REDD+ in a Green Economy

Draft Study Proposal for the International Resource Panel – Outline of 26 March 2013

1. Purpose of this study

The United Nations approach for Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD) under the UN Framework Convention on Climate Change was strengthened in 2008 with the addition of sustainable management of forests and conserving and enhancing forest carbon stocks to the scope of activities. This expanded approach, known as REDD+, has attracted considerable political attention and funding over the past six years, from both private and public sources. REDD+ activities and related investments can contribute significantly to rural development and to broader sustainable development objectives, including adaptation to the climate changes that now seem inevitable. As the implications of climate change become more dramatic, demand for integrating REDD+ within efforts toward a greener economy is increasing.

The multiple additional benefits of forests are also becoming better recognized, particularly in the context of the many ecosystem services that they provide. In addition to the carbon sequestration benefits stressed by REDD+, forest-related ecosystem services that provide economic benefits to people include: watershed protection; protection against extreme climatic events; erosion control; cultural values; conservation of genetic resources; providing habitats to pollinators; supporting biodiversity; provision of timber, fruits, medicines, and other materials; and many others. Many governments, community-based organizations, businesses, and civil society organizations are increasingly supportive of forest conservation for both use and non-use values, clearly recognizing indirect and option values. They are looking to REDD+ as an important additional source of support for improved management of forests to deliver sustainable ecosystem services that will support a green economy. The benefits that a green economy provides to the people most directly dependent on forest resources will be of particular concern. The UNEP International Resource Panel has been addressing one of the foundations of such an approach, namely decoupling unsustainable resource consumption from improved human well-being.

International organizations, other REDD+ actors, and the many other parties interested in forest-related development are seeking to improve understanding and knowledge about how to forge mutually reinforcing links between ongoing or planned REDD+ activities and a green economy transition. A global report by the International Resource Panel on 'REDD+ in a Green Economy' would bridge this knowledge gap and address key policy-relevant sets of questions:

 What is the potential added value to national economies from REDD+ investments and activities? How can REDD+ leverage social, environmental and economic benefits, and thereby support the transition to a green economy? How can REDD+ investments be designed to support decoupling of unsustainable forest resource consumption from human well-being?

- How can adaptation best be built into REDD+ investments and activities? What are the
 additional social, environmental and economic benefits these investments can provide or
 leverage? How can REDD+ help support the delivery of other forest-related ecosystem goods
 and services that support rural communities?
- Which socio-economic models, integrated socio-economic/bio-physical models, and related tools, are suitable for supporting national decision making on REDD+ investments? What is the scientific basis for using such models?
- What additional research is required to strengthen confidence in REDD+ investments? How can REDD+ investments be designed to maximize their learning potential, based on standard research designs? How can ecosystems resilience be designed as a basic foundation for REDD+?
- What concrete steps can developing countries take to harness the synergies between REDD+ and green development pathways that improve human well-being while enhancing forest management? How can the resource management principles developed by the International Resource Panel best be applied in support of REDD+?
- Recognizing that a truly green economy will require an integrated landscape approach that involves many sectors, how can REDD+ be used most effectively to ensure that forest resources are given their due recognition in green economies? What approaches will best facilitate collaboration among the many interested sectors? What are the most effective ways to ensure that the multiple values of forests are fully considered in land use planning?

Over the past three years, the UN-REDD Programme (a joint Programme of FAO, UNEP, and UNDP established in 2008, with currently 46 partner countries) has developed a body of work on '*Ensuring that REDD+ and a Green Economy transformation are mutually reinforcing*', based on pilot activities in sixteen partner countries. The proposed global report would analyze the lessons learned from these and similar activities, and provide key decision makers with a rationale for linking REDD+ activities and REDD+ investments with green economy efforts. In this context, the report will in particular focus on the role of integrated land-use planning for capturing environmental, economic and social benefits from REDD+ investments. Additional perspectives will be provided by other innovative approaches to forest management that provide benefits to local communities through forest conservation and sustainable use. In concepts elaborated by UNEP's International Resource Panel, this could include "resource decoupling" that reflects reduced resource use per unit of economic activity, and "impact decoupling" that occurs when the scale and character of resource use reduces negative environmental impacts so that natural systems can function and provide ecosystem services sustainably.

2. Proposed approach to the study

UNEP has defined a green economy as one that "results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities". Such an economy would minimize negative environmental impacts, following development pathways that are low in carbon emissions, water and soil pollution, soil erosion, and deforestation. It would use resources efficiently, with human well being decoupled from resource consumption. These characteristics would enable a green economy to be resilient and adaptable to changing social, economic, and environmental

conditions. Such an economy would be especially supportive of rural communities that are dependent on sustainable forest management and forest ecosystem services.

Following the adoption of the outcome document of the United Nations Conference on Sustainable Development (Rio+20) at the United Nations General Assembly in September 2012, the concept of a green economy has gained wide acceptance and interest from developing countries, and across the United Nations systems. At the same time, the efforts for reducing emissions from deforestation and forest degradation (REDD+) under the United Nations Framework Convention on Climate Change have come a long way since their origins in 2007, with activities now being supported in over 50 countries by the UN-REDD Programme, the World Bank's Forest Carbon Partnership Facility, and other international, regional and national organizations. REDD+, with the potential to address adaptation as well as mitigation, has the potential to trigger transformational change in the way forests are conserved, managed and restored, because of the large amounts of funding that have been pledged for REDD+ readiness and implementation (over 4 billion USD to date), and because of the focus on performance-based payments for reduced emissions. The proposed report would also provide data on additional ecosystem services provided by forests, and that could be enhanced through improved design of REDD+ investments.

While mitigation can be quantified in terms of carbon sequestration (though some challenges remain), developing metrics for adaptation poses significant challenges. Still, the REDD+ concept has stimulated a large group of political leaders and professionals, at all levels, to focus their attention on reducing deforestation and reversing forest degradation. However, no comprehensive analysis has yet been prepared on the economic development potential and impacts of REDD+, and on the socio-economic return on investment from reducing deforestation and forest degradation and linking this to the many other ecosystem services provided by forests, and to adaptation benefits. A major challenge is how to optimize these returns. In times of constrained public funds, this analysis is crucial to ensure that REDD+ funds are spent effectively, and that the ongoing and planned REDD+ activities can support the transition to a green economy. The various ecosystem services provided by forests have been quantified in various ways, suggesting some possible approaches that can be explored to develop a set of metrics that could be help to at least begin quantifying the climate adaptation values under REDD+ investments.

The overall motivation for the study is to support the transition to a green economy by promoting land use planning at the landscape scale as a vital component to the process. This will require an assessment of micro-level valuation studies that have measured the changes in the flow of ecosystem services under different forms of land use, and assigned values to the ensuing benefits. To apply these findings to the larger perspective of a global green economy will require a macro-level accounting approach that will value the total stock of forests and other related forms of natural capital, and provide policy options on how the available approaches can help integrate REDD+ planning into the planning for a green economy. This can draw on the comprehensive work that the International Resource Panel is doing on decoupling.

3. Scope

The thematic and geographic scope of the report are defined by the remit of UNEP within the UN-REDD Programme to ensure that 'REDD+ and a Green Economy transition are mutually beneficial', and the

scope of REDD+ pilot and demonstration activities within the context of the UNFCCC, which focus mainly on tropical developing countries (the UN-REDD Programme has 46 partner countries, mostly in the tropics, but also including Argentina, Mongolia, Nepal, and other developing countries that lie partially or fully outside of the tropics). Increased attention will be given to the role of forests in adaptation as an integral part of national responses to climate change, a topic which has been neglected to date.

4. Target audience

The target audiences of the report are:

- the large community of policy and practice that has grown around REDD+ since 2007, including the UNFCCC negotiators, civil society organizations, national REDD+ focal points, academia, and policy makers at national and local level in Ministries of Environment and Forestry and related institutions; and
- the key policy and decision makers that can influence the drivers of deforestation in developing countries, including key staff in Ministries of Finance, Economic Planning and Investment, Mining, Energy, Agriculture, Forests, and the private sector.

To reach these two distinct target audiences, a two-pronged launch and dissemination strategy is proposed, with a launch of some key findings during *Landscape Day* at UNFCCC COP 19 in November 2013, and a launch of the report itself during the World Economic Forum in Davos in early 2014.

5. Structure

The report will be compiled by a new working group under the IRP, and draw on several social science disciplines, notably economics and political sciences, as well as other disciplines including spatial planning, agriculture, forestry and agro-forestry. As such, it will require a multi-disciplinary team of working group members, including significant participation from the private sector as a key stakeholder. The profiles of working group members can best be matched against the key policy relevant questions that the report will answer, and the corresponding chapters (though this structure is expected to evolve as the report develops). Several of the early chapters will build on recent global assessments, such as IUFRO's "Biodiversity, Forest Management, and REDD+" and the CBD's "Forest Resilience, Biodiversity, and Climate Change: A Synthesis of the Biodiversity/Resilience/Stability Relationship in Forest Ecosystems", but will add value by linking them to a green economy. Of particular interest will be the quantification of socio-economic returns on investment, including through adaptation benefits. The economic dimensions will focus on both the support required to initiate REDD+ (such as capacity building and policy development) and contributing to the design of investments in a whole new non-extractive low-carbon economic paradigm (a "green economy") which would enable REDD+ to be a viable economic, social, and political development pathway.

Policy relevant question	Chapters	Profile of working group members
What is the added value to	1. An introduction to a "Green	Climate change mitigation
national economies from REDD+	Economy", including the role	scientists (forestry/LULUCF);
investments and activities? How		Public policy experts (public

are they seeking to leverage social, environmental and economic benefits? What is the optimal design of REDD+ national programmes and strategies, and REDD+ projects?	 of all types of forests. 2. The true costs of deforestation and forest degradation and the costs of inaction 3. How REDD+ is essential to a Green Economy 4. The case for REDD+ as a climate change mitigation option 5. The funding needs and for REDD+ and the potential of carbon payments 	expenditure reviews); environmental economists and other social scientists (estimation of carbon payments; estimation of costs and benefits of mitigation measures; economic valuation of forest ecosystem services)
	 6. Social, ecological and economic benefits from REDD+: • Agriculture and Food Security • Livelihoods • Energy • Water • Health 	
How can REDD+ investments also contribute to adaptation? What are the new social, environmental and economic benefits they can provide or leverage?	 7. The case for enhancing adaptation benefits and ecosystem services in REDD+ as a more effective response to climate change. 8. The funding needs for including adaptation in REDD+ and the expected benefits to local people. 9. How can "adaptation" be defined in the context of REDD+ and best contribute to a Green Economy? What benefits will flow to forest- dwelling people? 10. Social, ecological and economic benefits from 	Climate change adaptation scientists (forestry/CIFOR); forest ecologists and social scientists; Public policy experts (public expenditure reviews); Environmental economists (estimation of costs and benefits of adaptation measures; economic valuation of forest ecosystem services)

	adaptation in REDD+:	
	 Land-use planning, including at the landscape level 	
	 Enhanced provision of ecosystem services, especially related to water and biodiversity 	
	 Enhanced social and ecological resilience 	
Which socio-economic models and integrated socio- economic/bio-physical models, and related tools, are suitable for supporting national decision making on REDD+ investments?	 11. A matter of societal debate: overview of modeling for REDD+ policy making 12. Examination of relevant financial instruments affecting supply and demand: incentives (such as REDD+); certification schemes; regulations 13. Public sector investment options for REDD+ funds during Phases 1-3 (readiness; implementation; performance based payments) 14. Private sector investment 	Development policy experts (public expenditure reviews); Modeling experts (T21, other models); Land-use/spatial planning specialists (agriculture, forestry, agro-forestry); Environmental economists (economic analysis of various REDD+ investment options)
	options for REDD+ funds during Phases 1-3	
	15. Win-win situations at landscape level: tools and approaches; increasing the net present value of REDD+ forests by reducing the risk of future abandonment.	
	16. Using REDD+ to stimulate additional financing for a green economy, for example through reforming subsidies that currently encourage deforestation	
What concrete steps can developing countries take to	17. Public expenditure reviews and natural capital	Public policy experts (public expenditure reviews);

harness the synergies between REDD+ and low-carbon development pathways?	 accounting 18. Strengthening the role of the private sector and public- private partnerships; key enabling conditions to attract investment; etc. 19. Enhancing cross-sectoral coordination and integrated land-use planning 	Governance experts (cross- sectoral coordination; tenure rights); Environmental economists (valuation and natural capital accounting); Land-use planning specialists and private sector specialists (comprehensive land-use planning and related investments)
	20. Addressing social equity in land-use (tenure rights)	
	21. Capturing lessons learned from national case studies on PES	
	22. Drawing from practical measures such as sustainable forest harvesting, forest landscape restoration, land swaps, and others.	

Tentative timeline:

Time:	Activity:
January- March	Finalize the study proposal
2013	 Identify candidates for working group membership (approximately 10-15 members)
	 Start preparations for the working group meeting in June
22-26 April	 Meeting of the International Resource Panel (Berlin, Germany)
	 Panel to decide on the establishment of a working group on the
	basis of the study proposal
	 Working group members approved
19-21 June	• Global Symposium on REDD+ in a Green Economy (Jakarta, Indonesia) 19-20
	June / First meeting of the working group on 21 June
	 Build the knowledge base for the global report
	 Decide on work plan, delivery schedule and sharing of work
	between the group members
June-September	Background research and report writing
October	First draft ready
November	Internal Review
December	External Review
	Present preliminary findings
January 2014	Submit for Publication

References

Part I: REDD+ and sustainable land-use

Conserve or convert? Pan-tropical modeling of REDD-bioenergy competition.

Persson, U. M.; Elsevier Ltd, Oxford, UK, Biological Conservation, 2012, 146, 1, 81-88, http://www.cabdirect.org/abstracts/20123108063.html

Stabilizing the agricultural frontier: leveraging REDD with biofuels for sustainable development.

Killeen, T. J.; Schroth, G.; Turner, W.; Harvey, C. A.; Steininger, M. K.; Dragisic, C.; Mittermeier, R. A.; Woess-Gallasch, S.; Bird, N.; Cowie, A.; Elsevier Ltd, Oxford, UK, Biomass and Bioenergy, 2011, 35, 12, 4815-4823, 32 ref.

http://www.cabdirect.org/abstracts/20123021105.html

Forest loss and management in land reform settlements: implications for REDD governance in the Brazilian Amazon.

Ezzine-de-Blas, D.; Börner, J.; Violato-Espada, A. L.; Nascimento, N.; Piketty, M. G.; Corbera, E.; Schroeder, H.; Springate-Baginski, O.; Elsevier Ltd, Oxford, UK, Environmental Science & Policy, 2011, 14, 2, 188-200,

http://www.cabdirect.org/abstracts/20113116446.html

Bio-fuel, forest plantations, SFM, PES, CDM, and REDD - an abbreviated playing field, levelled for the poor?

Toborn, J.; Swedish University of Agricultural Sciences, Research Information Centre, Uppsala, Sweden, Currents (Uppsala), 2008, 44/45, 42-47, 36 ref. http://www.cabdirect.org/abstracts/20093009060.html

Impacts and inspirations of REDD+ mechanism on multifunctional forest management in China.

Lin DeRong; Li ZhiYong; Wu ShuiRong; He YouJun; Research Institute of Forestry Policy and Information, Chinese Academy of Forestry, Beijing, China, World Forestry Research, 2011, 24, 3, 22-25, 6 ref.

http://www.cabdirect.org/abstracts/20113333788.html

Community forest management and the emergence of multi-scale governance institutions: lessons for REDD+ development from Mexico, Brazil and Bolivia.

Cronkleton, P.; Bray, D. B.; Medina, G.; Molecular Diversity Preservation International (MDPI), Basel, Switzerland, Forests, 2011, 2, 2, 451-473, 66 ref. http://www.cabdirect.org/abstracts/20113211851.html

Options for REDD+ voluntary certification to ensure net GHG benefits, poverty alleviation, sustainable management of forests and biodiversity conservation.

Merger, E.; Dutschke, M.; Verchot, L.; Molecular Diversity Preservation International (MDPI), Basel, Switzerland, Forests, 2011, 2, 2, 550-577, 46 ref. http://www.cabdirect.org/abstracts/20113211856.html Prospects for REDD+: local forest management and climate change mitigation in Burkina Faso. Westholm, L.; Kokko, S.; The Centre for Environment and Sustainability, GMV, Goteborg, Sweden, Focali Reports, 2011, 1, V + 44 pp., many ref. http://www.cabdirect.org/abstracts/20113212614.html

Sustainable forest management and carbon in tropical Latin America: the case for REDD+. Nasi, R.; Putz, F. E.; Pacheco, P.; Wunder, S.; Anta, S.; Molecular Diversity Preservation International (MDPI), Basel, Switzerland, Forests, 2011, 2, 1, 200-217, 81 ref. http://www.cabdirect.org/abstracts/20113120076.html

Nesting local forestry initiatives: revisiting community forest management in a REDD+ world. Hayes, T.; Persha, L.; Elsevier Ltd, Oxford, UK, Forest Policy and Economics, 2010, 12, 8, 545-553, many ref.

http://www.cabdirect.org/abstracts/20103348881.html

REDD+ and the agriculture frontier: understanding colonists' utilization of the land. St-Laurent, G. P.; Gélinas, N.; Potvin, C.; Elsevier Ltd, Oxford, UK, Land Use Policy, 2013, 31, 516-525, many ref. http://www.cabdirect.org/abstracts/20133033775.html

Discourse on climate-smart agriculture for REDD+ strategy in the Congo basin. Molua, E. L.; Canadian Center of Science and Education, Toronto, Canada, Journal of Sustainable Development, 2012, 5, 10, 77-88, 45 ref. http://www.cabdirect.org/abstracts/20123392956.html

Agriculture and Deforestation: is REDD+ Rooted In Evidence?

Pirard, R.; Belna, K.; Elsevier Ltd, Oxford, UK, Forest Policy and Economics, 2012, 21, 62-70, 30 ref. http://www.cabdirect.org/abstracts/20123249044.html

Ecosystem-Based Adaptation Guidance: Moving from Principles to Practice, Travers, A., C. Elrick, R. Kay and O. Vestergard.

Lessons from reducing emissions from deforestation and degradation: Advancing agriculture in the UN framework convention on climate change

Negra, C.^a, Wollenberg, E.^b (2011) *Carbon Management*, 2 (2), pp. 161-173.

The role of community forest management in REDD+

Skutsch, M.^{a b}, McCall, M.K.^c (2012) *Unasylva*, 63 (239), pp. 51-56. Cited 1 time.

Analysis of three crucial elements of REDD+ in participatory forest management

Mustalahti, I.^a, Tassa, D.T.^b (2012) *Scandinavian Journal of Forest Research*, 27 (2), pp. 200-209.

Forest loss and management in land reform settlements: Implications for REDD governance in the Brazilian Amazon

Ezzine-de-Blas, D.^a, Börner, J.^b, Violato-Espada, A.-L.^c, Nascimento, N.^d, Piketty, M.-G.^a (2011) Environmental Science and Policy, 14 (2), pp. 188-200.

Forest Resilience, Biodiversity, and Climate Change: A synthesis of the biodiversity/resilience/stability relationship in forest ecosystems. (2009). Thompson, I., B. Mackey, S. McNulty, and A Mosseler. Secretariat of the Convention on Biological Diversity Technical Series 43: 1-67.

Understanding Relationships Between Biodiversity, Carbon, Forests, and People: The Key to Achieving REDD+ Objectives. Prepared by the Global Forest WExpert Panel on Biodiversity, Forest Management, and REDD+. IUFRO World Series 31: 1-161.

Part II: The Economics of REDD+

Capturing Carbon and Conserving Biodiversity: The Market Approach (2003) Swingland, I.R. (ed.). (2003). Earthscan, London.

Getting it Right: Emerging Markets for Storing Carbon in Forests. Totten, Michael. (1999). Forest Trends and World Resources Institute, Washington D.C.

The Financial Costs of REDD: Evidence from Brazil and Indonesia. Olsen, N. and J. Bishop (2009). IUCN, Gland, Switzerland

REDD, Tenure and Local Communities: A Study from Aceh, Indonesia. Dunlop, J. (2009). International Development Law Organization, Rome.

Payment for Ecosystem Services. Global Environment Facility (2010). The World Bank, Washington D.C.

For Services Rendered: The Current Status and Future of Markets for the Ecosystem Services Provided by Tropical Forests. Scheer, S., A. White, and A.Khare. (2004). International Tropical Timber Organization, Yokohama, Japan.

Drivers of Deforestation and Forest Degradation: A Synthesis Report for REDD+ Policymakers. Kissinger, G., M.Herold, and V. De Sy. (2012). Lexeme Consulting, Vancouver, Canada.

Ecosystem-Based Adaptation Guidelines: Moving from Principles to Practice. Travers, A., C. Elrick, R. Kay, and O. Vestergaard. (2012). UNEP, Nairobi.

Greening REDD+: Challenges and Opportunities for Forest Biodiversity Conservation. Pistorius, T., C.B. Schmitt, D. Benick, and S. Entenmann. (2010). Policy Paper, University of Freiburg, Germany. **Community Forest Monitoring for the Carbon Market: Opportunities Under REDD**. Skutsch, M. (ed.). 2011. Earthscan, London.

Law, Tropical Forests and Carbon: The Case of REDD+. Lyster, R. (ed.). 2013. Cambridge University Press, Cambridge, UK.

Challenges for a Business Case for High-biodiversity REDD Projects and Schemes. Eberling, J. and J. Fehse. 2008. Ecosecurities, Oxford, UK.