Report

June 2013

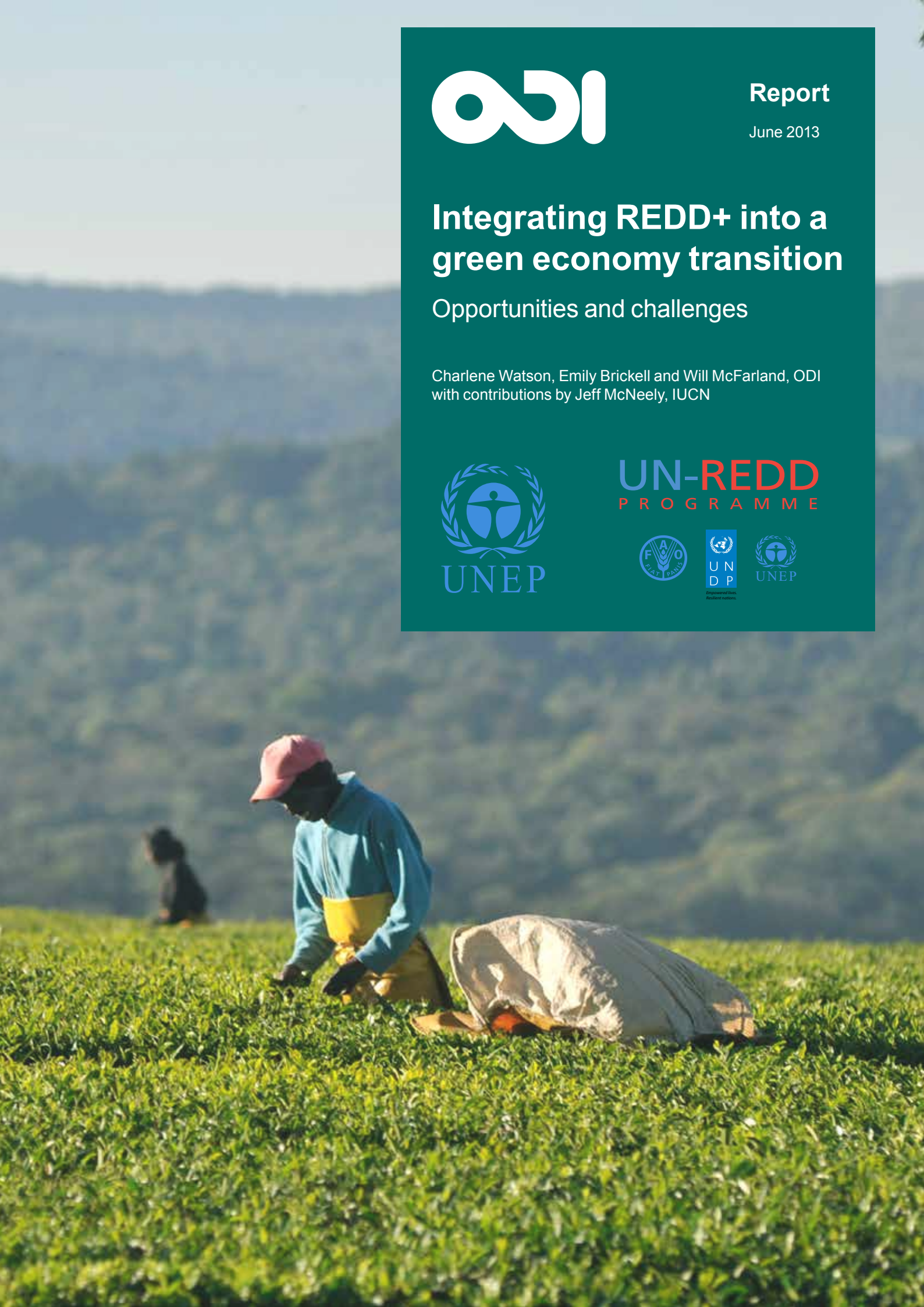
Integrating REDD+ into a green economy transition

Opportunities and challenges

Charlene Watson, Emily Brickell and Will McFarland, ODI
with contributions by Jeff McNeely, IUCN

UNEP

UN-REDD PROGRAMME



Acknowledgements

The authors are grateful for the review comments and feedback received from Ed Barbier (University of Wyoming), Tim Christophersen (UNEP), Thomas Enters (UNEP), Jane Feehan (European Investment Bank), Julie Greenwalt (UNEP), Val Kapos (UNEP- World Conservation Monitoring Centre), Lera Miles (UNEP-World Conservation Monitoring Centre), Robert Munroe (UNEP- World Conservation Monitoring Centre), Leo Peskett, and Fulai Sheng (UNEP). Feedback from Tom Mitchell, Smita Nakhooda, Andrew Scott and Steve Wiggins at ODI, is also much appreciated. The authors retain responsibility for all conclusions and errors of interpretation.

ODI gratefully acknowledges the support of UNEP and the UN-REDD programme in providing funding to produce this report.

Report

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Key messages

- Clear links exist between REDD+ and green economy objectives, both of which call for a change in the business-as-usual economic development in order to slow the loss of natural capital;
- Although an aggregate value is elusive, the multiple benefits of REDD+ provide a clear rationale for the integration of REDD+ in a green economy transition. This includes the enhanced provision of ecosystem services, in addition to climate change mitigation, and the potential to deliver various social benefits;
- Although challenges remain, integrating REDD+ within a green economy transition could maximise synergies in policy and planning, as well as reduce the transaction and implementation costs of pursing each independently.

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Executive summary

The concept of a green economy that '*results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities'* is gathering support (UNEP, 2011a). The role of forests and land use in the context of natural capital is included in growing discussions of a transition to a green economy (e.g. OECD, 2011; World Bank, 2012). However, the full potential of REDD+ – reducing emissions from deforestation and forest degradation, conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks – is rarely elaborated (see UNEP, 2011b; Sukhdev *et al.*, 2010). As REDD+ aims to address market, policy, and institutional failures that undervalue the climate change mitigation service provided by the forest ecosystem, while protecting the rights of those who rely on the forests, there are clear links between REDD+ objectives and green economy objectives, both of which call for a change in the business-as-usual economic development in order to slow the loss of natural capital.

This paper outlines a rationale for integrating REDD+ within the green economy transition and initiates thinking on how this might be achieved. It brings together the existing literature to consolidate conceptual issues, presents key examples of progress, and highlights the potential challenges and opportunities of including REDD+ in the transition to a green economy. Intended to support the discussions of the Global Symposium on REDD+ in a Green Economy, held in Indonesia in June 2013, the target audience of this paper is the communities of practice both in REDD+ and green economy; this includes policy-makers, civil society organisations and academia.

A clear rationale for REDD+ integration in a green economy transition

Over the years, there has been a growing need for and recognition of the multiple benefits of REDD+. These relate to the enhancement of ecosystem services and the potential delivery of wider social objectives (e.g. Dickson and Osti, 2010; Peskett *et al.*, 2008). Although emission reductions and, therefore, climate change mitigation will remain at the core of REDD+, there are many other ecosystem services flowing from forests that contribute to human well-being and can be enhanced through REDD+ activities and investments. These include watershed protection, building of soils, supporting fisheries in swamp forests, protecting coastlines with mangrove forests, and many others (MA, 2005; TEEB, 2010a). These services are largely underpinned by biodiversity, which also supports ecosystem resilience, which in turn could contribute to human adaptation to climate change (Miles *et al.*, 2010; Graham, 2011).

The multiple benefits of REDD+ also include potential wider social gains in forest governance. Many of the world's forests have unclear or contested tenure (Springate-Baginski and Wollenberg, 2010). Clarifying land tenure will provide investor confidence in REDD+ and play a role in determining accountability for the delivery of emission reductions and in distributing benefits (Robledo *et al.*, 2008). Equally important is the

participation of stakeholders in formulating and implementing policy processes, making institutional arrangements, and setting management priorities. Building trust and acceptance among relevant stakeholders through such participatory processes (Forsyth, 2009), is equally important in the transition to a green economy. A less well-studied social benefit of REDD+ could be delivered through employment and income. The forest sector is already an important source of employment with close to 14 million people employed in 2010 (FAO, 2011). REDD+ activities that increase afforestation, reforestation and sustainable forest management in low-income countries could lead to more jobs in the formal forestry sector as well as income gains in the informal forest sector.

An aggregate figure of the multiple benefits of REDD+ implementation at a national or global level is not yet available. This is due to an insufficiency of the data and understanding required to estimate what would happen in the absence of REDD+, the complexity of the effects of biophysical changes, and the complexity of the existing forest governance and institutional context of a country. Even so, these multiple benefits indicate that in a green economy transition, REDD+ can support the outcomes of human well-being, reduced environmental risks and ecological scarcity, and social equity, as contained within the United Nations Environment Programme definition of a green economy (UNEP, 2011a). A better appreciation of the multiple contributions of REDD+ to human well-being is a first step towards understanding the true benefits provided by forests and correcting the market and policy failures that have led to their decline. Such information may also help move forest and land use management away from the periphery of national planning processes and towards a more integral role in a green economy transition.

Drawing from ongoing progress and experience

Investments are being made that are relevant to both REDD+ and the transition to a green economy. Some countries and organisations have made explicit links between REDD+ and a green economy. Indonesia, for example, is currently making efforts to integrate REDD+ into its green economy approach, supported by international agencies such as the UN-REDD Programme, and Ethiopia has explicitly included the protection and re-establishment of forests within its Climate Resilient Green Economy strategy. Others have not necessarily adopted either concept but have still made progress, undertaking initiatives over the last few decades to tackle forest loss and contribute to the sustainable management of forests. Costa Rica's payments for environmental services scheme, provides an exemplary policy instrument for the integration of REDD+ in a green economy transition, while international certification schemes can lead to more environmentally and socially conscious consumer decisions on forest products. Lessons can be learned from these initiatives and it is worth noting that progress can be made without dwelling on the terminology or concepts adopted.

Generating an enabling environment for integration

Best practice in how REDD+ can be integrated in a green economy transition is yet to be distilled. Potential challenges and opportunities involved in generating an enabling environment for integration must be considered. Five elements of an enabling environment can be identified:

- **A strong knowledge base and tools for planning.** Demonstrating the multiple benefits of REDD+ remains challenging due to a lack of information. Building a strong knowledge base and choosing and utilising the appropriate planning tools, such as Threshold 21 models, scenarios and cost benefit analysis, can help generate greater willingness to engage in both the political and public spheres, and with those in sectors beyond forests and the environment.
- **Good political will.** Politically sensitive land use trade-offs are likely to be necessary in the pursuit of REDD+ in a green economy transition, where

there are strong political and economic interests in the exploitation and conversion of forests (Di Gregorio *et al.*, 2012). REDD+ could be instrumental in providing new incentives to make such difficult decisions.

- **Appropriate forest governance.** The mandate and power to strengthen forest governance necessary for REDD+ implementation may require a reframing of REDD+ as a development and not a forestry or environment issue. If REDD+ activities can be more centrally integrated in policy and planning, there may be opportunities to reduce overlapping mandates and prevent unnecessary institutional structures from being created.
- **Policy alignment and cross-sectoral coordination.** Any country must meet a multitude of objectives set in both existing and new national policies, strategies and plans in a green economy. Such increasing complexity can create conflicting or overlapping priorities. Avoiding fragmented thinking is challenging but necessary. Greater policy alignment, through the integration of REDD+ within a green economy transition, could lead to more strategic planning of limited financial resources.
- **Adequate finance.** Estimates of the finance needed for integration are substantial and prove a daunting challenge in today's financial climate (Stern, 2007; Eliasch, 2008). Leveraging REDD+ finance to pursue a green economy could help meet these costs, and safeguards applied in REDD+ that can raise confidence for investors could be adapted for or applied to green economy investments (Sukhdev *et al.* 2010).

These elements of an enabling environment are not necessarily sequential and will overlap. Any efforts to meet these challenges should build on the infrastructure that exists in country. It should be recognised that progress can be made before all opportunities have been taken and, therefore, before an optimal enabling environment is in place.

Moving forward

Integrating REDD+ within planning and investments for a green economy transition at an early stage could allow for synergistic opportunities to be maximised. In policy planning, the same actors, networks and institutions would likely be engaged in both the green economy transition and in REDD+ implementation. Integration at an early stage can reduce the proliferation of institutions and associated transaction costs if pursuing the concepts independently. It can also provide a platform to share REDD+ experience and tools. Progress already made on REDD+ safeguards, for example, could be applied or adapted to suit the social objectives of a green economy transition, reducing investor risks and catalysing investment. Integration may also provide a mutually supporting relationship, reducing the risks of non-permanence and the displacement of emission reductions.

This paper has gone some way to provide a rationale for integrating REDD+ in a green economy transition. To stimulate further discussion and debate on how this can practically be achieved, this paper highlights three questions that will need to be considered in order to move forward:

1. **How can lessons from REDD+ readiness contribute to overcoming long-standing challenges in creating an enabling environment and in the transition to a green economy?**

2. **Who will drive the alignment of REDD+ and efforts to green the economy?**

3. **What role can the international community play in supporting the integration of REDD+ into a green economy?**

1 The green economy and REDD+: core principles and developments

The term ‘green economy’ was coined in *Blueprint for a Green Economy* (Pearce *et al.*, 1989). Although not initially defined, a ‘green economy’ was seen as a way to achieve more sustainable development, meeting the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987). Elements of a green economy were subsequently discussed at the 1992 World Summit on Environment and Development, where the Rio Declaration called for eliminating unsustainable consumption and production (Principle 8) and internalising environmental costs (Principle 16) (UNGA, 1992b). Its more detailed Agenda 21 had chapters suggesting measures changing consumption patterns (Chapter 4), promoting sustainable human settlements (7), integrating environment and development in decision making (8), and combating deforestation (11) (UNGA, 1992a). A decade later, the World Summit on Sustainable Development in its Johannesburg Plan of Implementation reiterated the importance of addressing poverty (Chapter 2), changing unsustainable patterns of consumption and production (3), and protecting and managing the natural resource base of economic and social development (4) (UNGA, 2002). Another decade later, governments again convened in Rio for the UN Conference on Sustainable Development, where the concept of a green economy gained broader acceptance and the interest of developing countries. The outcome document highlighted the role of forests in providing social, economic and environmental benefits and called for enhanced efforts to achieve sustainable management of forests, reforestation, restoration and afforestation. A green economy was also identified as an important tool for achieving sustainable development (UNGA, 2012).

UNEP defines a green economy as one that ‘*results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. In its simplest expression, a green economy can be thought of as one which is low carbon, resource efficient and socially inclusive’* (UNEP, 2011a). The UNEP definition is adopted in this paper. It is recognised that others are pursuing concepts such as ‘green growth’, ‘low carbon development’, and ‘climate compatible development’. These have a similar objective at their core, however: to raise levels of environmental protection beyond what is seen in business-as-usual economic growth and development. These concepts do not reflect a move away from sustainable development objectives, but instead have been suggested to reflect a more politically palatable way of achieving sustainable development (Jacobs, 2012). A green economy, and variations thereof, will take time to achieve. In a transition to a green economy, it is envisaged that countries will still need to consume natural resources

to grow their economies, but that human development should be decoupled from the unsustainable consumption of natural resources.

As the concept of a green economy gathers broader public and political support, the principles, options, and emerging experiences in implementation are being explored (e.g. BMZ, 2011; OECD, 2011; SELA, 2012; World Bank 2012; WRI, 2011). The role of forests and land use in the context of natural capital is included in such studies. The full potential of reducing emissions from deforestation and forest degradation in developing countries, conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks (REDD+; Box 1) is rarely elaborated, however. The World Bank's report on Inclusive Green Growth, for example, notes that lessons can be learned from progress on REDD+ but does not elaborate on the ways in which REDD+ could contribute (World Bank, 2012). UNEP has gone furthest to recognise the role of forests and REDD+ in a green economy transition (UNEP, 2011b). Sukhdev *et al.* (2010) write specifically on the role of REDD+, suggesting that it can unlock the full potential of forests within a green economy.

Box 1: the status of REDD+

Under the United Nations Framework Convention on Climate Change (UNFCCC), REDD+ refers to reducing emissions from deforestation and forest degradation, sustainable forest management and the conservation of forest carbon stocks. Proposed by a group of developing countries as a climate change mitigation mechanism whereby developing countries would be provided with financial rewards and incentives for reducing emissions from deforestation, the concept received broad support. The Bali Action Plan agreed to consider policy approaches and positive incentives that could deliver such emission reductions (UNFCCC, 2007) and through the negotiations that followed, the scope was expanded from a focus on deforestation to the breadth of activities that affect forests' contribution to climate mitigation (Angelsen and McNeill, 2012). In 2010, the Cancun Agreements requested countries to address the drivers of deforestation and forest degradation, land tenure issues, forest governance issues, gender considerations, and environmental and social safeguards (UNFCCC, 2010). This paper considers REDD+ to be the suite of activities supported under the acronym that can deliver emission reductions.

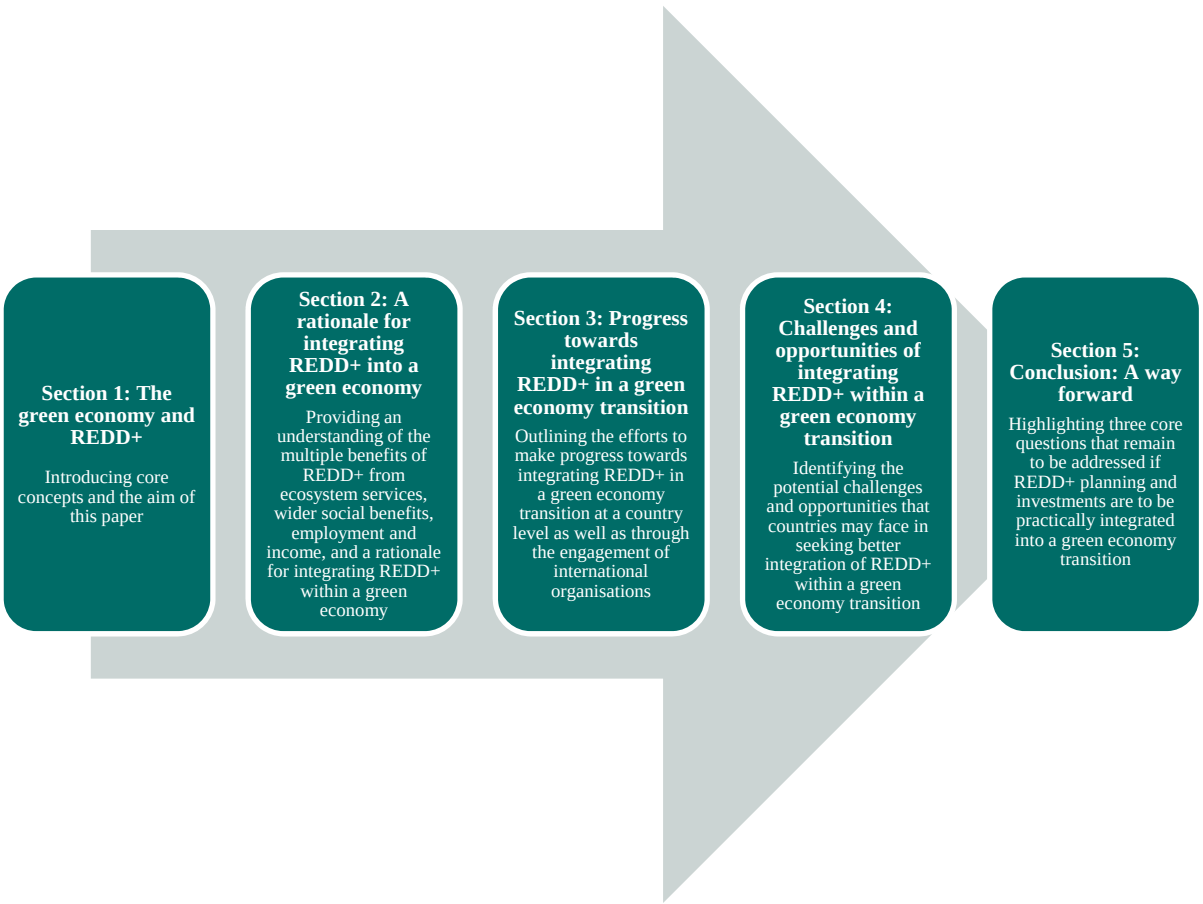
While a work programme was initiated in 2012 on long-term finance for REDD+ under the UNFCCC, at present there is no agreement on how adequate and predictable long-term funding for REDD+ will be mobilised (Angelsen and McNeill, 2012; Oakes *et al.*, 2012). Options for financing include REDD+ credits within compliance carbon markets; market-linked mechanisms, where finance is generated, for example, through auctioning of emissions allowances or a financial transaction tax; and non-market mechanisms, such as traditional forms of public finance. Many options, however, rely on ambitious climate change mitigation goals, currently absent from the international agreements (Streck and Parker, 2012). The inclusion of REDD+ in compliance carbon markets will also require a return of confidence in the predictability of finance, following substantial carbon price volatility over the past few years. In the interim, public finance through bilateral and multilateral funds and initiatives has supported REDD+ activities. US$1.5 billion had been approved for activities through these channels as of May 2013 (Climate Funds Update, 2013). REDD+ activities are also being supported through domestic budget resources (Streck and Parker, 2012). Some private finance is also flowing for REDD+ activities. The value of forest activities in the voluntary carbon market was estimated as US$185 million in 2011 (Peters-Stanley *et al.*, 2012).

The uncertainty about a scaled-up and long-term finance source for a UNFCCC REDD+ mechanism leaves questions about the extent to which REDD+ will provide sufficient financial incentives in developing countries to reduce emissions from forestry activities. A number of developed countries continue to voice their support for such a mechanism, however, and are committed to providing continued bilateral support to developing countries that implement REDD+.

As REDD+ aims to address market, policy and institutional failures that undervalue the climate change mitigation service provided by the forest ecosystem, there is clear overlap with green economy objectives to slow the loss of natural capital. Wider social objectives have also become much more embedded in the REDD+ discourse over the years. In this way, REDD+ activities have the potential to contribute to social and development objectives that are complementary to the outcomes of a green economy. It is possible that the uncertainty in future financing for REDD+ has led to the lack of integration of REDD+ planning and investments in the transition to a green economy. This apparent lack could also be because countries are only recently embarking on green economy planning. However, it may also be because REDD+ and green economy are being discussed in different fora, led by different individuals and organisations at both a technical and political level.

Greater efforts to integrate REDD+ planning and investments within countries' transition to a green economy has mutual benefits. Integration could allow for synergistic opportunities to be maximised in policy planning, and the transaction and implementation costs of both REDD+ and a green economy to be reduced. This paper provides a rationale for integrating REDD+ within the green economy transition and initiates thinking on how this might be achieved. Section 2 strengthens the rationale for integrating REDD+ in the transition to a green economy, by elaborating the multiple benefits that REDD+ activities could provide. Section 3 presents efforts of countries and organisations towards such an integration and highlights relevant interventions. Section 4 identifies the potential challenges and opportunities that countries may face, while Section 5 concludes by asking three core questions that remain to be addressed if REDD+ planning and investments are to be practically integrated in the transition to a green economy (Figure 1).

Figure 1: Outline of the report



2 A rationale for integrating REDD+ into a green economy transition

As REDD+ has developed, there has been growing attention to the multiple benefits that it can provide over and above its core focus on climate change mitigation. Some of this attention has arisen over the potential negative social and environmental impacts of REDD+ implementation. Consequently, a moral imperative to – at minimum – 'do no harm' to those who depend on forest resources for their livelihoods has been suggested (e.g., Grieg-Gran *et al.*, 2005; Peskett *et al*., 2008). For example, given the high dependence of the rural poor on wood fuel for energy, alternative energy resources should be provided where REDD+ restricts wood fuel utilisation. Others have suggested that REDD+ implementation should go beyond 'do no harm' to positively impact on poverty or biodiversity, for example (Dickson and Osti, 2010; Peskett *et al*., 2008). The need to avoid negative impacts and promote the multiple benefits of REDD+ is captured within the safeguards agreed as part of the UNFCCC Cancun decision on REDD+ (UNFCCC, 2010). This decision explicitly recognises the need to promote and support respect for the following: the knowledge and rights of indigenous peoples and members of local communities; the full and effective participation of relevant stakeholders, in particular indigenous peoples and local communities; and the consistency of actions with the conservation of natural forests and biological diversity.

To date, the anticipated multiple benefits of REDD+ have largely been communicated hypothetically, qualitatively, or quantitatively on a case-by-case basis. Quantitative assessments of the benefits of REDD+ related activities are increasing. Some relate to the contributions of forest ecosystem services to the well-being of individuals through economic valuation (Babulo *et al.,* 2009; Vedeld *et al.*, 2004), where ecosystem services refer to regulating, cultural, supporting, and provisioning services (MA, 2005). Others pertain to various social objectives and impacts of REDD+ activities (Lawlor *et al*., 2013).

This section details the potential of REDD+ and the extent to which it can deliver multiple benefits broadly categorised into, first, the enhanced provision of ecosystem services – including climate change mitigation – and second, the wider social benefits. This section concludes by describing how REDD+ could support the transition to a green economy.

2.1 Ecosystem service benefits of REDD+

REDD+ activities promote the existence and maintenance of forest ecosystems. The ecosystem services that flow from forest ecosystems contribute substantially to human well-being, and support the livelihoods of a number of rural populations across the globe. A report by The Economics of Ecosystems and Biodiversity (TEEB), for example, emphasised

the link between human well-being and natural capital. It showed that sustainable natural resource management generates clear economic benefits, and the costs of inaction justify investments today in natural capital (TEEB, 2010a). While the focus of REDD+ is the ecosystem service of climate change mitigation, there are many other ecosystem services flowing from forests that can be enhanced through REDD+ investments. These services are largely underpinned by biodiversity, which also supports ecosystem resilience and could contribute to human adaptation to climate change. This section explores the value of climate change mitigation and the provision of ecosystem services and their role in climate change mitigation in more detail.

2.1.1 REDD+ as a climate change mitigation measure

REDD+ was initially conceived as a climate change mitigation measure, and this remains its primary goal. The benefits, or contribution to human well-being through climate change mitigation, can be estimated through the potential emission reductions from REDD+ activities and the value they generated by reducing the impacts of climate change. Estimates of these avoided costs of climate change are highly debatable, as it is impossible to know with certainty what would have happened without any climate change mitigation. Estimates necessarily include assumptions on climate sensitivity as well as on socioeconomic and policy uncertainties when they establish and aggregate impacts on agriculture, coastal areas, human health and mortality, ecosystems and biodiversity loss, for example (Nordhaus, 2008; Tol, 2005; Watkiss and Downing, 2008). Tol (2008) brought together a number of estimates of the cost to society of emitting carbon, finding an average of US$23 per tonne of carbon (tC). This social cost is not a reflection of the market price but of the economic damages that would be associated with climate change. With tonnes of carbon per hectare of forest ranging from approximately 8 tC to 150 tC across the globe (IPCC, 2006), the economic value delivered from avoiding these costs through REDD+ activities could be substantial.

Of course, any benefits of REDD+ should be considered relative to the costs of delivering REDD+. These could include the opportunity costs of forgone revenues from other land uses; the up-front capacity building costs and implementation costs; and ongoing costs of continued forest protection and monitoring, reporting, and verification of emission reductions. The Stern Review estimated that the opportunity costs of forest protection, meaning the forgone income from an alternative land use, in eight countries representing 46% of global deforestation would be US$5 billion per year (Stern, 2007). In 2008 these figures were revised to US$7 billion per year as a result of higher commodity prices (Eliasch, 2008). These opportunity costs of land reflect the economic incentives that need to be overcome to keep forest standing, and some have suggested that payments for REDD+ be anchored to such opportunity costs of land (Pagiola and Bosquet, 2009; White and Minang, 2011; Wertz-Kanounnikoff, 2008). The estimate of the opportunity costs of land, however, has limitations (Angelsen, 2010; Grieg-Grann, 2006; 2008). In particular, opportunity cost estimates at this global scale are based on broad assumptions about crop types and market prices over time, and rarely reflect crop or soil heterogeneity at smaller scale. They often omit forest conversion benefits, such as timber, as well as other activities that may result in forest degradation and deforestation, besides the conversion to agricultural uses. Estimates can also fail to consider the subsistence values of forests and may fail to account for the lack of secure land tenure in many forested nations.

In addition to the opportunity costs of land, the costs of up-front capacity building, implementation, and the running of REDD+ implementation can be substantial. The Eliasch Review (2008) estimated that capacity building for REDD+ would cost US$4 billion over five years in 40 forest nations, and for 25 countries, the transaction costs to administer REDD+ payments could be US$233-US$500 million per year, with monitoring costs between US$7-17 million annually. Eliasch did not estimate the forest protection measures, however, as it is recognised that the costs of REDD+ implementation will vary by country

and depend on the existing sociopolitical context as well as the drivers of deforestation to be addressed.

2.1.2 Enhancing other ecosystem services

In addition to the climate change mitigation service, REDD+ activities can deliver a number of other ecosystem services. These include watershed protection, building of soils, providing timber and non-timber forest products, supporting fisheries in swamp forests, protecting coastlines with mangrove forests, supporting tourism, and many others. Biodiversity underpins the delivery of these ecosystem services, where biodiversity is the variability between living organisms, including that within species, between species, and in ecosystems (Dickson and Osti, 2010; Miles *et al.*, 2010). High correlation is found between high carbon stocks and the richness of mammal, bird and amphibian species (Strassburg *et al.*, 2010). It is, therefore, not surprising that there are potential biodiversity benefits of REDD+ implementation (CBD, 2011; Grainger *et al.*, 2009; Harvey *et al.*, 2010). Collaborative mapping work between the UN-REDD Programme and REDD+ countries have helped to explore where REDD+ implementation could deliver emission reductions and biodiversity and further ecosystem services (Ravilious *et al*., 2011). It is noted, however, that REDD+ activities could also negatively impact on biodiversity and provision of ecosystem services; there may also be trade-offs between the generation of emission reductions and such services (Grainger *et al.*, 2009).

The contribution of REDD+ to biodiversity conservation can also underpin the resilience of forest ecosystems, understood as their ability to recover after shocks or stress to maintain function and structure (Pelling, 2011). Ecosystem resilience, therefore, provides a form of insurance that decreases the probability of future losses in services from the ecosystem in question (Baumgärtner and Strunz, 2009). Resilience is conceptually important because irreversible damage or sudden collapse can lead to substantial losses in human well-being, and it can be very expensive or impossible to restore and recover these systems (TEEB, 2010b). Such resilience has been identified as important for the long-term viability of REDD+, and the role of reducing forest degradation has been highlighted in this regard; intact forests are found to be more resilient than degraded and fragmented forests (Miles *et al*., 2010).

As REDD+ can support the resilience of forest ecosystems, and maintains the function and structure of forests, it could have a knock-on effect on the ability of populations to adapt to climate change. Human adaptation to climate change can be defined as deliberate actions undertaken to reduce the adverse consequences of climate change as well as to harness beneficial opportunities (OECD, 2008). It is increasingly recognised that the activities of REDD+ may have the ability to contribute to local-level capacity to cope with climate shocks, stresses and other development pressures (Graham, 2011). This might be achieved through coastal protection, flood mitigation, water filtration, and erosion prevention if REDD+ is designed with these aims (Peskett, 2010). The links between REDD+, ecosystem reliance and human adaptation to climate change, however, are yet to be evidenced.

Quantification of REDD+ activities' contribution to human populations' adaptability to climate change is a complex task. Adaptation activities are intrinsically hard to separate from development activities; a country may not be well adapted to its current climate, for example (IIED, 2009; World Bank, 2010b). This would imply that its expenditure to manage climate change might include the costs of adapting to the current climate as well as preparing for a future climate. The impacts of climate change and how to value them also remain uncertain, and interaction between mitigation and adaptation will influence any calculations of benefits. The feedbacks, delays and non-linearity in changes in ecosystems, and therefore any tipping points (Laurence *et al*., 2011), and the risk preferences of users and the economic context are also critical factors that deserve more academic study in order to make stronger links between ecosystem services and human adaptation to climate change (e.g., Baumgärtner and Strunz, 2009; Derissen *et al.*, 2011; Quaas and Baumgärtner, 2008).

Within current limitations, establishing a baseline and time period for measuring the benefits of adaptation over the costs of not acting remain challenging.

2.2 The wider social benefits of REDD+

REDD+ implementation can have wider social benefits for forest governance as well as in employment and income, in addition to the benefits through ecosystem service provision. These potential social benefits, on the whole, can be hard to quantify or attribute value to. This is because the way that REDD+ is implemented in a country, as well as the existing forest governance and institutional context of the country, will affect the extent to which it causes or avoids causing negative social impacts. The potential for REDD+ to deliver wider social benefits is explored in this section, and where metrics exist to assess these aspects they are reported.

2.2.1 Strengthening forest governance

The success of REDD+ will depend heavily on the good governance of forests (Barbier and Tesfaw, 2012; Springate-Baginski and Wollenberg, 2010). Forest governance can be thought of as the process of making decisions, rather than the decisions themselves, and therefore captures the range of actors and interests affecting forest management. Poor forest governance has low transparency, a lack of accountability, and low participation in decision-making; it also has poor capacity and coordination in management and administration of forests, which can lead to corruption and illegal forest conversion and use, as well as conflicts over ownership and access rights (WRI, 2009).

Good forest governance is therefore critical to successful REDD+ implementation as it represents one key driver of deforestation and degradation. It can reduce conflicts over forest resource use and will also underpin any distribution of benefits from REDD+, as well as the transparency and accountability of REDD+ activities and processes. The World Resource Institute's Governance of Forests Toolkit provides indicators for assessing forest sector governance across components of actors, rules and practice, against principles of transparency, participation, accountability, coordination and capacity. Under this framework, key issues of forest tenure, land use planning, forest management and forest revenues and incentives are addressed (WRI, 2009).

Photo by Ollivier Girard/ CIFOR

The issue of forest tenure is of key interest to the successful implementation of REDD+. Much of the world's forests have unclear or contested land tenure, and governments largely retain statutory rights to forest land (Cotula and Mayers, 2009; Hatcher, 2009; Springate-Baginski and Wollenberg, 2010). REDD+ implementation necessitates the clarification and strengthening of land tenure and property rights, including the recognition of customary rights on forested land (Barber and Tesfaw, 2012; Larson *et al.,* 2012). Such clarification can build on, rather than conflict with, local interests and will determine accountability in the delivery of carbon stocks as well as the distribution of benefits from financial transfers from REDD+ (Robledo *et al*., 2008). REDD+ has successfully brought international attention to issues of land tenure and to the rights of forest people. Clarifying land tenure is recognised in the Cancun agreements on REDD+ safeguards, as is the protection of the rights of indigenous peoples (UNFCCC, 2010). It is acknowledged, though, that efforts to address tenure issues have been limited (Larson *et al.*, 2012).

The principle of participation is similarly an important element for the success of REDD+ programmes. Full and effective participation allows stakeholders to be involved in formulating and implementing policy processes, making institutional arrangements, and setting management priorities (Forsyth, 2009; Springate-Baginski and Wollenberg, 2010). It empowers and helps build trust and acceptance among relevant stakeholders with different interests, reducing the risks of failure (Forsyth, 2009; Peskett *et al*., 2008).

Forest governance is relevant for the transition to a green economy, as poor forest governance will have consequences for environmental, social and economic goals. Illegal forestry, for example, although difficult to quantify, could result in government revenue losses of as much as US$5 billion annually (World Bank, 2008). Poor forest governance may also lead to political instability, income disparity and the loss of biodiversity and habitats, which may counter the ultimate objectives of a green economy (FAO and ITTO, 2009). Gender considerations, as agreed within the Cancun decision, are also necessary under forest governance given the heavy dependence of women on forests for their livelihoods (UNFF, 2013a).

2.2.2 Employment and income

Where REDD+ activities can lead to income or employment either directly or indirectly, they can also contribute to the multiple benefits of REDD+. International Labour Organization studies have illustrated that greening certain sectors of the economy can lead to an increase in direct and indirect employment (ILO, 2009). They subsequently recommend that policies should be aimed towards creating low carbon, employment intensive, poverty-reducing growth. However, there is evidence both for and against the significance of impact that investment in greening an economy has on jobs (Bowen, 2012). The forest sector is already a rich source of employment and Gross Domestic Product (GDP), particularly in low-income countries; an estimated 13.7 million people were employed in the formal forest sector globally in 2010 (FAO, 2011). This represents up to 2% of the total workforce in some forest-rich developing countries such as Gabon, Guyana, Malaysia and Suriname. In terms of economic significance, across west, central and eastern Africa for example, the forestry sector provides 2% of GDP, including up to 11.1% in Central African Republic and 17.7% in Liberia (FAO, 2011). Concerns over poorly maintained forest stocks threaten the sustainability of this industry; for example, calculations in Ghana predicted a 68% drop in gross value of production between 2012 and 2020 if governance and management were not improved (Mayers *et al.,* 2008). Therefore, in the medium and long term, REDD+ policies could help protect the economic contributions to forested nations in the forest sector.

In terms of job creation, Nair and Rutt (2009) calculated that a stimulus package in sustainable management of forests would provide an additional 10-16 million jobs globally at an estimated cost of US$36 billion. The package would also contribute to rebuilding the forest asset base and enhancing ecosystem service provision. They suggest that the majority

of the jobs would be provided in developing countries through afforestation and reforestation, maintenance of managed forests, forest conservation, and agroforestry, all of which are forest management options that have the potential to generate emission reductions. This implies that that forest management activity through which REDD+ is implemented will have impacts on the ultimate scale of job creation. The jobs created in the forest sector are also relatively labour intensive and low in capital requirements compared to other sectors. This makes them attractive investments when greening an economy (FAO, 2009; Bowen, 2012).

In considering potential benefits of REDD+ for income, it is important to also consider the informal forest sector. It is estimated that formal employment comprises only between a third and half of forest sector jobs (ILO, 2001; Lebedys, 2004; UNFF, 2013a). Furthermore, between 119 million and 1.42 billion people are estimated to rely on forests for some component of their income and employment (UNEP, 2011b). The protection and development of a broad range of forest-based livelihood strategies is, therefore, a key element of many country strategies to implement REDD+. According to Lele *et al.* (2013) over 3 billion people, approximately 43% of the world's population, are dependent on wood fuel, the collection of which could be affected by the implementation of REDD+. The employment and income captured from these activities in rural households are rarely captured in national statistics, as direct consumption supports non-cash income. However, ensuring the continuation of such benefits alongside REDD+ implementation will allow continued provision of benefits such as energy security, shelter and furnishings, medicinal use, food, nutritional security, and subsequently, health from standing forest (UNFF, 2013a).

Arriving at a total figure of employment and income created or at risk from REDD+ implementation would be a complex undertaking, not only given the lack of data on the informal forest sector, but also because the identification of a business-as-usual case for comparison is complex. Without doubt, the conversion of forest to other uses creates employment and income (Imori *et al.,* 2011). Agriculture, a main driver of deforestation, is also the main source of income for many low-income households, and growth in low-income countries is often heavily agriculture based (Bowen, 2012). Such agricultural growth has the potential to be strongly pro-poor, although it is difficult to generalise about the impact of biofuels and agricultural development on rural development and poverty reduction because of the different characteristics of every crop, production method and local market conditions (Peskett *et al.,* 2007). This further emphasises that REDD+ implementation must be designed with respect to national development and food security objectives.

Finally, research into benefit sharing modalities indicates a number of impacts on development, growth and poverty reduction (Peskett, 2011). Recognising that forest resources contribute significantly to the income of the rural poor, the potential effects of REDD+ implementation on poverty, in particular, have gained prominence (Grieg-Gran *et al.,* 2005; Peskett *et al.,* 2008). As the long-term REDD+ finance available from international sources remains uncertain at both national and local levels, it is too early to make assessments on the income impacts of the benefits shared from REDD+ incentives. However, it is clear that the manner in which the existing finance is spent and distributed will have an impact on the economic benefits accrued through REDD+ implementation.

2.3 How REDD+ could support the green economy transition

Section 2.1 and 2.2 have demonstrated that, designed appropriately, REDD+ can enhance ecosystem service provision and wider societal benefits. A headline aggregate figure of the multiple benefits of REDD+ is not available, however. A figure may be misleading, if calculated, or it may even be impossible to calculate. This is largely due to insufficient methods and data for estimating what will happen in the absence of REDD+

implementation, or for estimating the functioning, distribution, and effects of biophysical changes on the delivery of ecosystem services. Some ecosystem services are also inputs to the production of other services, so aggregation may double count benefits (TEEB 2010b). Alternatively, aggregation may fail to capture the trade-offs that might exist between ecosystem services or social objectives in a particular area. A monoculture tree plantation might sequester a lot of carbon, for example, but would not support the same level of biodiversity as a mixed-species plantation.

Nonetheless, the multiple benefits that could arise from REDD+ implementation make a clear rationale for why REDD+ can inherently be part of the transition to a green economy. Firstly, forest ecosystem services are rarely reflected appropriately in market prices, or are not present in markets at all. A better appreciation of the multiple contributions of REDD+ to human well-being is a first step towards understanding the true benefits provided by forests, and consequently correcting the market and policy failures that have led to their decline. Such information may also help move forest and land use management away from the periphery of national planning processes by generating a shift in thinking that takes into account the multiple benefits of forests, including climate change mitigation.

REDD+ policies and measures will have implications for a large group of people, given the need to harmonise REDD+ efforts with, for example, energy and agriculture policies, which are also important drivers of development (Graham, 2011). Integrating REDD+ within planning and investments for a green economy transition could allow for synergistic opportunities to be maximised. This is particularly true in policy planning as the same actors, networks and institutions will likely be engaged in the green economy transition and in REDD+ implementation. Integration at an early stage can reduce the proliferation of institutions and thereby the transaction costs of pursuing REDD+ and a green economy. It can also provide a platform to share REDD+ experience and tools. Progress already made on REDD+ safeguards, for example, can be applied or adapted where necessary, to suit the social objectives in the context of contributing to a green economy transition. In addition, established safeguards can help reduce investor risks by setting clear rules. This is evidenced by the prominence of social and environmental standards in the voluntary forest-carbon markets (Jagger *et al*., 2012; Peter-Stanley *et al*., 2012). The relationship could also be mutually supporting, with the clear pursuit of a green economy able to reduce risks of non-permanence and leakage risks of REDD+ investments (Sukhdev *et al*., 2010).

3 Progress towards integrating REDD+ in a green economy transition

Economic growth and development will continue to be a fundamental concern for countries. Given many developing countries' economies' reliance on the natural resource system (World Bank, 2004; 2010a), it is not surprising that investments are already being made that are relevant to both REDD+ and the transition to a green economy, but these efforts are still in their infancy. While some countries and organisations are making explicit links between REDD+ and a green economy, others are investing in activities that could fall under both concepts but are not using either terminology. This indicates that progress can be made without dwelling on terminology, and also that lessons can be learned from initiatives that were undertaken over the last few decades, prior to REDD+, to tackle forest loss and contribute to the sustainable management of forests. The integration of REDD+ within the transition to a green economy is likely to continue to be strengthened as countries work towards the implementation of REDD+ and green economy plans and the adoption of strategies that must inherently operate within a broader socioeconomic and political context.

The following sections present efforts of countries and international organisations towards this integration, highlighting relevant interventions.

3.1 Country-level experience

Some countries have explicitly recognised a green economy in REDD+ planning and processes. Others have made less explicit the relevance of the various forest sector and/or REDD+ investments and activities in a green economy transition (Table 1). Indonesia, for example, has taken steps to integrate the concept of REDD+ into its green economy approach, and its planning agency, supported by development partners, has made progress in identifying nationally relevant green economy objectives. Indonesia's efforts are also being supported through the Forest Investment Program (FIP) of the World Bank's Climate Investment Funds and 'FIP is expected to contribute to realising the goals of green economy and green growth' (RoI, 2012a). The Master Plan for the Acceleration and Expansion of Indonesia's Economic Development is not explicitly framed as aiming for a green economy, but it, too, incorporates many elements that are relevant to the transition to a green economy and it includes contributions from REDD+ activities.

Table 1: Exemplary country-level linkages between REDD+ and a green economy

Country	Examples of linkages between REDD+ and a green economy
Democratic Republic of the Congo	• The Democratic Republic of the Congo has developed a 'REDD+ to a green economy' scenario as part of its analysis of policy reforms required for REDD+ with stakeholders and the Ministry of Planning, providing an example of what such transformation based on REDD+ investments could mean • Democratic Republic of the Congo's REDD+ Framework Strategy finalised in 2012 also includes direct reference to the importance of a green economy in REDD+ planning and processes
Ethiopia	• Ethiopia has situated its 'REDD Readiness Wheel' within the Climate Resilient Green Economy initiative developed by the Ethiopian government, explicitly incorporating REDD+ within the initiative that seeks to coordinate the main sectors of the economy to develop an environmentally sustainable growth path in Ethiopia (FDRE, 2011) • Forestry activities are part of Ethiopia's poverty reduction strategy and there are plans to extend participatory forest management across the country, which has the potential to contribute towards emission reductions as well as to greater empowerment and social equity • Ethiopia has recently secured funding from the World Bank's Forest Carbon Partnership Facility to continue to develop its national REDD+ strategy
Guyana	• Guyana's Low Carbon Development Strategy makes specific reference to REDD+ as one of two goals in its transition to a green economy (Republic of Guyana, 2013) • Guyana has established the Guyana REDD+ Investment Fund to finance activities identified under the LCDS. The fund has received US$115 million from Norway in the form of performance-based payments for REDD+, to date, with a total of US$250 million available over five years. Guyana is investing these payments in clean energy, agriculture and other low-carbon sectors.
Indonesia	• Indonesia plans to cut greenhouse gas emissions by 26% by 2020 while growing the economy by 7% annually. A large portion of emission reductions is likely to come from REDD+ activities • The Master Plan for the Acceleration and Expansion of Indonesia's Economic Development illustrates a strong REDD+ contribution (RoI, 2011) • Indonesia is collaborating with the UN-REDD Programme to link its REDD+ efforts with its overarching goal of transitioning to a green economy • Indonesia's investment plan of the World Bank's Forest Investment Programme makes explicit links to realising the goals of a green economy and green growth in the pursuit of REDD+
Kenya	• Recent environmental valuation work in Kenya highlights the impact of forest ecosystem change to the national economy • A Kenya Forest Service Report, with UNEP support, linking the value of montane forests to the economy has also stimulated the establishment of a steering committee on forest resource accounting, with efforts to include this accounting in official forest statistics • Kenya's new constitution puts environmental concerns more centrally in government priorities
Panama	• The Forest Carbon Partnership Facility Readiness Preparation Proposal highlights the need to strengthen local capabilities required to promote a green economy at the local level, and the need for resources to encourage productive activities compatible with conservation goals and human development goals, and to incorporate activities into a green economy (ROP, 2009)
Viet Nam	• Viet Nam's Green Growth Strategy recognises the need for increased investments in conservation, development, and efficient use of natural capital. The strategy includes both afforestation and reforestation, as well as REDD explicitly, within its 17 'solutions'

Forests are also explicitly included in Ethiopia's Climate Resilient Green Economy (CRGE) strategy, as 37% of national greenhouse gas emissions coming from the forestry and land use sector (FDRE, 2011). One of the four pillars of CRGE is the protection and re-establishment of forests for providing economic benefits and ecosystem services. CRGE seeks the protection and expansion of forest carbon stocks through reduced demand for fuelwood via fuel-efficient stoves, increased afforestation, reforestation and forest management. REDD+ was also integral in Ethiopia's Plan for Accelerated and Sustainable Development to End Poverty that promoted forest rehabilitation with the goal of increasing national forest cover. As a participant country of the World Bank's Forest Carbon Partnership Facility and a partner country of the UN-REDD Programme, Ethiopia now has the endorsement and finance to further develop a national REDD+ strategy and readiness.

The Democratic Republic of the Congo's REDD+ framework includes direct reference to a green economy. Scenario analyses have been employed in the Democratic Republic of the Congo to establish REDD+ policy reform options and a pathway to 2035, and as part of this exercise, a 'REDD+ to a green economy' scenario was generated. The exercise raised awareness of the linkages between REDD+ and a green economy, including a variety of stakeholders, among them the Ministry of Planning. Also underway in the Democratic Republic of the Congo is sensitisation to and customisation of the Threshold-21 model. Threshold-21 is a simulation tool that can analyse different policy options to reach a desired goal. Developed by the Millennium Institute, the model integrates social, economic and environmental factors and can be customised to a country's context to support integrated planning as well as the monitoring and evaluation of results.

Other countries are making and have made progress without dwelling on framing issues around green economy, green growth, and even in some cases REDD+. A growing recognition of the contributions of ecosystem services to human well-being, for example, can be seen in the growth of payments for environmental services (PES) schemes. PES works by creating a market or price for a well-defined ecosystem good or service, or a land use supporting that service, and clearly identifiable providers and buyers that can enter into a voluntary contract (Wunder, 2005). PES schemes have emerged in watershed protection, for example to pay upstream users for improved downstream water quality (Perrot-Maitre, 2006), as well as for biodiversity and landscape preservation. Schemes in the forest sector are the most common form of PES (OECD, 2008). This includes carbon storage and sequestration, such as payments for avoided deforestation or afforestation and reforestation and is therefore highly relevant for REDD+ implementation. One well-established PES scheme is that in Costa Rica, where payments are made to landowners for their contribution to carbon sequestration, watershed protection, biodiversity conservation and scenic beauty (Box 2). Many developing countries are now exploring both national-level and project-level PES schemes.

Developed countries have also taken action to reduce global forest decline. Public-sector measures that address international trade can include legislation, policies, agreements, directives or guidance (Walker *et al*., 2013). A number of interventions have focused on timber, highlighting a need to apply similar approaches to agricultural commodities and other products driving deforestation. Legislation outlawing trade in illegal timber includes the US Lacey Act, the Australian Illegal Logging Prohibition Bill, and the EU Timber Regulation (UNEP, 2013; Walker *et al*., 2013). The EU Timber Regulation is also part of the EU's Action Plan for Forest Law Enforcement, Governance and Trade (FLEGT). FLEGT, published in 2003, aims to control illegal logging and improve forest governance through a series of interventions within the EU and with timber-producing countries, including Voluntary Partnership Agreements designed to build capacity and improve enforcement (UNEP, 2013).

Box 2. Payments for ecosystem services in Costa Rica

Costa Rica has been a leader in the implementation of national-level PES. In 1997 it initiated its Pagos de Servicios Ambientales (PSA) programme. The programme provides direct payments to farm and forest owners for their contributions to carbon sequestration, watershed protection, biodiversity conservation and scenic beauty. The inclusion of reforestation, forest conservation and sustainable forest management among the activities for which payments can be derived shows that this has strong links to results-based payments for REDD+.

In designing and implementing the scheme, Costa Rica showed innovation in its approach, reacting to rapid forest losses due to infrastructure development, cattle exports and a system of land titling. PSA was also underpinned by forestry law that recognises the ecosystem services provided by forests, which then led to a new national forest strategy. Development of PSA was also preceded by income tax deductions, tax credits and funding provided to municipalities to promote reforestation.

The Fondo Nacional de Financiamiento Forestal, a public forestry-financing agency, administers the PSA. The finance to make payments arises from a tax on fossil fuels, revenues from carbon trading, hydroelectric companies, and domestic funds for forest conservation. Some have criticised the payment levels and impact on deforestation of the PSA, but it remains a strong example of a nationally led PES scheme that provides an economic value to ecosystem services beyond timber production.

Source: Zbinden and Lee (2005)

3.2 Engagement of international organisations

The UN-REDD Programme, a collaboration of UNEP (United Nations Environment Programme), UNDP (United Nations Development Programme) and the FAO (Food and Agriculture Organization of the United Nations), is supporting the integration of REDD+ in a transition to a green economy in its member countries. Outcome 6 of the Global Programme is to catalyse green economy transformation processes as a result of REDD+ strategies and investments. UNEP is the lead implementing agency on this work programme, which aims to deliver methods and approaches to developing policies and investment options for seeking a balance of benefits from forests for climate, development, and conservation goals. Over the past three years, the UN-REDD Programme has supported pilot activities in a number of countries. Initiatives pursued to this end through the UN-REDD Programme include, for example, greater identification of investment options that incorporate the value of ecosystem services in addition to carbon and climate change mitigation.

The Global Green Growth Institute (GGGI), an international organisation working towards economic growth and environmental sustainability, is also supporting the integration of REDD+ into its efforts in key forested countries. In Indonesia, GGGI is producing a green growth assessment framework that considers local-level impacts as well as contributions to GDP, therefore extending beyond small-scale cost-benefit analyses. The intention is to apply this framework to REDD+ investments calibrated with local-level data in addition to broader green growth investments.

In April 2013, the United Nations Forum on Forests (UNFF) had a central theme of forests and economic development. Background papers prepared for the forum highlighted the economic contribution of forests and the cross-sectoral linkages in managing forests. While these background papers were not framed explicitly as relevant to REDD+ or a transition to a green economy, they nonetheless enhanced recognition of many of the benefits of forests. The reports highlight the gaps in reliable information on the full extent of the economic

contributions of forests to economic development. They call for better systematic data on the non-cash value of fuelwood, non-timber forest products, medicines, and cultural values, noting that estimates of the non-cash contributions range between three and five times the formally recognised cash contributions (UNFF, 2013a). The outcome of the UNFF forum did, however, explicitly recognise a green economy by inviting '*Member States, Collaborative Partnership on Forests member organisations and other organisations to enhance the role of forests and sustainable forest management in sustainable development, taking into account different visions, approaches, models and tools to achieve sustainable development, including green economy in the context of sustainable development and poverty eradication*' (UNFF, 2013b).

Certification schemes, such as the Forest Stewardship Council, set voluntary environmental and social performance standards against which to independently assess and verify individual practices. These work by allowing conscientious consumers to make more environmentally and socially friendly decisions on the products they buy. 'Roundtables' focused on individual agricultural commodities, such as palm oil and soy, have also begun to develop certification schemes. These roundtables engage multiple stakeholders from the private sector and NGOs to develop principles and criteria for defining and measuring social and environmental performance. The rate of implementation of certification schemes seen through some roundtables has been more rapid than that seen for timber certification schemes; in the first five years of implementation 14% of world production of palm oil has become certified under the Roundtable for Sustainable Palm Oil, for example (Nepstad *et al.*, 2013). Voluntary commitments from private sector companies are also increasing; for example, the Consumer Goods Forum, which represents more than US$2 trillion in annual revenues, announced a commitment to 'zero net deforestation' systems by 2020. Soy and meat companies have also agreed to a moratorium on the purchase of products from land where forest conversion has taken place after a certain date (Nepstad *et al*., 2013; Walker *et al*., 2013). These examples reflect a growing engagement of the private sector, often supported by civil society action, in social and environmental issues. This is, in part, driven by the perceived reputational risks of being associated with poor environmental or social practices. Campaigning by Greenpeace that linked deforestation in the Amazon to soy exported to Europe, for example, has been cited as critical in the soy and meat industry moratorium (Nepstad *et al*., 2013; Walker *et al*., 2013). These private sector focused initiatives, however, have often developed in parallel with REDD+ activities and more collaboration could be beneficial (Nepstad *et al*., 2013).

Other international organisations have long worked on tools that can improve national accounting frameworks to better capture natural capital. These are relevant in order to understand the contribution of forests towards a country's societal objectives and can, theoretically, support fiscal policy decisions and budgetary allocations. These tools are necessary as the System of National Accounts (SNA) often fails to appreciate such environment-economic relationships, instead being focused by sector, or on monetary flows (UNEP, 2012). GDP, for example, is a conventional SNA measure of well-being but ignores the depreciation of a country's natural capital, including forest ecosystem services and carbon stocks (Barbier and Markandya, 2013). The World Bank's wealth accounting approach provides an estimate of the sustainability of a country's development using physical capital, the value of urban land, *and* the value of natural capital (such as agricultural land, sub-soil assets, forest resources and protected areas) (World Bank, 2006). The method provides an estimate of the value of future sustainable consumption called Adjusted Net Savings. The UN Framework System of Environmental–Economic Accounting provides a set of descriptive statistics on the relationship between the environment and the economy. For example, it identifies timber as one form of physical resource, and it reports stocks and stock change more systematically than conventional SNA (SEEA, 2012).

4 Challenges and opportunities of integrating REDD+ within a green economy transition

Having provided the rationale for REDD+ to be part of the transition to a green economy, it is necessary to consider what countries can do to best achieve integration. Early efforts to link REDD+ explicitly with a green economy are emerging, but it is premature to capture best practice in how REDD+ can be integrated in a green economy transition. It is likely, however, that countries will require a strong knowledge base of how forests contribute to the national economy and suite of tools for planning; political will to invest in REDD+ and the green economy transition; an appropriate institutional framework; policy alignment and strong cross-sectoral coordination; and adequate finance (Table 2).

The actions involved in building what might be considered ‘enabling conditions’ are not necessarily sequential; they also bring both challenges and opportunities. Efforts to meet these challenges should build on the infrastructure that exists in country. Progress can be made before all opportunities have been taken and, therefore, before an optimal enabling environment is in place.

This section draws from experience relating to REDD+, the transition to a green economy, and other efforts to conserve and sustainably manage forests, to explore the integration of REDD+ in a green economy transition through these challenges and opportunities. Over time, it will be necessary to review the extent to which these challenges and opportunities remain relevant and to share lessons on how countries are best able to overcome challenges and take up opportunities.

Table 2: Potential challenges and opportunities of integrating REDD+ into a green economy transition

	Challenge	Opportunity
Strong knowledge base and tools for planning	Data and methodological limitations in understanding of forest contributions to the national economy can push forests down the policy agenda. A lack of information can also limit the application of economy-wide land use planning tools.	Strengthening knowledge can generate greater political will by demonstrating the multiple contributions of REDD+, and can feed into emerging tools to manage potential conflicts and trade-offs with other land uses and policy priorities.
Good political will	Politically sensitive trade-offs are inherent in a change in the status-quo, and forests have not traditionally been seen as a high priority in national development planning.	REDD+ could provide new incentives for forest conservation that can increase political will and go some way to overcome interests and incentives that run counter to REDD+ and green economy objectives.
Appropriate forest governance	Acting to clarify tenure, foster broad participation and effect good law enforcement are longstanding challenges in forest conservation. Accelerated progress towards appropriate forest governance may require national recognition of REDD+ and a green economy as a development rather than an environmental issue.	Similar networks and institutions are likely to be engaged in both REDD+ and a green economy transition. Complementary systems can be designed, and can build on those emerging under REDD+, to reduce overlap and unnecessary complexity and transaction costs.
Policy alignment and cross-sectoral coordination	REDD+ and green economy objectives sit within a number of national policies, strategies and action plans in a diversity of sectors, but policy-alignment and cross-sectoral coordination can be hard to achieve in practice.	Where REDD+ can be integrated into green economy planning and investments, more strategic planning of investments could reduce the overall costs of progress where pursued separately.
Adequate finance	Current limits on public finance and limited engagement of private sector in REDD+ at present, provide a challenge in raising sufficient finance to integrate REDD+ within a green economy transition.	The integration of REDD+ in a green economy transition could aid private sector engagement through sharing lessons on the application of safeguards to reduce risk and increase investor confidence.

4.1.1 A strong knowledge base and appropriate tools for planning

REDD+ has the potential to provide multiple benefits where implemented appropriately, but the challenge is to understand fully the complexity in ecosystem service provision and in the contribution of forests to the national economy. For example, a study focused on Europe and Central Asia showed that many countries have poor information on the forest sector as well as poor data relating to employment, incomes and livelihoods, protective functions and biodiversity (UNECE and FAO, 2013). The UN-REDD Programme and Forest Carbon Partnership Facility (FCPF) country needs assessment has identified an urgent need for case studies comparing the probable impacts of business-as-usual investment practices with those of green economy options in 48% of countries surveyed (UN-REDD and FCPF, 2012a). Improving analysis of ecological scarcity, valuing the loss in benefits from deforestation and forest degradation, and translating the implications into policy are key steps towards a green economy (Barbier, 2011). Where the knowledge base is strong, appropriate tools for planning can be applied that can balance the needs and interests affecting forests and land use. Overriding priorities in many developing countries are human development, food security, and poverty reduction and land use decisions are often

also taken with a view to contributing to these priorities. Concerns have, therefore, been expressed as to whether REDD+ or adopting a green economy paradigm will undermine these priorities and what tools can be used to plan for such trade-offs. For example, while the agricultural sector can promote growth and development in rural areas (IFAD, 2010), it is also a major global driver of deforestation and generator of greenhouse gases (Graham and Vignola, 2011).

Building a stronger knowledge base provides an opportunity to broaden the perception of the benefits of REDD+ to include more than just climate mitigation and generate greater willingness to engage, both politically and in the public sphere. Better information on some of the less visible benefits of forests, such as environmental services or contributions to the non-cash economy, are critically important for the poor and marginalised communities that are seldom well represented in international and national discourses (Bird and Dickson, 2005; UNFF, 2013a). Opportunities exist to make use of the emerging tools applied for REDD+ planning and investments, to guide decision-making and to understand where the potential conflicts and trade-offs may exist in pursing REDD+ within a green economy. Evidence of 'win-win' solutions are elusive in both policy and practice, and a more strategic assessment of the distributional and financial implications of policies claiming such triple wins is necessary (REDD-net, 2010; Tompkins *et al*., 2013). Tools such as cost-benefit analysis, multi-criteria analysis and cost-effectiveness analysis can be applied using environmental valuation data to help decision-makers minimise potential trade-offs and maximise synergies between various national priorities to be implemented. Threshold 21 models, scenarios analysis, and efforts to map the multiple benefits of REDD+ can also contribute towards integrated land use planning, which can help identify options for balancing different objectives, including areas to retain or restore forests, areas that can integrate multiple land uses (for example, through agroforestry), and areas that may be converted or more intensively used for other land uses (Megevand, 2013; Sunderlin *et al*., 2009; UNFF, 2013a; UN-REDD, 2013).

4.1.2 Good political will

A challenge of integrating REDD+ into the green economy transition is building the will to make politically sensitive trade-offs inherently implied in the change in the status quo, for example, in reforming or reducing forest-related subsidies (Goetzl, 2006). The extent to which an agenda has adequate weight in national politics and priorities has been shown to be important in influencing actors (ODI, 2012). Where forests have not been seen as a high priority in national development planning, the potential to overcome political barriers is limited (Brickell *et al.*, 2012). Countries can be 'locked in' to the status quo, shaped by existing power structures, policies, technologies, infrastructure, interests and norms (Wreford, 2012). Most countries have strong political and economic interests in the exploitation and conversion of forests (Di Gregorio *et al.*, 2012). Entrenched vested interests often favour investments in forest conversion to agricultural land, industrial crops such as oil palm or rubber, and mining, rather than more sustainable options (Brockhaus *et al.*, 2012). The links between the state and major drivers of deforestation is a concern as collusion and corruption in light of vested interests can hinder change to the policy status quo.

An opportunity exists where REDD+ can be a potential game changer in providing new incentives for the conservation and sustainable management of forests (Brockhaus and Angelsen, 2012). Greater political will can help to pursue REDD+ in a green economy and overcome longstanding governance challenges. Several countries have shown high-level political will in relation to REDD+ and green economy, such as President Susilo Bambang Yudhoyono's announcement that Indonesia would reduce emissions by 26% by 2020, compared to business as usual. The early steps of countries seeking to link REDD+ and a green economy, as outlined in Table 1, provide further examples of countries demonstrating political commitment to making the necessary changes. Generating greater political will for including REDD+ in a green economy transition requires investment in understanding the

political economy of the system, where formal and informal interests and incentives drive the behaviour of groups and individuals (Unsworth and Williams, 2011). Overcoming the interests and incentives that run counter to REDD+ and green economy objectives will take time, requiring targeted and sustained efforts from developing countries and those who support them.

4.1.3 Appropriate forest governance framework

Challenges may exist in providing an appropriate forest governance framework for the integration of REDD+ within a green economy transition. Strengthening forest governance can help ensure that land tenure and rights are clarified; that planning processes are participatory, coordinated and strategic; that policies are implemented; and that laws are enforced and effective. This is likely to require that mandates to act come from significantly influential ministries, and it needs the full engagement of national planning and finance ministries that set the agenda and budgets for line ministries. In some countries, this may require a reframing of both REDD+ and a green economy as developmental issues, rather than narrowly as environmental issues. It may also require capacity building in certain institutions, the lack of which can be a major challenge in linking policies on forests to national development priorities such as in agriculture and in poverty reduction (McConnell, 2008; Obua *et al.*, 2010; UN-REDD, 2013). In the case of Uganda, for example, capacity weaknesses in the enforcement of laws, policies and regulations on forest resource use are widely recognised to hinder forest conservation efforts (GoU, 2011; Obua *et al.*, 2010).

Strengthening governance provides an opportunity for progress both towards REDD+ and a green economy. The broad participation of stakeholders and the clarification of land tenure and rights is likely to be necessary to protect natural capital in a green economy transition, as well as being critical for REDD+. As similar networks and institutions are likely to be engaged in both REDD+ and a green economy transition, there is a need to reduce overlap and to make best use of existing institutional structures, with capacity support where necessary, to avoid generating unnecessary complexity and transaction costs. There are also opportunities to build complementary systems of stakeholder participation for the implementation of REDD+ and a green economy. These may draw on REDD+ experience that indicates that inclusiveness and participation of a broad range of stakeholders is necessary, as different groups will be affected positively or negatively by policy choices (Graham, 2011; UN-REDD and FCPF, 2012b). Strengthening participation, rights and access in decision-making can, therefore, help build public and political acceptance of both REDD+ and a green economy.

4.1.4 Policy alignment and cross-sectoral coordination

Another challenge is to integrate REDD+ into a green economy transition, while recognising the multitude of objectives to be met through a growing number of national policies, strategies, and action plans. With the direct and underlying drivers of deforestation emerging from a multitude of sectors, this has given rise to an emphasis, in particular, on cross-sectoral coordination between ministries and agencies (Graham, 2011; Kissinger, 2011; Peskett and Brockhaus, 2009). These may include Poverty Reduction Strategy Papers; national development plans; environment, agriculture, and energy policies; low carbon development strategies; National Adaptation Plans of Action; and National Biodiversity Strategies and Action Plans. In practice this has been hard to achieve (Bird and Dickson, 2005; McConnell, 2008). Analysis of sector coordination in Uganda found that, without a strong political imperative for coordination, the perception that the costs of coordination are too high to justify the rewards will continue to hamper sector coordination for REDD+ (Brickell *et al*., 2012). The UN-REDD Programme and FCPF country needs assessment found that ‘very urgent’ support was needed in 52% of countries for the identification of major inconsistencies between the objectives of the REDD+ strategy and other sectors (e.g., transport, agriculture, energy, mining, tourism) and ways to address them. 62% noted a very urgent need to assess how existing laws, policies, programmes and practices incentivise deforestation and forest degradation (UN-REDD and FCPF, 2012a).

Analysis of Readiness Preparation Proposals indicates that 66% identify challenges in cross-sectoral interventions that pose risks for REDD+ implementation (Williams, 2013).

There is an opportunity to make progress on policy alignment through integrating forests in a green economy transition that could lead to more strategic planning of investments. Cross-sectoral coordination is not at all unique to REDD+; the origin of calls for cross-sectoral coordination are linked to discourses on sustainable development (Dornisch, 2007; Verbij, 2008). Such coordination will also be essential in a green economy. Challenges to cross-sectoral coordination have been highlighted as both technical and political (ODI, 2012). At the technical level, planning tools often differ; for example, different ministries often use different maps for planning processes, and high costs can be associated with harmonising these. The One Map Indonesia initiative illustrates such an example, where cross-sectoral coordination could benefit both REDD+ implementation and the green economy transition by coordinating information between government ministries, while also making it available in the public domain to increase transparency (Box 3). Political, high-level support is also important to create an incentive for coordination, as it can make available the resources required to overcome the cost implications of cross-sectoral coordination, both in money and time. It has already been emphasised above how the integration of REDD+ in a green economy transition can generate political will.

Box 3. ONE MAP Indonesia

The Presidential Instruction to create 'ONE MAP Indonesia' was initiated in December 2010 as a response to the different land cover maps held by the Ministry of Environment and the Ministry of Forestry. As each line ministry was responsible for preparing its own data, different definitions and methodologies resulted in differing statistics of what had been designated as forest in Indonesia. The lack of an integrated database of licenses on forest and peatland created further challenges for planning, with inconsistencies and overlaps with concession areas being found.

The one map initiative aims to develop one database of information across sectors and levels to improve sharing of information; facilitate cross-sectoral and central-regional coordination; and provide a foundation for better natural resource governance. From the central database, ministries and regional governments may produce their own maps, as long as they are then included within the public Indonesia National Spatial Data Infrastructure to ensure transparency. Once One Map is fully established, it is proposed to be used for land use planning and conflict resolution relating to tenure.

Source: RoI (2012b)

4.1.5 Adequate finance

The scales of funding needed, and the current limits on public finance, provide a challenge in raising sufficient finance to integrate REDD+ within a green economy. An estimated US$1.3 trillion per year is needed to finance the transition to a green economy by 2050. This is based on sectoral investments to achieve both the Millennium Development Goals and the International Energy Agencies Blue Map Scenario to halve global energy-related greenhouse gas emissions by 2050 compared to 2005 levels (UNEP, 2011a). As seen in Section 2, REDD+ implementation also requires substantial finance. Both require a range of sources of investment. The increasing attention in REDD+ on addressing the drivers of deforestation has led to greater prominence of the need to engage private sector actors, in particular those involved in supply chains affecting forests. The need to engage the private sector has also been highlighted in relation to a green economy, not only for finance but as key actors to manage resources and provide green goods and services (UNEP, 2011a). The 'private sector' is a broad term that captures a heterogeneous group of actors ranging from smallholders in developing countries to large multinational organisations. To date, however, progress to engage the private sector in REDD+ has been slow (UNEP, 2013). Greater

engagement from the private sector is likely to depend on demonstrating and enhancing the opportunity presented by green economy transitions and responding to policy reforms and price signals (FIP, 2013; UNEP, 2011a). Public-sector measures are also important in influencing private sector behaviour, however (Pirard and Treyer, 2010; Walker *et al*., 2013; Whitley, 2013). This can be through changing the subsidies and incentives for different activities, although as noted above these can be politically sensitive choices.

Integrating REDD+ in a green economy can provide the opportunity to identify and explore investments in a range of 'no-regrets' measures that could still yield benefits regardless of the shape of future REDD+ financing (Megevand, 2013). Although there is uncertainty regarding the future sources of finance, an international REDD+ mechanism under the UNFCCC also represents an opportunity to help finance the transition to a green economy. Their associated environmental and social outcomes through standards such as the Climate, Community and Biodiversity Alliance, or the Voluntary Carbon Standard, can also provide a powerful corporate social responsibility incentive to invest in REDD+. This illustrates how environmental and social safeguards can enable private and even public sector engagement in REDD+ by reducing reputational and operational risk, through clarifying legal requirements to be followed and establishing social and environmental requirements in what is a new area of business for many investors (Sukhdev *et al*., 2010).

Photo byDr. Johannes Refisch

5 Conclusion: a way forward

Underlying both REDD+ and a green economy is the need to raise levels of environmental protection beyond business-as-usual economic growth and development. While REDD+ has a focus on climate change mitigation, there are multiple benefits of REDD+ that can contribute to the broader objectives of a green economy. In particular, appropriate REDD+ implementation could lead to the enhancement of ecosystem services beyond climate change mitigation, as well as wider societal objectives for forest governance, employment and income. With REDD+ and a green economy both inherently cross-sectoral, the integration of REDD+ within a green economy transition could maximise synergistic opportunities in policy and planning, as well as reduce the transaction and implementation costs that would be incurred if the concepts were pursued separately.

The REDD+ community has made substantial progress in a number of areas from which experience can be applied in the transition to a green economy. The existence of safeguards for REDD+ implementation, for example, can raise investor confidence in REDD+ activities, and such a system could be extended and adjusted to work with wider components of a green economy. While efforts to explicitly integrate REDD+ and a green economy transition are still at their early stages, there are further experiences, tools, and instruments that have been used to tackle forest loss and contribute to sustainable forest management over the last few decades that can be applied to aid this transition. One example is the growth of PES schemes in developing countries, and associated work on the distribution of costs, benefits, and contract design. While the instruments chosen by countries will depend on their national socioeconomic and political context, much can be learned from early country experiences in the pursuit of REDD+ and towards conservation of forest ecosystems.

Challenges remain in integrating REDD+ into the transition to a green economy. These challenges are not unique to the integration of REDD+ in a green economy, nor are they new challenges *per se*. They will remain even where the two concepts are pursued individually. The creation of an enabling environment is also at the forefront of a number of debates in climate finance, for example, with efforts to build political will and appropriate institutions central in building climate finance readiness (Nakhooda *et al.*, 2012). Policy alignment and cross-sectoral coordination are also key areas for a country's broader climate change response and development strategy. This presents a further rationale for taking a coordinated approach to both REDD+ and a green economy; not doing so holds high risks of duplication, overlap, and increasing institutional and policy alignment complexity. The challenges are linked with one another, and with wider national political agendas; flexibility in institutions and active awareness of the broader national and international agenda will also be necessary.

Opportunities do exist to progress the integration of REDD+ and green economy planning and investments. Filling information gaps in understanding how forests contribute to the

national economy and well-being can help generate political will and buy-in across sectors for integrating REDD+ within a green economy transition. Political will can also be instrumental in catalysing the strengthening of forest governance and in pursuing policy alignment. Despite the uncertainty about future REDD+ finance under a UNFCCC mechanism, REDD+ could still provide a source of finance for the transition to a green economy. Integration of REDD+ may also reduce the financing burden by reducing the proliferation of plans and institutions, thereby avoiding unnecessary transaction costs.

Many countries are working to better integrate the forest sector and associated emission reductions into their green economy and green growth plans, joined by numerous institutions and organisations. Three core questions need to be addressed in the ongoing pursuit of REDD+ within the transition to a green economy:

1. How can lessons from REDD+ readiness contribute to overcoming long-standing challenges in creating an enabling environment and in the transition to a green economy?

REDD+ readiness activities have been undertaken and supported in countries for many years. The potential challenges faced when situating REDD+ in a green economy are not necessarily novel to REDD+, nor to other pressing needs that are cross-sectoral in nature and/or are influenced by international processes. Therefore, it is worth reflecting on the progress made towards REDD+ and to seek out good practice. This may be particularly true for issues such as cross-sectoral coordination, which has often been highlighted as important in the REDD+ discussions, but understanding of how this can be achieved remains limited, as is our understanding of what a sufficient level of cross-sectoral coordination will look like.

Similarly, experience outside of REDD+ can be instructive. There may be lessons to learn from the programming of climate finance and from market readiness, for example, when it comes to enabling conditions and financing change. Exploring how such a systematic analysis of lessons from the REDD+ experience can be consolidated, and communicating best practice, can create a further incentive for discussions between what have often been, to date, separate actors and fora.

2. Who will drive the alignment of REDD+ and efforts to green the economy?

At present, REDD+ issues have largely been driven by environmentally focused line ministries and departments (with some exceptions). A recognition of climate change as a development issue is increasing; a growing involvement of national planning agencies and the ministries of finance is observed. Establishing who will be responsible for ensuring inclusion of REDD+ in a green economy is a relevant consideration given that many civil servants are already sitting on many committees and working groups, and new institutions may well generate further burdens in already complex administrative systems. Such an institution is likely to need to make difficult and sometimes unpalatable trade-offs towards a green economy as well as engage effectively both across sectors and with a variety of stakeholders.

The institution tasked with such an effort will also be responsible for generating a business case for REDD+ within the transition to a green economy. They will therefore need to have the technical capacity to seek, analyse and communicate the role of REDD+ in a green economy. Information can help decision-making under uncertainty, but in the interim the need for improved information will have to be balanced with the need for urgent action. Whether the mandate, the responsibility, and the technical capacity to implement REDD+ will remain within environment-related structures if it is fully integrated into the green

economy approach will, again, be specific to country context. Discussions are needed, however, on whether this is the most appropriate way forward, or if an appropriate division of labour between institutions can be found.

3. What role can the international community play in supporting the integration of REDD+ into a green economy?

A final question concerns the engagement of multilateral institutions and the potential role of other countries in one nation's pursuit of a green economy. With so much dependent on the national context, from ecological, social, economic and political points of view, how can support be provided and experiences transferred between countries? Or should each country seek its own solution? This issue is further complicated by the need to have nationally owned green economy plans that can foster greater public and political buy-in. While public finance is being used to support existing work in this area, greater foreign investment will require greater clarity on how donors can best support the integration of REDD+ within a country's transition to a green economy.

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ISSN: 2052-7209

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Tea Plantation bordering with the Mau Forest near Kericho.