Malawi Policy Brief No. 4

Channelling REDD+ finance toward sustainable rural livelihoods in Malawi

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1. Why REDD+ matters for Malawi

Malawi is uniquely vulnerable to the climate change unleashed by carbon emissions mostly from elsewhere. It is uniquely vulnerable because of high and rising population density of very poor people. More than 90% of this population depends for food on subsistence rain-fed agriculture where area per capita is falling to unsustainable levels and on fuel primarily from tree cover that is rapidly disappearing. Government fertiliser subsidies have restored short term food security, but their long term financial sustainability is highly questionable. At current rates of consumption and replanting Malawi's off reserve forest will be totally exhausted by 2024 (Luhanga and Mataya, 2011). Unless tree cover can be maintained and restored to enhance soil fertility, provide fuel, and diversify rural livelihoods, Malawi faces catastrophe. This policy brief outlines why support for REDD+ within Malawi has never been more important.

1.1 Introducing climate change

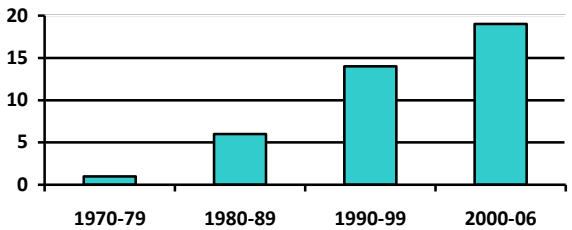
Human activity is rapidly altering atmospheric concentrations of greenhouse gases (GHGs), the most important of which is carbon dioxide (CO2). Atmospheric concentrations of CO2 (394ppm) in 2011 exceed by far the natural range over the last 650,000 years. Global increases in CO2 concentrations are due primarily to fossil fuel use, but deforestation also accounts for approximately 17.4% of these emissions.

Greenhouse gases trap radiation within the atmosphere, making the planet hotter and weather events more extreme. Eleven of the years preceding the last report of the International Panel on Climate Change (1995-2006) ranked among the twelve warmest years in the instrumental record of global surface temperature (since 1850).

1.2 How climate change is affecting Malawi

By 2020 between 75 and 250 million African people are projected to be exposed to increased water stress due to climate change. In some countries, including Malawi, yields from rain-fed agriculture could be reduced by up to 50%. Agricultural production, including access to food, is projected to be severely compromised. This will further adversely affect food security and exacerbate malnutrition. For example, in Malawi about 6.3 million Malawians live below the poverty line, the vast majority depending on rain-fed subsistence agriculture. Climate change is already delaying the onset of rains and increasing temperatures forcing farmers to shorten the growing season and switch to more expensive hybrid crops (Khamis 2006). The incidence of floods and droughts is increasing (see Figure 1.)

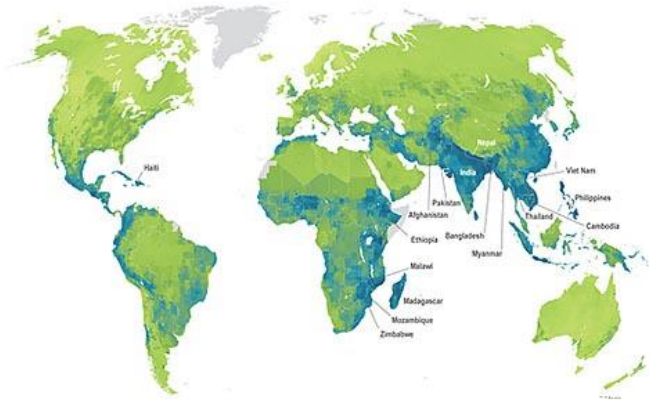
Figure 1. Incidence of droughts and floods 1970-2006 (Source: Khamis, 2006)



There has also been a noticeable increase in diseases such as malaria, cholera and dysentery associated with changes in rainfall patterns, and this has created health challenges that are particularly affecting women. Malawi ranks among the countries whose agriculture is most

severely at risk from climate change (Figure 2 – source Maplecroft)

Figure 2. Agricultural vulnerability to climate change (blue indicates highest vulnerability)



1.3 How can REDD+ help?

Malawi is not alone in facing the threat of climate change. Increasing insurance losses due to climate change that topped US$ 40 billion per year since 2010 are one powerful driver behind efforts to put the brakes on climate change by OECD countries. Since deforestation makes such a significant contribution to CO2 emissions – the idea of a mechanism for Reducing Emissions from Deforestation and forest Degradation (REDD) has received increasing attention.

The basic idea behind REDD is that countries that are willing and able to reduce emissions from deforestation and degradation should be financially compensated for doing so.

Payments for REDD were not initially contemplated in the 1997 Kyoto Protocol, which limited payments in the Clean Development Mechanism (CDM) to “afforestation and reforestation”. But as evidence was presented showing how much deforestation and degradation contributed to global man-made carbon emissions the mood began to change. In the 2005 Conference of Parties (COP) of the UN Framework Convention on Climate Change in Montreal - Canada, Papua New Guinea and Costa Rica tabled a proposal that developing countries ought also to be compensated for reducing emissions from deforestation (RED).

REDD is primarily about payments for carbon emissions reductions. At the COP 13 in 2007 in Bali – Indonesia, the Bali Action Plan acknowledged that it forest degradation should also be included and REDD was born.

The Bali Action Plan also noted that a comprehensive approach to mitigate climate change should include “sustainable management of forests and enhancement of forest carbon stocks” which has subsequently become known as REDD+.

OECD Governments have now committed in excess of US$ 20 billion for REDD readiness, developing pilot programmes and implementing REDD+ strategies at national level. Initial donor funding will then perhaps give way to a market mechanism where verifiable carbon emissions reductions are purchased by private companies having to meet fixed emissions targets.

Malawi has contributed little to global carbon emissions and it is quite appropriate that Malawi should therefore receive payments for climate change adaptation from countries that have. Nevertheless, the high rate of deforestation within Malawi does not leave it entirely blameless in climate change terms, and there is therefore some moral obligation to act responsibly in trying to control emissions from deforestation using external REDD finance – especially if this can be done in a way that helps the rural poor adapt to climate change through the restoration and sustainable commercial management of forest or agroforestry systems.

Should the Government of Malawi so decide, the challenge would then be to develop a credible National REDD Strategy that attracts and channels REDD finance towards verifiable emissions reductions.

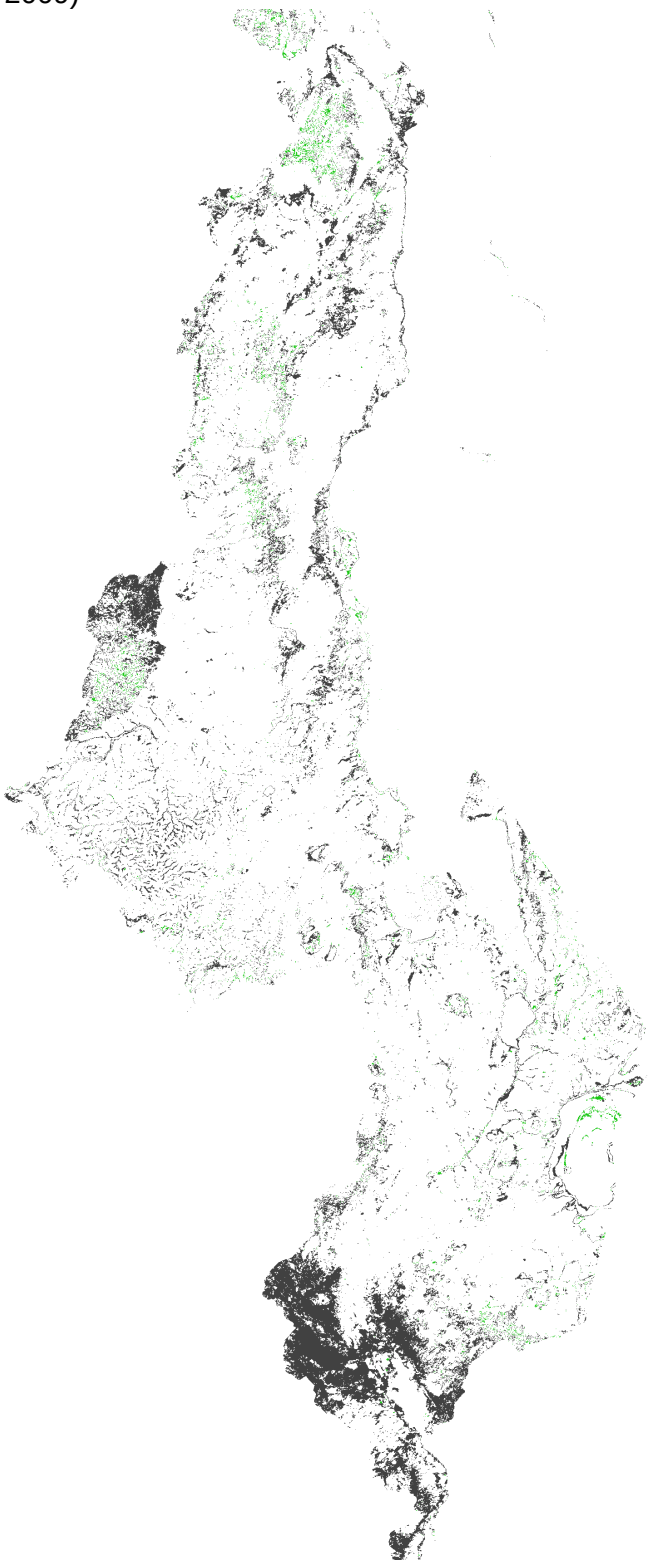
2. What steps are needed to develop a credible Malawian national REDD strategy

2.1 Data on the rate and causes of deforestation

A baseline of accurate data on scale and location of deforestation is an essential starting point for designing a national REDD+ strategy.

In Malawi new data is emerging - for example, the most recent satellite data on forest cover in Malawi (Figure 3) shows an annual forest cover loss of 3.49% between 2001 and 2009 or approximately 100,000 ha per year.

Figure 2. Deforestation map of Malawi (2001-2009)



Areas of forest cover loss shown in black (and some forest restoration in green) (Gemma Cassells, 2011 – data still undergoing final validation).

But a single snap shot needs to be complemented by the capacity for Monitoring, Reporting and Verification (MRV) so that Malawi can monitor accurately the extent to which new activities actually reduce for loss so that Malawi can be paid according to verifiable emissions reductions. Ongoing capacity building programmes on MRV between the University of Edinburgh, FRIM, Mzuzu and Bunda college offer some hope in that regard.

2.2 Consensus on what needs to be done to address it

The second major ingredient in a credible national REDD strategy requires inclusive consultation processes that results in consensus over the major causes of deforestation and degradation with agreed plans to tackle those causes. This again should be based on sound evidence.

Recent research by Mzuzu university has shown how there is almost a direct correlation between expanding agricultural area (driven ultimately by population growth) and a decrease in forest area, i.e. deforestation. This comes despite the gradual decrease in average agricultural land area per capita population (which now stands at 0.28 ha).

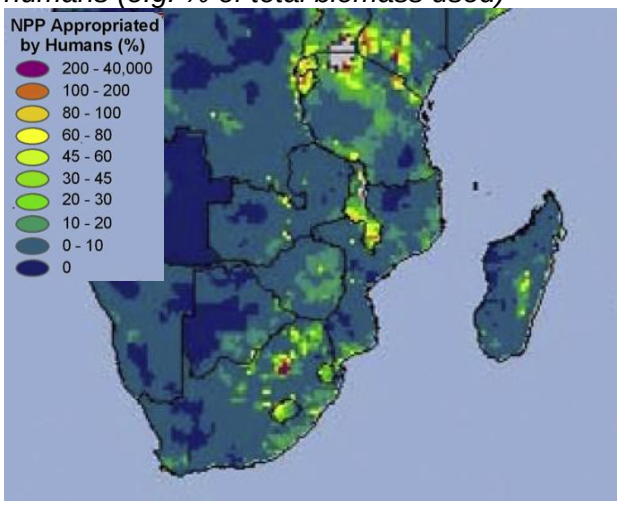
That agricultural expansion should be the primary cause of deforestation (but not necessarily degradation) is not surprising. Malawi's agriculture accounts for about 35% of Gross National Product and more than 80% of the country's export earnings (USDS, 2009). At least 80% of agricultural produce comes from smallholder farmers on customary land. Recent agricultural subsidies between 2005-2009 have helped resolve the short term food security crisis, but it is unclear how they are impacting on deforestation. On the one hand, higher yields might reduce the pressure to clear more forest land. On the other hand, increasing wealth might result in greater use of fuel wood leading to forest degradation (Mhango and Dick, 2011). Degradation is also an important contributor to carbon emissions as described below.

Recent research in neighbouring Mozambique suggests that the ratio in terms of biomass loss between deforestation and degradation may be in the region of 35%:65% (Ryan, 2011). Tackling degradation is therefore a critical issue – and one in which fuelwood and charcoal extraction plays a huge role. Malawi's charcoal and fuelwood sector is the third largest in economic terms after tobacco and tea and employs 133,000 people. It has been estimated to account for forest cover

loss of approximately 15,000 hectares per year (Kambewa et al., 2007).

At present 1.2 million tonnes of biomass is currently used for energy per year within Malawi. Under the most likely future scenarios – this will rise to 2.1 million tonnes by 2020 due to expanding populations, despite the roll out of hydro-electricity and coal power. In the North, demand is only 23% of supply. But in the centre, demand is 95% of supply and this reaches 111% of the supply in the South (Government of Malawi, 2009). New satellite maps that plot the balance between total net primary production (NPP) and total NPP appropriated by humans show that some areas of Malawi (especially the central and south west) are now exceeding the sustainable carrying capacity of the environment (Figure 4. Source: Imhoff et al. 2004).

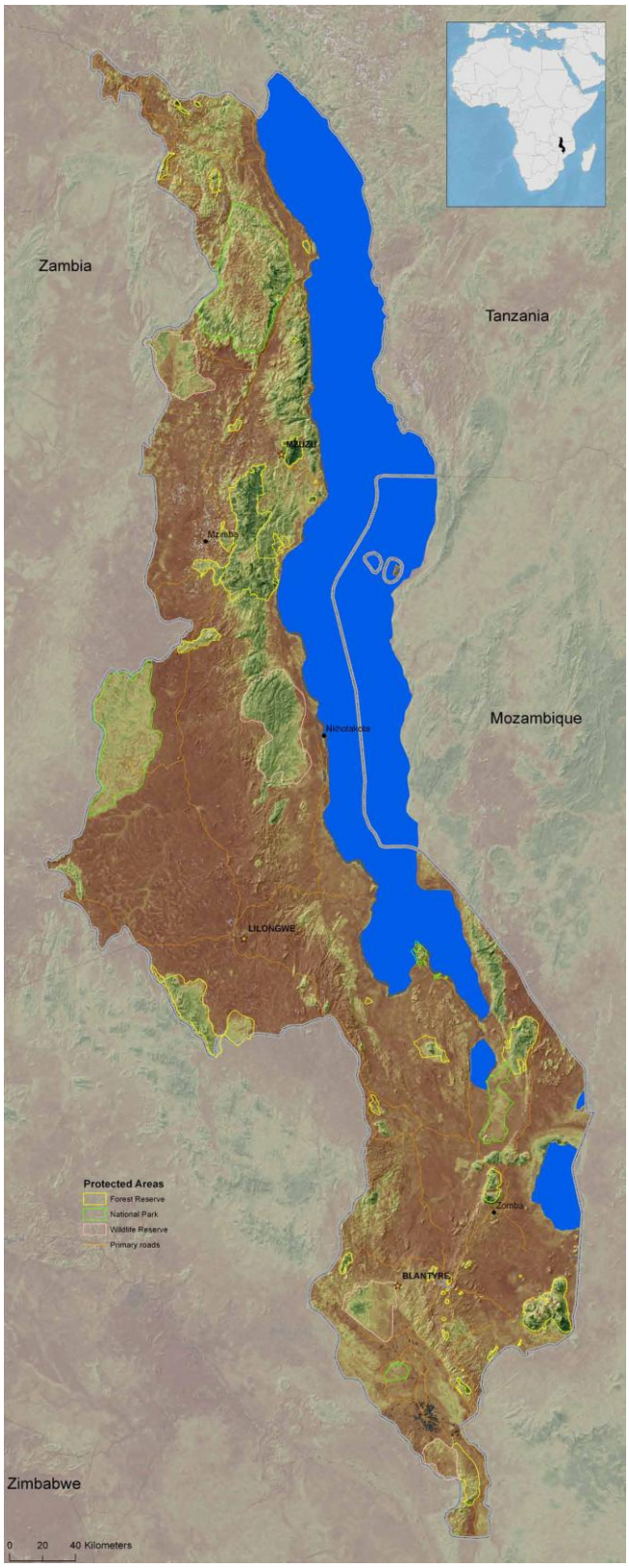
Figure 4. Net primary production appropriated by humans (e.g. % of total biomass used)



Another major cause of forest degradation is uncontrolled fires – which cause substantial forest degradation over time, but are much more difficult to detect and therefore monitor accurately (Ryan et al. 2011).

A national REDD strategy must gather clear evidence, not only on what is causing forest cover loss, but also why existing policies and institutions, tenure rights and incentives have not stopped that loss to date. As seen in the biomass map for Malawi in Figure 5 (WHRC, 2011) the situation outside forest reserves, national parks and wildlife reserves is highly critical and requires radical reform if forest cover is to be restored by Malawi's communities and if pressure on the remaining protected areas is to be reduced.

Figure 5. Biomass map for Malawi (Darkest brown = 0 Mg/Ha to darkest green = 350MgHa Source: WHRC, 2011)



Finally, government, civil society organisations and communities need to agree on packages of activities to reverse these trends – including

changes to policies – with clarity on what is and what is not eligible for REDD funding.

2.3 Trustworthy mechanisms to channel REDD funds towards eligible activities

A third critical element of a credible national REDD strategy is the identification of institutional structures that oversee the initiative. Central to these is the oversight of financial mechanisms to channel REDD funding towards the rural actors who will deliver changes in behaviour that reduce loss of forest cover or restore forests. Such mechanisms must be overseen by multi-sectoral representation – since reducing deforestation at the very least involves agriculture, forest, energy, mining and finance authorities. Due attention is needed to financial safeguards and transparency.

At the same time institutional mechanisms must also include technical units with the capacity to conduct monitoring reporting and verification, extension and communication units to ensure widespread understanding of what REDD+ is all about, technical units that can provide advice and support for agro-forestry, agricultural intensification, community forest management and the range of plantations that are considered eligible.

3. Using REDD to make community based forest management work

3.1 Why community forestry is critical for REDD

Community based forest management (CBFM) for the well-being of the people of Malawi is a central theme of Government policy (Government of Malawi, 2003). It is not hard to see why. The rural poor use trees for subsistence fuel, food, construction, medicine and income generation. Beyond agriculture, forests provide one of the only resources from which to earn a living. Since local communities are based in forest or woodland areas and offer the only real prospects for controlling deforestation, degradation and undertaking forest restoration – strengthening community forestry is key for REDD+. Recent research shows that forests contribute over 30% of rural income, even in the Mulanje area, and this figure is likely to be higher elsewhere (IFMSLP, 2008).

The idea of REDD payments to make community forestry work is something that resonates well with the existing national policy framework within Malawi. For example, Malawi's 1992 National Environmental Action Plan (NEAP) identified deforestation as one of nine key issues and the resulting National Forest Policy (and Forest Act) aim to provide an enabling framework for promoting the participation of communities and the private sector in forest conservation and management. The Government has placed particular emphasis on removing the restrictions on harvesting forest products by communities (Government of Malawi, 1996). This was reinforced in 2003 when a supplement to the Forest Policy; Community Based Forest Management was launched.

The National Forest Programme of 2001 echoes this emphasis with "Support for community based forest management" one of its 12 key activities. It stresses "the broad range of village institutions, developing their capabilities, along with those of extension staff, for collaborative management" (Government of Malawi, 2001)

The 2000 National Land Policy also advocates a community approach to resource management but with a slightly stronger emphasis on customary land being exclusive to the Traditional Authority with a formalisation of the traditional supervisory roles of chief, clan leader, head person and family heads (Government of Malawi, 2000).

The emphasis on community forestry is perhaps clearest in the Standards and Guidelines for Participatory Forestry in Malawi (2005) which provide the basis for all community level forestry interventions from tree planting through to co-management of state forest reserves/plantations. The underlying logic is that unless communities see clear financial returns from looking after trees, and the technical support to do that, they are unlikely to mobilise their efforts behind sustainable forest management – whether in the co-management of reserves or in community conservation areas or farm forestry planting.

In search of this outcome, the Malawi Decentralisation Policy devolves administrative and political authority to the district level, closer to the communities in which CBFM takes place (Government of Malawi, 1998). There is now greater clarity on the functions, roles and responsibilities between the Department of Forestry and the District Assemblies. The latter

are now responsible for district forest management and conservation on customary land, including the legal capacity for local level plan development and licensing (Government of Malawi, 2006). Much responsibility now rests on District Forest Office which is officially accountable to the District Assembly. Their involvement in the development and roll out of a national REDD strategy is clearly key.

3.2 What might eligible REDD+ activities look like?

At the heart of REDD lies the need for verifiable reductions in emissions from deforestation and degradation. Achieving this in practice requires at least three main areas of intervention at the community level:

(i) Clear commercial tenure rights over trees in both forest and agricultural settings - Agricultural, forest-dependent communities must have clear commercial tenure rights over trees if they are to invest their time in protecting forests or restoring degraded land. As the Forest Governance Learning Group case study in Ntcheu has shown, once it is clear which family, clan and community owns exactly which trees a powerful incentive is created to plant and protect new plantations (in that case of commercially valuable pine trees). Where forest resources are regarded as open access, or where they are perceived to be the property of the state, or where there are internal community conflicts over who owns which trees, the forest rapidly disappears (Kafakoma, 2008). Additionally, farmers need to be encouraged to incorporate trees into agricultural systems – perhaps by linking any fertiliser subsidies to the development of agroforestry systems that can maintain soil organic matter and fertility, reduce erosion, and sequester carbon at the same time. REDD+ financing could pay for the participatory processes needed to clarify community, clan and family ownership rights and develop new systems of climate-proof agriculture.

(ii) Strong local organisations with the capacity to intensify agriculture and manage forests sustainably – delivering REDD+ funds to where they are needed involves heavy transaction costs. To reduce these it is essential that community groups are well organised (preferably into pre-defined Village Natural Resource Management Committees) and federated, so that REDD+ related securing of land tenure, training and technical capacity building in support of agricultural intensification that involves tree cover can be achieved efficiently. REDD+ funds could be used to strengthen these organisation that will be essential for effective control of deforestation.

(iii) Competitive business capacity – the real incentive for managing or restoring forests will come once local communities can envisage future profits from their activities. For example, Malawi's many charcoal producers are unable to pursue their trade legally and therefore have no incentive to invest in planting trees whose conversion to charcoal would be deemed illegal. But that does not mean that charcoal production cannot be done sustainably, or that communities are unable to run a successful industry (charcoal is the countries' third largest). But with the correct set of rights and incentives, communities will still need support to develop new commercial processes – for example building efficient brick kilns that can reduce the amount of wood used in charcoal production by 2-3 times. Beyond charcoal they will need to know how to develop agroforestry systems and add value to agricultural products, sell timber, or develop value added products such as sawn wood, furniture etc. Much greater emphasis is needed on building the capacity to make commercial returns from sustainable forestry and agriculture and REDD+ could provide funding for business training and a range of other business development services. It could also make available grants and soft loans for such enterprises.

3.3 What next?

Malawi needs to develop a robust argument in favour of substantial REDD+ funding if it is to capture resources sufficient to tackle the current climate threat that confronts the countries rural poor. Several urgent steps need to be taken:

- A task force must be developed to flesh out a Malawi framework for REDD to build awareness and attract donors to provide REDD readiness funding.

- Ongoing work must be continued to establish and harmonise an MRV system and coordinating unit that can accurately track deforestation and responses to it.

- Government negotiators need to develop a clear negotiating position that makes the case for REDD in Malawi, despite low carbon densities, and ensure definitions

of forests at international level are optimised for Miombo woodland.

- Funds allowing, the Government needs also to lead a process of national consultation to agree the causes of deforestation and a strategy and activities to address it within a broadly owned national REDD+ strategy

- A number of pilot projects should be launched as soon as possible, testing different tenure regimes (traditional lands, private lands, and government reserves), different management approaches, different organisational arrangements, and different payment mechanisms and deliveries. It set up properly, such pilots could generate very valuable lessons and data for the iterative national strategy process and for scaling up REDD initiatives.

References

Cassells, G., Woodhouse, I. and Mhango, J. (2011) Can REDD+ work in Malawi. Presentation at the conference "MRV in woodland nations, 2011" at Bunda College, Malawi 23-24 June 2011. University of Edinburgh, Edinburgh, UK

Government of Malawi (1996) Malawi National Forest Policy. Government of Malawi, Lilongwe, Malawi.

Government of Malawi (1998) Malawi Decentralisation Policy. Government of Malawi, Lilongwe, Malawi.

Government of Malawi (2000) Malawi National Land Policy. Government of Malawi, Lilongwe, Malawi.

Government of Malawi (2001) Malawi National Forest Programme. Government of Malawi, Lilongwe, Malawi.

Government of Malawi (2002) Malawi Poverty Reduction Strategy Paper. Government of Malawi, Lilongwe, Malawi.

Government of Malawi (2003) Supplement to the National Forest Policy concerning Community Based Forest Management (CBFM). Government of Malawi, Lilongwe, Malawi.

Government of Malawi (2005) Standards and guidelines for participatory forestry in Malawi. Government of Malawi, Lilongwe, Malawi.

Government of Malawi (2006) Decentralisation in Forestry – moving forward together. Government of Malawi, Lilongwe, Malawi.

Government of Malawi. 2009. Malawi Biomass Energy Strategy (BEST). Government of Malawi, Lilongwe, Malawi.

IFMSLP (2008) Why forests matter – a briefing note for decision makers. Improved Forest Management for Sustainable Livelihoods Programme, Department of Forestry, Lilongwe, Malawi.

Imhoff, M.L., Bounoua, L., Ricketts, T., Loucks, C., Harriss, R. and Lawrence, W.T. (2004) Global patterns in human consumption of net primary production. Nature 429: 870-873.

Kambewa, P.S., Mataya, B.F., Sichinga, W.K. and Johnson, T.R. (2007) Charcoal: the reality – A study of charcoal consumption, trade and production in Malawi. IIED Small and Medium Forestry Enterprise Series No. 21. International Institute for Environment and Development, London, UK.

Kafakoma, R. (2008) Opportunities for forestry governance in Malawi – bridging the gaps. Unpublished Report. Training Support for Partners, Lilongwe, Malawi.

Khamis, M. (2006) Climate change and smallholder farmers in Malawi - Understanding poor people's experiences in climate change adaptation. Actionaid, London, UK.

Luhanga, J. and Mataya, B. (2011) Modelling deforestation in Northern Malawi. Presentation at the conference "MRV in woodland nations, 2011" at Bunda College, Malawi 23-24 June 2011. University of Edinburgh, Edinburgh, UK

Mhango, J. and Dick, J. (2010) Analysis of fertilizer subsidy programs and ecosystem services in Malawi. Renewable Agriculture and Food Systems. doi:10.1017/S1742170510000517

Ryan, C.M., Hill, T., Woollen, E., Ghee, C. Mitchard, E., Cassells, G., Grace, J., Woodhouse, I. and Williams, M. (2011) Quantifying small-scale deforestation and forest degradation in African woodlands using radar imagery. In revision Global Change Biology

USDS (2009) Background note: Malawi. Available at web site http://www.state.gov/r/pa//ei/bgn/7231.htm

WHRC (2011) Malawi: Aboveground Live Woody Biomass. Woods Hole Research Centre, Falmouth, USA.