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Defining market-based approaches for REDD+

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invaluable
Valuations, Markets and Policies for Biodiversity & Ecosystem Services

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Implementing REDD+ at both the national and international levels requires a diversity of policies and policy instruments. These must be designed and chosen avoiding as much as possible prejudice resulting from the use of terms. In this respect, we wish to convey several key messages to policy makers:

- Reducing deforestation and securing funding to this end will no doubt require tapping into a diversity of instruments at all levels, yet being aware of their specific area of relevance and recognising their limitations: for instance direct markets or certification at international level, fiscal measures at national level, Payments for Ecosystem Services (PES) at local level.

- "Market-based approaches" as mentioned in Decision 2/CP.17 in Durban should not be interpreted in a restrictive way as carbon markets; indeed these approaches cover a large field that includes also various types of incentives for conservation (e.g. direct payment schemes and the vast range of PES).

- In practice, the opposition between market and non-market approaches becomes shaky, and does not necessarily correspond to the opposition between private and public funding of REDD+; this could be mitigated in the political debate by agreeing on references to clear definitions.

- Beyond terminology issues, research is required to contribute to an understanding of well-identified instruments with similar characteristics, in order to move beyond ideology to more informed views and evidence-based discussions in the REDD+ negotiations.

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MARKET-BASED INSTRUMENTS (MBIS) IN THE CONTEXT OF REDD+

Discussions on Reducing Emissions from Deforestation and forest Degradation (REDD+[1]) under the UN Framework Convention on Climate Change (UNFCCC) have centred largely on the need to raise significant new and additional finance. Estimates of the sums needed to halve global gross deforestation rates continue to be debated,[2] and efforts to agree on strategies for biodiversity-related resource mobilisation are also showing the limits and circumstantial nature of costing conservation efforts.[3]

There is a broad consensus that considerable new and additional finance for the implementation of REDD+ is needed in particular after the readiness phase. However, in light of the current financial and public budget crises in OECD countries, any major increase in Official Development Assistance (ODA) flows is unlikely. Thus, many see a clear need for increased private finance, and Innovative Financial Mechanisms (IFMs) to compensate this lack of new public funding. In this context, many developing countries are suspecting private finance to make up for contracting ODA[4]– such equity debates however go beyond the scope of this policy brief.

At the UN climate talks in Durban in December 2011, Parties to the Convention agreed that finance for REDD+ that is new, additional and predictable may come from "a wide variety of sources, public and private, bilateral and multilateral, including alternative sources."[5] The decision noted that "appropriate market-based approaches" and "non-market based approaches" could be developed.[6] At the upcoming COP18 in Doha, the Parties are expected to decide on 'results-based financing' for REDD+, but there is still considerable confusion regarding important details. In particular the definition and applicability of what constitutes an appropriate market-based approach.

We argue that the international political debates and related discourses on the role of markets in providing incentives for REDD+ have so far generated much confusion. These debates are often marked by a lack of clarity regarding the variety of policy options which exist within these terms, and therefore fail to evaluate the range of approaches for their ability to provide equitable, effective and cost-efficient outcomes. Our ambition is to take an economist view and to provide a compass for policy makers, practitioners and scientists in the jungle of coexisting concepts and terms, and with this to contribute to an informed debate at COP18 on the range of policy approaches which exist under the banner of MBIs.

A ROUGH GUIDE TO THE MBIS JUNGLE

In order to investigate the real nature of market-based instruments, we draw on a recently published typology (Table 1). These categories aim to (i) cover the broad spectrum of MBIs and (ii) distinguish between instruments that operate with contrasting underlying logic and/or objectives. For instance the establishment of forest carbon trading that operates as a system of tradable permits has little common ground with private initiatives to establish eco-labelling schemes for sustainable timber.

Based on extensive database of scientific peer-reviewed papers on all sorts of market approaches[7], it was found that three main arguments are proposed in the literature to justify the use of MBIs and PES. These arguments include the provision of incentives (61%), better resource allocation (28%), and the capacity to address the funding gap for

1. REDD+ formally means "Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries".
2. A variety of studies have attempted to estimate the costs of REDD+, with estimates ranging from 3 bn US$ to 28 bn US$ per year to halve deforestation and degradation rates (see, among others, Grieg-Gran, M., 2006, *The cost of avoiding deforestation*, part of the Stern review on the economics of climate change; and Kindermann, G. et al, 2008, *Global cost estimates of reducing carbon emissions through avoided deforestation*, PNAS, 105 (30), pp. 10302-7). We personally think that these figures must be interpreted with great caution, as they could under- as well as over-estimate the true costs. A lot remains to be done in this field to fill the knowledge gaps.
3. See UNEP/CBD/COP10/INF/22: Global Monitoring Report 2010 CBD / Innovative Financing for Biodiversity; page 52: estimates range from appropriate funding of existing conservation tools (a few tens of bn US$ per year) to the need of global conservation across the globe (a few hundreds of bn US$).
4. The World Bank / Global Monitoring Report 2012 mentions a contraction of bilateral ODA flows in 2011 for the first time in recent years.
5. Decision 2/CP.17 , para 65
6. Decision 2/CP.17, paras 65 and 66
7. The estimates build on two references with a focus respectively on MBIs and PES: Pirard, R. and Lapeyre, R., *Classifying market-based instruments for ecosystem services: A rough guide to the literature jungle*, In: "Regulatory and Institutional Frameworks for Markets for Ecosystem Services", Earthscan, forthcoming; Lapeyre, R. and R. Pirard, False friends or next of kin? Positioning Payments for Environmental Services within Market-Based Instruments, *Society & Natural Resources*, forthcoming.

Table 1. Categories of market-based instruments for forests and biodiversity

Category	Description	Examples
Direct markets	A market where an environmental product is directly traded with the explicit intention to conserve or sustainably manage biodiversity	Non timber forest products (NTFP), eco-tourism
Tradable permits	An ad-hoc market designed to serve a clear environmental objective, where users of an environmental resource need to purchase "permits" (notion of policy-induced scarcity) that are exchanged among resource users	Mitigation banking, carbon trading, tradable development rights for land
Auctions	A mechanism whereby candidates to ecosystem service provision set the level of payment as a result of competition. Usually part of governmental programs but also applied in local experiments	BushTender in Australia, Conservation Reserve Program in the US
Coasean-type agreements	Consists in contracts resulting from negotiations between a limited number of stakeholders to exchange rights in response to a common interest (ideally free of public intervention)	Direct payment schemes (PES definition in Engel et al 2008), conservation easements, conservation concessions
Regulatory price changes	Consists in regulatory measures that lead to higher or lower relative prices or production costs, e.g. as part of a fiscal policy (including subsidies)	Eco-tax, agroenvironmental measures
Voluntary price signals	Consists in schemes whereby producers signal positive environmental impacts to consumers, and get price premiums and/or increased market shares	Forest certification, labels for organic agriculture, norms (self-produced before certification)

Source: Adapted from Pirard, R. 2012. Market-based instruments for biodiversity and ecosystem services: A lexicon, *Environmental Science & Policy* 19-20: 59-68.

conservation (17%)[8]. Worth noting, these arguments do not apply equally to all of these policy instruments, and this clearly supports the assumption of their diversity.

PAYMENTS FOR ECOSYSTEM SERVICES (PES) ARE SPECIFIC MBIS

We seek specifically to determine the role of 'payments for ecosystem services' (PES) within the variety of MBIs identified for two reasons. First, PES is the only "innovative financial mechanism" and "incentive measure" explicitly mentioned in the report of CBD COP10 in Nagoya[9]. In this light, and due to their applicability for REDD+ with many countries considering establishing national PES schemes in the context of developing national REDD+ strategies and action plans, they deserve specific attention to inform policy makers. PES are commonly seen as a suitable means to share the expected benefits from an international compensation mechanism.

In addition, PES occupy a particular position in the realm of MBIs, which is demonstrated, *inter alia*, by the tiny overlap between both streams of scientific literature.[10] Figure 1 demonstrates that PES schemes suit specific categories of the typology relative to other MBIs. Indeed, PES mainly fit as Coasean-type agreements and regulatory price changes, and their presence in other categories is anecdotal. This distribution is consistent with previous conceptualizations of PES as bilateral agreements between providers and beneficiaries of ES; nevertheless, for a variety of reasons including efficiency (reducing transaction costs), PES also extend their realm of implementation to government-financed schemes as with the Costa Rica emblematic case.

DO NOT MISTAKE CONTRACTUAL PAYMENTS FOR COMMODITY MARKETS

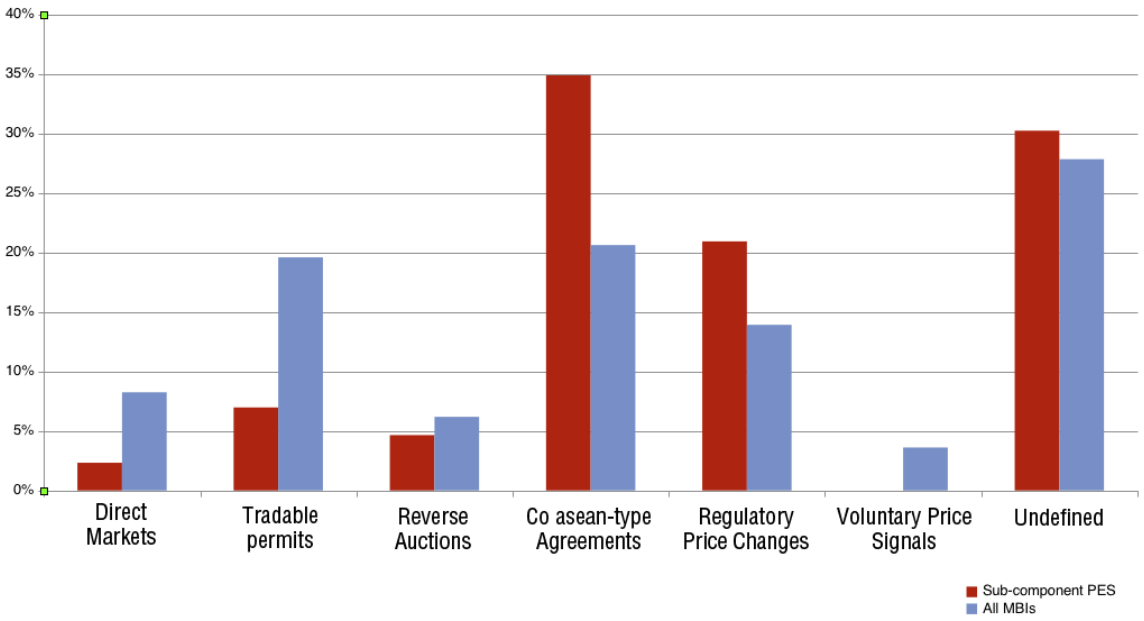
Beyond the multiple categories of market-based instruments on which we have based our analysis so far, two broader groups emerge which shed more light on the use of terminology. We find it useful to further differentiate between these two very contrasted groups of MBIs.[11]

Therefore, we propose to differentiate market governance and bilateral governance structures:

- the former is "the classic nonspecific governance structure within which faceless buyers and sellers meet for an instant to exchange standardized goods at equilibrium prices"[12]; here the medium in the exchange remains the 'sale' rather

8. Possible to mention more than one category per article.
9. See UNEP/CBD/COP/10/27: REDD+ is also mentioned, but it is at an international scale and refers to a framework for action and funding rather than to concrete means of action. Indeed, PES can be part of REDD+ for ensuring forest conservation on the ground.
10. See Lapeyre and Pirard (forthcoming). Ibid.
11. In order to do so, we can build on the seminal work by Williamson and his theory of transaction costs to charaterize MBIs as governance structures. Williamson, O.E. 1979. Transaction-Cost Economics: The Governance of Contractual Relations. *Journal of Law and Economics* 22(2): 233-261.
12. Ibid.

Figure 1. Distribution of PES relatively to other MBIs in the typology



Source: Lapeyre and Pirard (forthcoming).

than the 'contract' and the identity of parties is almost of negligible importance;

- at the opposite, "bilateral governance" applies to transactions with rather specific, non-transferable investments in physical and human assets. In this case, the non-standard and ill-defined nature of the good or service at stake makes market governance hazardous and recurrent transactions justify the costs for additional governance mechanisms.

These insights resonate with other propositions to distinguish between markets for ES (MES) and payments for ES (PES)[13]. Others make a similar point when they plead for a distinction between rewards, incentives and markets along a commodification gradient, and ask for hybrid regimes that would be more suitable to the challenge of governing ecosystem services than "pure markets or hierarchies"[14].

An illustration of policy instruments operating like markets is the category "tradable permits" where commodities such as forest carbon offsets are traded *via* financial markets. An illustration of those operating like bilateral payments is the category "Coasean-type agreements" where beneficiaries of given ecosystem services (or their intermediaries) negotiate directly with providers.

Distinguishing between groups of instruments subject to potential implementation is not only useful from a heuristic point of view; we argue that it is also crucial for policy makers to understand these differences because the environmental and socio-economic impacts of each instrument will be different. Instruments that aim at generating demand and operating in a market style can be expected to be more efficient, e.g. by inducing a better resource allocation. However, they do not necessarily ensure effectiveness or even the stipulated environmental integrity, and any assumed efficiency may be undermined by increased transaction costs in the creation of very abstract commodities. In this context, critics fear negative impacts related to the commodification of nature, as the quantification required to create a fungible commodity excludes many of the more inherent values and functions of ecosystems.

In contrast, instruments operating like payments may mostly deliver in terms of incentives, which may be translated as environmental effectiveness: service providers are assumed to more likely make the desired decisions when incentivized than with coercion, and contracts based on payments rather than trading avoid the need to create fungible

13. Corbera, E., Kosoy, N., and N.M. Tuna. 2007. Equity implications of marketing ecosystem services in protected areas and rural communities: Case studies from Meso-America. *Global Environmental Change-Human and Policy Dimensions* 17(3-4):365-380; Vatn, A. 2010. An institutional analysis of payments for environmental services. *Ecological Economics* 69(6): 1245-1252.

14. Muradian, R., and L. Rival. 2012. Between markets and hierarchies: The challenge of governing markets and hierarchies. *Ecosystem Services* 1.

units of the service being provided. Critics may see here a potential for the destruction of intrinsic motivations and social norms in favour of biodiversity conservation, or even a waste of financial resources where there is little additionality.

A VARIETY OF APPROACHES EXIST AND ARE NEEDED…

This policy brief highlights that 'market-based' refers to a variety of approaches. Whilst we made the point that MBIs eventually fall into two broad distinctive categories, one should also keep in mind their extreme diversity. MBIs differ in scope, modalities of implementation, sources of funding, conditionalities, implications, and many other aspects.

It would also be misleading to mistake public *vs.* private funding as synonymous with non-market *vs.* market-based approaches. Indeed, not only can private funding be operational under non-market approaches (e.g. NGO support for protected areas), but public subsidy-oriented programs are sometimes classified as MBIs (e.g. the Costa Rica PES program managed by national authorities). So the frontiers are more than often blurred, and caution is necessary to evaluate the real implications of differing policy options.

Coming back to REDD+, the Durban decision highlights that both market and non-market approaches are needed – mainly because it was not possible to reach a consensus on which approach is generally appropriate. Although probably not intended by the Parties, we agree with the inherent flexibility of this decision because we see a need for a variety of different approaches. Policy makers and stakeholders alike should keep in mind that the notion of "market" refers to contrasted objects depending on who uses the term, and misunderstandings are common. For example, is a contract between parties for the provision of ecosystem services and the conservation of a piece of forest, with payments and associated conditions, a market-based approach? Opinions differ… However, one aspect should be clear: the implications of such an approach cannot be confused with the implications of creating a market where forest carbon offsets would be exchanged among a variety of actors with little control over on-the-ground activities.

… BUT REQUIRE MORE CONSISTENT RESEARCH FRAMEWORKS TO INFORM POLICY MAKING

When examining the literature to evaluate the relative impacts of broad categories of instruments, although more than a third of the articles assess instruments' environmental effectiveness and about one fifth do focus on their cost-effectiveness (efficiency), many other objectives and principles are also considered to assess such instruments: contribution to poverty alleviation (12%), equity (9%), participation (9%), feasibility (6%), legitimacy (2%),sustainability (2%), contribution to development, governance, food security, freedom of choice, adaptation capacity to climate change (all accounting for 1%), etc.

Overall, this heterogeneity in terms, research methods and evaluation criteria does not contribute to clarifying the debate on the definition, legitimacy and usefulness of MBIs for conservation. **In this context, it was not possible to find evidence for positive or negative trends emerging from the literature.**

This policy brief has shown that scientific research on market-based instruments for biodiversity, and more generally on innovative financial mechanisms, is heterogeneous at various levels: terms used by authors, evaluation criteria, methodologies and approaches to undertake assessments. **In this context, confusion might remain, leaving space for ideological views;** at this point, it is then a hard task, if possible, to draw lessons for policy makers on what works, in what environment, for what reasons and with which associated risks. Given that a key concern for REDD+ negotiations at COP18 will be to determine the effectiveness of various instruments, how can this be achieved?

A more rigorous approach to research which allows for comparative and cross-scale lessons to be drawn would provide more consistent take-home lessons for policy makers. In particular, consistency in terminology is needed (e.g. 'direct negotiated payments for ecosystem services delivery' instead of the generic and broad 'payments for ecosystem services'), systematic replication of analysis, and undertaking of research that covers the range of evaluation criteria of relevance for policy-making (e.g. equity, effectiveness, efficiency, legitimacy, etc.).