears to have been largely accepted under the Paris Agreement on

2.4 Environmental change and finance

The relationship between environmental change and finance can be looked at from two directions. On one hand, the financial system will necessarily have to adapt to a changing world. This establishes the first imperative – **greening finance**. As companies and households face new risks and policymakers seek to address the challenges of climate change there will be new forms of regulation and new supporting functions to enable players in financial markets to respond effectively. Significant impetus is now coming from the global financial regulatory community. In part this can be regarded as simply about protecting the financial system from a host of new threats. The potential for far reaching global action to limit GHG emissions could significantly impact on asset values across a number of major sectors, most obviously oil and gas but into related transportation areas. Some analysis suggests that the current inadequacies of global action to mitigate change increase the risk of more precipitate future responses with even more severe write-downs being taken.

The financial system can help drive the change needed – **financing green**.⁹ The building of new green infrastructure, adoption of new technologies and development of new coping strategies will require massive investments. Risk management tools must be transformed. These tools need to support action at a range of levels from the micro – households and businesses, through meso – sectoral level to the macro – national and global. This suggests innovation – a financial system generating new ways to address new financing challenges.

The two perspectives on the necessary changes in finance - greening finance and financing green – are mutually reinforcing and ultimately convergent. Africa needs a financial system fit for the future which is changing rapidly in ways which pose significant threats but also offer opportunities.

3 Potential for impact

In line with the FSD 2.0 philosophy we must start with the real economy in order to determine how the financial system needs to change. What prevents the emergence of solutions to the environmental challenges faced across the continent? While this is a formidably complex question and often highly sector and context specific, in order to start building towards a systemic approach it is valuable to at least start examining these foundational questions. Based on this we can consider what are the realistic areas of opportunity for financial system development in Africa. *A highly tentative theory of change summarises this thinking*. Considerable work will be needed to develop, test and evolve the very preliminary ideas identified here.

3.1 Sustainable development

Since the publication of the Club of Rome report on the Limits to Growth in 1972, if not before, the question of sustainable development has attracted considerable controversy. A crucial contention is that there are simply insufficient resources or absorptive capacity (for example, of GHGs) to enable consumption at the levels seen in the G7 economies across the whole planet. Although some aspects of the original limits to growth argument have proven unduly pessimistic,¹⁰ climate change presents

climate change (formally the 21st Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC), held in Paris in December 2015). What remains at issue is how? and how much?

⁹ These two elements form the cornerstone of the UK's strategy on green finance (BEIS, 2019)

¹⁰ Assertions that many crucial raw materials – such as copper – would be exhausted by the end of the twentieth century given global demand and assumptions about recoverable resources. There are no signs of this having been reached for any material yet. See Pinker, S. (2018) *Enlightenment Now: The Case for Reason, Science, Humanism, and Progress* New York: Viking.

a case where the overwhelming weight of scientific evidence is that planetary ecological boundaries will be exceeded over the next two-three decades unless urgent action is taken now.¹¹ Directly limiting growth appears a near impossibility from a political economy perspective. It implies a reduction in current consumption by existing high-level consumers (primarily in the wealthy countries) and forgoing increased consumption by others where large numbers of the world's poor have yet to even reach the minimum associated with meeting basic needs.

Unsurprisingly therefore policy responses in the mainstream have been heavily focused on finding ways to maintain and increase consumption while reducing the environmental impact. Energy and transport policy have thus been less about discouraging travel and more to shifting towards renewable sources and encouraging more efficient and less polluting ways to achieve the same consumption aspirations. There are of course instances where public policy choices are made to limit activity in areas where there is clear enough support; much of the world has agreed to forego trade in critically endangered species. But across Africa, the poor are simply consuming too little and the economies too small for even radical redistribution to have adequate direct impact. The emphasis therefore has to be squarely on finding paths to sustainable growth.

Turning to how this can be achieved a central question is the relative roles of state and market. There is little serious doubt that state action is required in order to harness the market to deliver on sustainable growth. The highly influential Stern report observes that: 'climate change presents a unique challenge for economics: it is the greatest and widest-ranging market failure ever seen.' Externalities loom large here.

In principle there are effective institutional solutions to many of the problems. Creating a cost to carbon emissions through either a carbon tax or cap and trade system will provide critical incentives necessary for market solutions to the GHG problem. Progress is being made by both nation states and sub-national authorities, even if these fall far short of the estimated requirements to limit global warming to less than two degrees.¹² Despite the slow progress in achieving the required numbers, the architecture is being developed. Standards and disclosure requirements relating to energy use and carbon emissions are steadily becoming more sophisticated.

These developments go far beyond climate change. The UK – for example – has developed a 25-year environment plan. This commits the UK government to changing incentives across a broad range of environmental issues through a mixture of actions combining new laws, regulations and standards with supporting services to deliver change.

Moreover while states are necessarily the focus, growing awareness of sustainability concerns across citizens is changing expectations and preferences manifested in shifting consumer demand alongside growing political pressure. Even without the completion of formal institutional structures designed to address the market failures, these changes and the expectation of future developments are still leading to responses in markets. Private sector players are increasingly looking to cater for a low-carbon, clean and sustainable future.

Finally there are now many areas in which prospectively economically viable solutions do already exist to both mitigating and adapting to environmental change. For example, in many contexts – and especially much of Africa – photovoltaic (PV) solar energy has the potential to compete with

¹¹ Given that the science here is based on a complex systems approach it is infeasible *in principle* to predict the timing or precise severity of outcomes. This inherent uncertainty has unfortunately provided succour to sceptics who interpret this as suggesting a degree of meaningful ambiguity or contestation over the core scientific consensus which no longer exists.

¹² Thus far countries responsible for 55% of GHG emissions having committed to use a carbon pricing tool to meet their commitments under the Paris Agreement on Climate Change of 2016. However within many of these jurisdictions the coverage and price levels fall far short of the levels required to account for the estimated externality.

mainstream hydrocarbon-based power generation even without pricing the negative externality created by carbon emissions.¹³ The development of solar is illustrative of the potential that new technologies may have to ultimately provide both economically and environmentally sustainable solutions.¹⁴

3.2 Harnessing finance

Where economically viable opportunities for mitigation or adaptation solutions exist, as in any other area, the financial system has a central role to play in allocating the investment resources required and managing the risks created. The extent to which financial sectors in Africa are able to fulfil these functions are subject to many of the familiar constraints which the FSD Network has been tackling for nearly two decades. The challenges of financing smallholder farmers or small and medium enterprise (SMEs) to adopt a viable green technology are not necessarily significantly different in principle from those faced in financing other non-green investments to improve productivity. Obviously given the continued poor performance across the continent in financing smallholder agriculture and SMEs this simply reinforces the case for innovations to address the transaction cost and risk management constraints.

Nevertheless the specific requirements of green investment needs may raise particular challenges. For example, the financing of solar energy presents a different risk proposition from other forms of energy. The technology here however has inherently very long payback periods with virtually all the costs incurred upfront with negligible running costs. By contrast the costs of diesel generation are split between a lower initial capital investment but relatively high on-going fuel costs. High risk premiums associated with long-term finance in African financial markets clearly represents a constraint here. The simple novelty of new green technologies present barriers where they are unfamiliar to investors and intermediaries in the financial sector who may lack both the specialised knowledge and data to assess the risk proposition. There may be a need to specifically address the knowledge and information deficit. FSDs' experience has shown that the demonstration effect from supporting innovation is frequently a powerful approach to bringing about change. Early success in pay-go solar appears to have crowded in many other prospective investors.¹⁵

Where green finance clearly faces novel challenges relates to the shifting risk context created by environmental change and evolving regulation in response. Risk is clearly of central importance to finance – whether relating to the management of credit or investment risk or providing risk solutions to the market. Either way major disruptions to the prospects of households, businesses, sectors and entire economies is clearly highly problematic for the financial system. Without relevant data and predictive models, the financial sector will struggle to provide the required volumes of fresh long-term investment to achieve a transition to a green economy and provide risk tools to enable businesses and households to adapt to change. At a sector level, regulators need to manage emerging threats to the sector – finding appropriate tools which reveal where new risks are found and mitigate them appropriately. Again investment is likely be needed to develop the information architecture appropriately. The initiative of the Financial Stability Board's Task Force on Climate-related Financial Disclosures is relevant here.

¹³ Context is important here. Solar power is currently generally only cheaper than carbon-based alternatives for consumption during daylight without the need for extensive battery storage. The costs of battery storage are steadily reducing but are still often too high to render solar competitive.

¹⁴ Much of course depends on the level of implicit subsidy that rival forms of unsustainable production and consumption enjoy. A major problem is that this subsidy is often opaque and sometimes hard to measure in principle.

¹⁵ This despite the evident difficulty in achieving profitability in this market. This may be a function of the attraction to impact investors – motivated by the outreach achieved more than the returns or the magic dust of fintech where the prospect of an eventual breakthrough to massive profitability results in greater patience on the part of investors.

There are now very considerable amounts of finance seeking to explicitly support green development.¹⁶ There is already a very sizeable and growing demand from investors for green and other ethical investments. This ranges from individual retail investors - especially younger ones - determining where to place the money for their pensions to sovereign wealth funds acting on behalf of entire countries.¹⁷ Alongside this there are government and impact investors seeking to work around the market failures which prevent action on climate change and other environmental imperatives. There are profound problems of uncertainty (as opposed to quantifiable risk) and coordination which entail that pure market-based solutions will simply not emerge in many instances. Other investors may be looking to build a portfolio which provides a measure of hedging against long-term environmental driven risks. Either way in order to exploit these sources of investment, credible information is needed. This requires the use of recognised environmental standards, implementation capacity to measure compliance and associated trusted verification.

Financial market development needs therefore look set to encompass requirements at the macro, meso and micro levels. At the macro level, appropriate policy and regulation is necessary to set the incentives both in line with long-term national or global development goals and the prospective sustainability of the sector itself. Considerable development is probably required at the meso level. Information emerges as an immediate need but new risk pooling mechanisms are likely to be required. Notable here may be the requirement to find better ways to effectively blend concessional or impact driven forms of finance for maximum impact. Capital markets need to develop effective more effective ways to intermediate green investment funds – making it easier for investors to reliably place their investments in credible opportunities to drive the transition to a green economy. Finally at the micro level new solutions are needed to the challenges faced by households, businesses, cities and other communities. In the short-term at least this is likely to be strongly focusing on adaptation, enabling the investment in new ways of doing things which are less exposed to the threats from climate change and other environment risks. While risk pooling through insurance solutions is likely to play a role in reducing vulnerability this is most likely to be relevant to larger businesses and local and national governments (rather than households).¹⁸ This is likely to require innovation which more creatively exploits technology to address familiar but now even more intractable risk management problems.

4 FSD network: current position and aspirations

4.1 Relevance to FSD 2.0

Green finance lies at the heart of FSD 2.0. Formally it is a critical part of the third of the three thematic lenses adopted under the FSD 2.0 meta-narrative. There are five SDGs to which green finance is directly relevant (the first domain eligibility screening criteria identified in the FSD 2.0 metanarrative) but crucially these issues crosscut others. The achievement of inclusive growth in Africa is closely tied to environmental sustainability. Most obvious is the heavy dependence on the agriculture sector. The viability of agricultural development is directly threatened by climate change alongside other factors, notably soil degradation and water availability. Energy and housing form two core basic service for households for which sustainability is again a core factor.

¹⁶ This may encompass a wide range of instruments including direct investment, credit and guarantees.

¹⁷ For example the Norway Government Pension Fund Global – the world’s largest such fund has a strong ethical steer in its investment policy and has committed to divesting from coal energy. Interesting its subsequent move to divest from oil and gas was motivated by long-term risk more than environmental concerns.

¹⁸ Uptake of individual insurance is already very low across the Africa among low income households. The negative impacts from climate change and other environmental related changes simply makes this even harder as premiums necessarily increase as losses rise and the level of confidence in past data and models as a means to predict the future reduces.

Table 1: Relevance of green finance to SDGs

SDG Goal	Relevant Indicator/s which can be influenced
11: Make cities and human settlements safe, inclusive, resilient and sustainable	11.1.1 Proportion of population living in inadequate housing
12; Ensure sustainable consumption and production patterns	12..6.1 Number of companies producing sustainability reports
13: Take urgent action to combat climate change and its impact	13.a.1 Mobilized funding in developing countries towards UN Framework Convention on Climate Change 13.2.1 Number of countries which have established or operationalized an integrated policy/strategy/plan which increases their ability to adapt to adverse impacts of climate change
14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development	14.7.1 Sustainable fisheries as a percentage of GDP
15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	15A Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems 15.B Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation

4.2 Current FSD programming

This a new area of development for most FSDs in the network. While all have already expressed some degree of interest in the topic only a few are already engaged in interventions which are directly relevant. The most notable existing FSD network intervention thus far has been FSD Africa’s support for the development of green bonds.¹⁹ This project has thus far contributed to the creation of new green bond markets in Kenya and Nigeria. A first issue has been achieved in Nigeria and Kenya’s NSE has launched its market. At the heart of this is establishing credible information to investors on the environmental standards met by prospective investments.

Both FSD Kenya and FSD Nigeria have been involved in developing index-based weather insurance programmes targeting both livestock and crop production. Successful solutions here are aimed primarily at adaptation – allowing low-income producers dependent on rainfall patterns to cope with an increasingly volatile climate. Initial efforts in Kenya to pursue commercial risk solutions for farmers resulted in only limited uptake. Subsequent initiatives switched to a model in which there was greater government involvement and a focus on meso or macro based coverage (as opposed to individual farmers). This is consistent with DFID’s analysis which rates micro-insurance as a ‘bad buy’ and insurance (at community, local authority, country level, i.e. not individual) including disaster risk financing as a mixed buy.

¹⁹ Green bonds are regular bonds with one distinguishing feature: proceeds are earmarked exclusively for projects with environmental benefits, mostly related to climate change mitigation or adaptation but also to natural resources depletion, loss of bio-diversity, and air, water or soil pollution. Green bonds are an important channel for low-carbon climate-resilient investments to support the transition to a sustainable economy. The green label is a discovery mechanism for investors; it enables the identification of climate-aligned investments with limited due diligence from investors, which reduces market friction and facilitates growth in environmentally friendly investments. (From Kenya Green Bonds [website](#)).

4.3 Network capacity

Neither the FSD Network nor any individual FSD currently has an explicit well-developed strategy for financial system level change to underpin a long-term shift to environmentally sustainable development.²⁰ A rapid review of the literature has thus far failed to unearth a clear framework which we could adopt readily (though the search continues).

There is currently limited **expertise** on green finance in the network. FSD Africa is rapidly building its capacity through training and action learning through the green bonds initiative. It is also developing a climate finance training programme in collaboration with Cambridge and (possibly) ESAMIT. here is some insurance know-how (for example in FSD Africa and Kenya). This needs to be explored further. As a relatively new area to FSD we also currently have limited **know-who** and **institutional linkages** specifically with respect to green finance know-how. FSD Africa is rapidly developing these in relation to capital markets. Crucially we don't yet have a good sense of strong consultants/researchers able to support us in advancing our thinking on green finance system development.

4.4 Expectations and plans

The decision to work on green finance has already been made as per the FSD programme annexes developed as part of the recent DFID funding business case. There are strong ambitions in this area across the network: of the fourteen programmes in the network, half have an explicit theme on green finance (table 2 below, with further details in annex 1). From the remainder, four mention green finance in their proposed programme and the final three nevertheless have activity in which green finance can be envisaged to be significant. There was overwhelming support for collaborative working across the network on climate change when the topic was raised.

Table 2: Proposed green financing programming across the network

Programme	Africa	EFina	Ethiopia	FinMark	Ghana	Kenya	Mozambique	Rwanda	Sierra Leone	Tanzania	Uganda	WAEMU	Zambia	Zimbabwe
Explicit major theme	✓				✓	✓				✓		✓	✓	✓
Embedded elements			✓	✓			✓				✓			
No specific activities		✓						✓	✓					

In the light of the evolving relationship and new funding agreement with DFID it is important to flag the strong expectations from DFID on the topic and in particular for high-profile initiatives in the short-term. An immediate target is UK's hosting of CoP 26 in Glasgow. Timing is November 2020 and inputs will be sought by April 2020.

²⁰ As part of its new strategy, FSD Africa has developed a strategic framework for its envisaged engagement on climate change. This provides a basis for determining where FSD Africa will prioritise interventions within its wider strategy.

5 Collaborative programming

The case for collaboration across the Network on this topic appears strong from the outset: there is already a commitment to work explicitly in this area in seven FSDs but the capacity to do so is currently limited. There is therefore a need to very rapidly better understand the field and the nature of the opportunities. Many of these opportunities will be country specific depending on local policy and regulatory environments, the economic development context alongside natural resource endowments and constraints. But given the relatively early stage of FSDs' involvement here it is important to draw on the lessons from elsewhere. Furthermore many prospective partners work either regionally or globally.²¹ FSDs' potential for value addition is therefore likely to depend on being able to work simultaneously at country and continent-wide levels.

Table 3: Case for FSD collaborative programming

Criteria	Assessment
1. FSD 2.0 emblematic	Climate change is directly linked to SDG 13 but there is overwhelming evidence that environmental factors underpin many of the others. There is a clear real economy linkage.
2. Scale potential	The last IPCC report showed a \$1.6-3.8 trillion energy system investment requirement to keep warming within a 1.5-degree Celsius scenario to avoid the most harmful effects of climate change (IPCC, 2018). A fraction of this has been provided to date.
3. Feasibility	While current technical capacity across the Network is limited, there are strong links to existing expertise on financial sector policy, regulation, infrastructure and innovation. Crucially there are indications of increasing demand from policymakers and regulators to market players.
4. Sustainable	Tackling green finance credibly requires a sustainable approach which has much in common with more traditional FSD work. There are already credible opportunities for market development. However it is virtually impossible that the financial sector alone will be able tackle the financing challenges. State and inter-governmental financing will need to be a part of the solution. While this presents serious challenges to creating sustainable solutions there is no alternative but to seek address these.
5. Additionality in country	Although green finance has received growing attention over the last decade, it is only very recently that governments are committing themselves to developing green finance strategies, underpinned by meaningful action. There is an opportunity to develop more systemic and inclusive approaches at a country level which leverages and scales existing work by FSD in the financial sector and that of others in greening the economy and building livelihoods.
6. Is regional collaboration additive?	The skills to undertake this works are scarce and no FSD yet has developed a full strategic approach to tackling green finance. Sharing the resources here to first develop our basic thinking and then sharing the know-how and experience within individual countries promises to improve the speed and effectiveness of the Network's response. Working at a regional level is likely to be increasingly

²¹ Such as the Task Force on Climate-related Financial Disclosures (TCFD) or the Climate Bonds Initiative (CBI) on the regulatory, standards side or the Climate Policy Initiative (CPI) and its Global Innovation Lab for Climate Finance on the innovation.

Criteria	Assessment
	important – especially in relation to policy and regulation. Many market players are already working cross-border and regulators looking to converge their approaches. There is a very substantial global dimension: the global climate financing architecture (through which necessary international transfers will derive), global standards both relating to the real economy and the financial sector and the key coordination mechanisms (COP26, IPCC etc) .

5.1 Scope

The first question to be determined is the scope of programming. There are broadly two options here (with the case for a broadening of scope discussed earlier under section 2):

- Remain focused on **climate-change**, with the programme looking to support and develop initiatives which relate to either adaptation or mitigation.
- Widen the scope to **green finance** to address opportunities to address environmental related constraints to sustainable development.

Given the strong inter-relation of factors here the practical differences may often prove less stark than implied here.

5.2 Approach

How a collaborative programme should work depends on the overall approach taken by the Network to this subject. Based on current understanding of the prospective opportunities a number of approaches could be adopted. Options might include:

- **Real sector based** (demand-side): This would entail mainstreaming sustainable approaches within existing approaches to priority sectors such as agriculture, energy, construction and manufacturing. The advantage here is that this would not necessarily generate new intervention but allow greater focus and prospective effectiveness on areas in which we are already committed to building capability and solutions. A possible disadvantage is that the best opportunities for impact on (say) building livelihoods in agriculture and transitioning to cleaner production may not coincide.
- **Livelihoods impact driven** (demand-side): Capitalising on the Network’s past focus on financial inclusion there is a case for looking for high-impact adaptation focused solutions for poorer households. Aside from the clear poverty focus it arguably presents a more distinctive offer from the FSD network. However whether there are the prospects for direct *generic* financial solutions remains questionable. At the micro-level the generally modest progress on micro-insurance contrasts with the success experienced by real sector driven pay-go solar. Successful adaptation programmes for communities most at risk from climate change are unlikely to be driven by a specific financing tool. Rather these tools will need to be developed to enable credible opportunities for adaptation to be realised.²²
- **Environmental impact specific** (demand-side): The aim here would be to generate a specific set of interventions to tackle areas with highest environmental impact and which require financing solutions. For example, reducing deforestation could be adopted as a specific very high impact target and in which financing is likely to be vital to enable investments and the shift in incentives required. It is also an area where either subsidy or the reach to investors

²² An analogy can be drawn with the relative success of financial graduation programmes (in which finance is one tool) and microcredit in building the livelihoods of very poor households.

with a demand for green finance could be vitally important. This has pros and cons which largely mirror the real sector-based route discussed above.

- **Financial sector driven** (supply-side): This would address the constraints in policy, regulation, infrastructure and innovation. There are clear advantages in working here – the terrain is well known even if the topics are new. We can most readily leverage our existing partnerships with regulators and players. At the macro level the case here looks strong – policy and regulatory change are essential in order to shift incentives towards green financing and indeed underpin the stability of the financial system. Similarly meso level work – especially in relation to improving information flows looks open to a more generic, financial sector-wide approach. However at the micro-level which innovation is set to be important there are reasons to be cautious about the extent to which *generic* forms of financial innovation are likely to be effective in generating solutions which add real value to addressing problems.²³

These are clearly not mutually exclusive but in fact prospectively complementary. The first two represent options which relate most strongly to the ‘financing green’ agenda while the last to the ‘greening finance’. There is an argument that elements of all four should be undertaken in parallel with a view to developing a more comprehensive approach. It does however inevitably raise the question of whether it might lead to overstretch and lack of focus.

5.3 Potential areas for collaboration

In practical terms what are the areas which it makes sense to pursue together collaboratively? The aim is to determine where there would be prospects for greater efficiency or effectiveness. Options are:

- **Research, analysis and learning:** There is a huge body of relevant experience globally which we should be learning from. There are significant benefits from pursuing this together. Furthermore the prospects of forming a strong partnership with a global entity with real expertise in the area is enhanced where FSD it able to present a single-entry point. A further option to consider here is the extent to which a collaborative programme should be resourced to enable it to provide bespoke research in particular countries. Finally the lessons learning is needed across the Network and beyond.
- **Strategy:** The scale of ambition is huge here. While the nature of the topic means that there will be no shortage of prospective interventions to pursue, the risk is that these will not add up to systemic impact. This argues for developing, monitoring and refining a collective strategic approach to financial system change here. This clearly ties strongly to the research agenda. Refining this from the experience of multiple initiatives and contexts is likely to enrich it and increase efficiency as well as open opportunities to benefit from wider partner experience.
- **Shared implementation capacity:** Given that most FSDs have very limited capacity in this area there is an argument for sharing implementation resources at the outset at least until sufficient capacity has been developed within country programmes. There are prospective risks in moving too far in this direction. Part of the FSD USP is to have on-the-ground expertise which is able to work directly and effectively with local partners (not simply act as a conduit to a central specialist).
- **Joint programming:** The logic behind pursuing joint programming could come in a number of ways. Most obviously where there is a good opportunity to implement a programme in

²³ The limited progress made on insurance thus far doesn’t undermine the case for tackling risk but rather the dangers of a supply-side driven approach.

multiple countries. Two countries have identified working on disclosure and verification in line with the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD). Taking a regional approach here has clear benefits offering the opportunity to benchmark all participating countries against relevant standards. The technical support required as well as lessons could prospectively be shared. Tackling specific questions or themes could be another candidate for joint programming. To illustrate – suppose adoption of energy efficient building technologies emerges from analysis as an important opportunity for mitigation and direct impact on basic services. Given that a number of FSDs propose to work in affordable housing this could be a topic usefully addressed jointly. Finally, a much broader topic – such as innovation – could be addressed together. While the coordination is far more demanding given the breadth and complexity of the topic, there are greater prospects for making progress in identifying and solving the underlying constraints than working individually.

- **Leverage institutional linkages:** There are multiple prospective partners for FSD in this work and the prospects for success are probably heavily dependent on our ability to leverage existing know-how. As mentioned earlier for many global or continent focused institutions the chances of forming partnership in the first instance and then using these effectively is likely to be enhanced if it is done collectively.

5.4 Way forward

We need to proceed both **tactically** and **strategically**. On one hand we need to get initiatives moving to ground our understanding in real world developments, on the other hand we need to be intentional in the longer-term about what we do.

We can already **build initiatives** where we see clear opportunities within our existing market development framework. The green bonds programme illustrates this well: conceptually it addresses a familiar market information failure. This can be addressed using approaches with which we are already familiar – helping to practically extend existing institutions (rules) to build functional markets (through developing certification processes and mechanisms to provide credibility). Our existing tools – convening, capacity building, pump/priming and demonstration are well suited to this.

But to contribute optimally to the systems change needed to ‘green’ finance in the volumes necessary needs further work to develop an effective **strategic framework** for our work. A first cut can probably be developed quite rapidly and we will then want to iterate rapidly to enrich it as we learn through execution over time.

Shaped by the options chosen, work could proceed rapidly to develop a collaborative programme. The next stage – in line with the approach to collaborative programming agreed by the Network – is to undertake detailed planning. The priority activities within this planning stage might be:

- i. Develop a rapid **strategic framing** of our approach to green finance as a first order guide to the network (within 3 months).
- ii. Develop pilot **country strategies** based on the strategic framing developed with a view to identifying new interventions leveraging existing FSD activities in line with country priorities.
- iii. Support the identification of short-term **interventions** around key emergent **themes**:
 - Green bond market development (FSD Africa led)
 - Disclosure and verification in line with Taskforce on Climate-related Financial Disclosures (TCFD)

- Develop and pilot financing solutions (probably largely credit and insurance) to enable uptake of existing sustainable technologies or processes within priority value chains (agriculture, housing)
- iv. Determination of the **resourcing** to be provided by the collaborative programme. While activity will clearly remain driven by the individual programmes a collaborative programme can accelerate this effort by providing support areas such as:
- broad **strategic guidance**,
 - **expertise to support intervention** design and implementation,
 - support for **in-country strategy formulation**,
 - **research** and **lesson-learning** from FSD activity
 - leveraging **institutional linkages**, and
 - **communication** across the FSD Network and (with FSD Comms) beyond.

The copro/domain needs strong network level **active governance from now**. Active participants will be need in a steering group to drive it forward. This needs to be very active to be useful and we may be looking for a minimum of 20% FTE from participants (ie: a full day every week). Ideally we could seek a chair who will take a lead in driving activity (with support) until full-time leadership can be brought on board.

Day-to-day **leadership** is likely be essential and there is a good case to hire a full-time, expert resource to head the collaborative programme. This head should report to the collaborative programme steering group. Experience shows that given the specialised nature of the role this could be a six months process and therefore there is a case for starting on the recruitment process as soon as possible. This is especially pertinent given the importance of having the leadership involved in framing the programme for which she or he will be responsible.

Given the likely delay in getting new specialists on board and the importance of starting work as possible, there is a case for engaging some resource to support progress through the planning stage. Immediate **implementation** will therefore depend on identifying relevant consulting expertise and possibly institutional support. These can start with relatively short contracts in order to both mobilise experts quickly but also test their effectiveness.

Annex 1: Summary of proposed FSD network activities

Programme	Interventions
Explicit major theme	
1. Africa	<p>FSDA to become green financial market building agency</p> <ul style="list-style-type: none"> i. Long-term finance: Green bond market development ii. Long-term finance: Climate finance twinning iii. Long-term finance: Regulator capacity building iv. Credit and small enterprise: Disclosure on green loan portfolios v. Risk: African Cities Resilience programme vi. Risk: Index-based insurance products vii. Risk: Climate Risk Assessments viii. FSDAI: Investment in financing renewable energy
2. Kenya	<ul style="list-style-type: none"> i. Work with regulators and financial institution associations to create the market for climate finance disclosure and verification in line with Task Force on Climate-related Financial Disclosures (TCFD) and other environmental, social and governance standards ii. Promote the development of financial solutions for reducing negative climate externalities within enterprises such as manufacturing and transportation; iii. Support financial solutions for mitigating risks, rehabilitation and increasing resilience due to climate change.
3. Tanzania	<ul style="list-style-type: none"> i. Work with regulators and financial institution associations to create the market for climate finance disclosure and verification in line with Task Force on Climate-related Financial Disclosures (TCFD); ii. Promote the development of financial solutions (such as ‘green bonds’) for reducing negative climate externalities focusing on priority areas of agricultural practices, urbanization, manufacturing transportation and renewable energy. iii. Action research on how finance can support rehabilitation such as sustainable forestry, ecotourism and links to carbon markets.
4. Zambia	<ul style="list-style-type: none"> i. Promote the development of financial solutions for reducing negative climate externalities and mitigating risks/increasing resilience due to climate change, particularly weather index and other insurance tools; ii. Enhance digital and other innovations in value chain financing and trade; iii. Work with regulators and financial institution associations to remove barriers to crop and animal diversification for climate proofing and agricultural investment by smallholders,
5. Ghana	<p>Innovation in green finance and digital products</p> <ul style="list-style-type: none"> i. Build regulatory capability ii. Facilitate sovereign and corporate green bonds iii. Support development of climate insurance products

Programme	Interventions
6. WAEMU	i. Support the development of climate finance and green bond market. This would include demonstration transactions.
7. Zimbabwe	i. Promoting the development of financial solutions for reducing negative climate externalities within enterprises such as agriculture and energy. In addition a green funding window aimed at entrepreneurs who provide environmentally friendly services such as solar energy for agriculture, biogas, waste energy recycling ii. Supporting financial solutions for mitigating risks and increasing resilience due to climate change iii. Conducting action research on how finance can support rehabilitation in areas such as sustainable forestry and ecotourism.
Elements embedded within programme	
8. Mozambique	<ul style="list-style-type: none"> • Finance for investment: Agriculture (whole value chain), commerce (trade) and housing finance were identified as areas that can contribute to inclusive growth. <i>Climate change will be implemented in collaboration with all FSDs as crosscutting area within FSD Network: Facilitate development of new capital markets products (municipality bonds, green/blue bonds, financial instruments for climate change);</i> • Finance for access/usage: agriculture, basic services (water, education, energy, etc.), commerce, and housing finance. - <i>Support creation of appropriate financial products and services for people with impairment and climate change sensitive;</i> • Financial stability: <i>Work with regulators and policy makers to design appropriate regulations considering climate change and green finance, considering the 4 Ps (Provision, Promotion, Prevention and Protection);</i>
9. Ethiopia	Not identified as specific intervention area. Themes are: <ul style="list-style-type: none"> • Institutional support for policy and regulatory reform • Increase access to productive capital for firms - <i>TA to the government and market actors in issuance of climate-friendly investment instruments e.g. green bonds.</i> • Increase financial inclusion particularly for marginalised groups • Support the development of a digital economy • Support the agricultural sector • Support the manufacturing sector • Support urban development
10. FMT	Not identified as specific intervention area. Themes are: <ul style="list-style-type: none"> • Agriculture - <i>Insurance and other products to deal with climate change</i> • Light manufacturing • Cross border trade • Inclusive digital financial services • Sustainable future through financial system integrity and stability

Programme	Interventions
11. Uganda	Not identified as specific intervention area. Directly relevant areas are: <ul style="list-style-type: none"> • <i>Green bonds</i> Real sector themes: <ul style="list-style-type: none"> • Affordable housing • Financing solutions for utilities
No specific theme or activities identified	
12. Rwanda	Sectors identified are: <ul style="list-style-type: none"> • Agriculture • Light manufacturing • Affordable housing • Digital finance
13. EFinA	Themes identified are: <ul style="list-style-type: none"> • Finance for inclusion • Finance for investment • Finance for innovation • Finance for integrity • Finance for stability
14. Sierra Leone	Themes are: <ul style="list-style-type: none"> • Local currency finance market development • Agricultural value chains • DFS enabling environment • Financial product development • Revenue disclosure