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**NOME DO ARTIGO:** We don't protect what we don't value? Untangling the politics of economic valuation of ecosystem services

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## **Abstract**

The paper takes a critical perspective on the political economy of biodiversity conservation under the neoliberal free market framework. The focus of the analysis is the economic valuation of ecosystem services (EVES) approach that is increasingly entering the mainstream debate on the 'green economy'. However, there is strong evidence that the political uptake of EVES remains limited, while the reasons for this are little understood.

The main aim of the paper is to forward the argument that there is a direct link between the limited use of EVES in conservation management, and the ideological-theoretical foundation on which it is built. A review of practice-oriented publications and theoretical and research literature dedicated to the concept demonstrates that EVES continues to be promoted primarily by institutions and organizations based in Western Europe and the USA – the 'heartlands of neoliberal discursive production'. Recent efforts to improve political uptake focus on strengthening the policy-science interface in these regions, and on standardizing EVES methods and techniques.

At the same time, it remains largely unknown how decision makers and stakeholder groups on the national level in developing and emerging countries perceive the EVES approach, and recent calls for global EVES standards. This is a serious limitation that points towards important questions of geopolitical inequalities and the role of private interest and influence in valuing nature. In order to effectively translate the EVES approach into political practice, such questions need to be investigated in comparative studies across geographic scales, economic sectors and stakeholder groups.

## 1. Introduction

25 years after the term ‘sustainable development’ has been officially coined (WCED 1987), questions of biodiversity loss and the extinction of species, tropical deforestation and soil erosion, pollution of coastal waters and over-fishing, oil spills and nuclear contamination, urban pollution, and, last but not least global warming have finally entered the mainstream debate on sustainable development (IUCN, 2004; MEA, 2005; TEEB 2010). There is now widespread agreement that biodiversity exhaustion and related problems pose a considerable threat to social welfare and that urgent action is needed. The proposed solution is the “green economy”: one that conciliates economic growth with social development and environmental protection – the three pillars of sustainable development (UNEP 2012).

It is in this context that methods for the economic valuation of ecosystem services (EVES) are being promoted increasingly as a panacea to put capitalist society on a sustainable pathway. The EVES approach is based on the assumption that environmental degradation occurs because many ecosystem services generated by natural capital do not have market values (DE GROOT 1992; DAILY 1997). While ecosystem goods like apples and clean water are tradable in conventional markets, non-market services such as flood protection and climate regulation are rarely incorporated into economic trade-off decisions of public and private actors. By assigning a monetary value to these services, decision makers will recognize that society as a whole gains more well-being (or value) from environmental protection than it gives up. This, in turn, will lead to better informed decision making on resource use and more effective conservation, following the simple logic “We don’t protect what we don’t value” (MYERS AND RICHERT 1997).

Values generated by EVES methods can be used, for instance, to inform damage assessments of oil splits, or to optimize policy mechanisms like Payments for Ecosystem Services (PES<sup>1</sup>) schemes. Based on these expectations, the approach is being promoted by diverse actors such as global governance and financial institutions (BOVARNICK ET AL. 2010; OECD 2006), national governments<sup>2</sup>, policy research institutes (IISD 2007), and environmental advocacy organizations (WRI 2008; CONSERVATION INTERNATIONAL 2008). However, the great number of international publications on ecosystem services valuation, as well as the mainstream adherence to

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<sup>1</sup> “A PES scheme, simply stated, is a voluntary, conditional agreement between at least one ‘seller’ and one ‘buyer’ over a well defined environmental service—or a land use presumed to produce that service” (Wunder 2005)

<sup>2</sup> For instance, in December 2008, the USDA announced the creation of the Office of Environmental Markets (created as Office of Ecosystem Services and Markets in 2005) to catalyze the development of markets for ecosystem services.

‘sustainable development’ and, more recently, the ‘green economy’, overshadow the fact that these concepts remain ambiguous to date. Some argue that their very vagueness is what gives them so much support in political debate and within financial institutions (COSTANZA ET AL. 1997). There is, indeed, strong evidence that the values captured in often complex and costly EVES studies are rarely used to guide investment decisions or inform environmental regulatory frameworks (see e.g. BILLÉ ET AL. 2012). The reasons for these shortcomings remain poorly understood. This is an important gap, given that the effectiveness of the EVES approach in improving natural resource conservation will be limited as long as the integration of valuation results into political decision-making is not achieved.

This paper approaches the practical application of the EVES concept from a political economy perspective. The key argument is that there is a direct link between the ideological base on which the EVES approach was developed and currently stands – the neoliberal free market orthodoxy –, and the continuing challenges of the approach to effectively improve conservation practice across scales and sectors. In order to sustain this claim, I review theoretical and research literature on the development of the EVES approach over the past two decades, as well as publications and project proposals aimed at improving its practical use.

Important findings are:

1. The idea of monetary valuation of natural resources originated in and continues to be led by global financial and governance institutions, liberal national governments, transnational corporations and NGOs based in Western Europe and the USA – the ‘heartlands of neoliberal discursive production’.
2. It is widely unknown if decision makers in emerging and developing countries share the expectations attached to the concept, and support current efforts to standardize EVES methods and mainstream their use on a global scale.
3. Research and practical efforts to improve the policy uptake of EVES are clustered in Western Europe and the US, and scholarly attention has been focusing primarily on the policy-science interface in the environmental sector of these regions.
4. The role of other stakeholder groups in environmental policy making, as well as differences between economic sectors and across scales, are understudied.

These findings point towards important questions about socio- and geopolitical inequalities, political interests and distribution of benefits related to EVES: While there is an abundance of academic and practice-oriented publications on how to use economic valuation methods to estimate

the *benefits* of ecosystem services, there is a lack of systematic inquiry into the question of *who actually benefits most* from estimating the *benefits* (or costs) of biodiversity conservation. In order to shed light on these questions, the paper calls for research studies that systematically investigate how perceptions and ideas of the current and future potential of the EVES approach to improve biodiversity conservation differ across stakeholder groups and economic sectors in developed, developing and emerging economies.

The paper is divided into 6 sections. Following this introduction, I will trace how the EVES approach made its way onto the global development agenda and, by contrast, how it struggles to find its way into national and local environmental policy agendas (2). Section 3 traces the ideological-theoretical foundations of EVES and how it has been criticized by institutionalist approaches. The following section brings ideology and practice together, establishing a link between the ideological base and current global dynamics of the promotion of the EVES concept. (4) Finally, I call for comparative research studies that take a political economy approach and systematically investigate how the EVES approach is being interpreted by different actors in developed, emerging and developing countries. (5) Section 6 is reserved for a brief conclusion.

## **2. EVES – between economic theory and political practice**

Awareness for ecosystem services dates back to Plato or even earlier (MOONEY AND EHRLICH 1997) and the importance of ecological functions for livelihoods has been recognized by classical economics (e.g. POLANYI 1944/1957). But it was not before the 20th century that scholars from the emerging field of environmental economics began to “measure the value of services that natural areas provide” (KRUTILLA AND FISHER 1975). In the 1980s, their claim that nature conservation needs to be focused on an economics-based environmental policy gained momentum. Two factors contributed to this development: the rise of neoliberal economic thinking and its belief in the supremacy of the market over the state, and increasing evidence for the intrinsic link between nature conservation and long-term economic sustainability (MUNASINGHE 1992).

Global governance bodies<sup>3</sup> were the first to adopt economic valuation as a key strategy to move away from the logic of ‘conservation versus development’ towards ‘conservation for development’ (FOLKE 2006). Scientific interest in the EVES approach was triggered by the Exxon Valdez oil spill in Alaska in 1989 (see CARSON ET AL. 1992), the publication of David Pearce’s *Blueprint*

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<sup>3</sup> Especially the Global Environment Facility (GEF) established by the World Bank in 1991, see STAP (2010)

*for a Green Economy* (PEARCE 1989), and the incorporation of the ecosystem services approach into the Convention on Biological Diversity in 1992, among other factors. Over the past two decades, a range of methods for the estimation of ecosystem services benefits (and cost of ecosystem loss) have been developed<sup>4</sup> and applied in a wide variety of contexts. More recently, global projects focusing on market-based environmental policy statements (most prominently MEA 2005 and TEEB 2008) have placed the EVES approach into the mainstream of international debate on biodiversity conservation.

At the same time, the EVES concept and its proponents have been fiercely attacked from Marxist, post-development, political ecologist, environmentalist, and ecological economist thinkers, among others. Some of them have made important contributions, which greatly enhanced the EVES debate and even led to repercussions in policy. For example, ecological economists have criticized environmental economics for their orthodox belief in the compatibility of their pro-growth orthodoxy with sustainable resource use, and their disregard for equity issues related to the EVES concept. This critic has triggered an increasing recognition for the shortcomings of established national accounting systems (EC ET AL. 2003; EC ET AL. 2012) and challenged the legitimacy of the GDP as an adequate measure for nation's well being. As Stieglitz et al. (2009) explain: "GDP mainly measures market production, though it has often been treated as if it were a measure of economic well-being. Conflating the two can lead to misleading indications about how well-off people are and entail the wrong policy decisions".

Independent of ideological standpoints, it needs to be acknowledged that the EVES community, by promoting their idea of assigning a monetary value on ecosystem resources and services, have achieved what traditional conservationists with their arguments of ethics and aesthetics have widely failed to achieve: to attract the attention of economists and policy-makers to issues of biodiversity conservation, and increase interactions between economists, ecologists and natural scientists about policy relevant issues. Some ecological economists and even scientists from other fields have recognized this opportunity and make use of EVES concepts and approaches. The biologist Gretchen Daily, for instance, rejects the Marxist claim that EVES equate nature commodification and "pricing", and defends the concept accordingly:

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<sup>4</sup> Methods include: Direct effects valued on conventional markets, based on changes in market prices or productivity, due to environmental impacts (Change in Productivity, Loss of Earnings, Actual Defensive or Preventive Expenditures); Potential expenditure valued on conventional markets (Replacement Cost, Shadow Project); Valuation using implicit markets, using market information indirectly (Travel Cost, Property Value, Wage Differential, Marketed Goods as Proxies for Non Marketed Goods, Benefit Transfer); Valuation using constructed markets (Contingent Valuation, estimating individual's willingness to pay, or accept a compensation).

“price is by no means the only thing that affects people’s decisions. However, if we can get the price closer to being “right”, everyday behavior and decisions will be channeled toward a future in which nature is no longer seen as a luxury we cannot afford, but as something essential for sustaining and improving human well-being everywhere”. (DAILY ET AL. 2009A)

The environmental scientist Peter Turner dedicates his work to the interface between environmental and ecological economics, and takes a more rational perspective on e.g. the common critic that EVES does not consider intrinsic values of nature: “Intrinsic values are relevant to conservation decisions, but they are generally not measurable. As such they do not help to define actions in the context where choices have to be made against the backdrop of scarce conservation funds” (PEARCE AND TURNER 1994).

Despite these recognitions for the potentials of EVES, there is, however, significant evidence that the effective translation of scientific studies into concrete policy action across contexts, scales and sectors remains a fundamental challenge (TURNER 2007, PEARCE 2007, SALZMAN ET AL 2012). In an extensive literature search for peer-reviewed articles on ecosystem services until the year 2006, FISHER ET AL. (2008) find only 34 cases with either an explicit or potential reference to policy interaction. In complementary interviews, “several respondents were very frank at the lack of policy traction of their work, and several offered the view that an ecosystem service argument or valuation was only a small input to the decision-making process.” A more recent review of more than 700 references conducted by LAURAN ET AL. (in review) concludes that there is a “paucity of papers that describe, through a case study, how a specific ESV has played a role in a decision.” Rather, “the common rule is to present an economic valuation, then suggest that it be used for decision-making, but without this use being either explicated or contextualized, and without concrete examples being provided or analyzed” (BILLÉ ET AL. 2012). The authors call for systematic investigation into this topic, pointing out that it is still “a strikingly under-investigated issue”.

It is an under-investigated, but recognized topic. There has always been awareness among proponents of EVES that the approach can only meet its potential when it is actually used by decision makers to design policy instruments and make trade-off decisions (NAVRUD AND PRUCKNER 1997; LEVIN 1999; HAHN 2000; HEAL 2000; DAILY ET AL. 2000; SALZMAN ET AL. 2001; NRC 2005). Scholars have investigated the political influence of EVES and cost benefit analysis on a variety of scales and dimensions. For example, project selection processes of the European Commission (PEARCE 2004); uptake by federal public servants in the UK (PEARCE

1998, HANLEY, 2001, RUSSEL AND JORDAN 2006, PEARCE ET AL. 2006) and other European countries (Pearce 1991); regulatory instrument assessment procedures in OECD countries (OECD 1997); acceptance by sectorial administrations within the EU (GÖRLACH ET AL. 2007); as well as subnational governance sectors in the UK (PEARCE 2003 AND 2006) and Germany (HOLM-MÜLLER AND MUTHKE 2001). The findings of these studies are very similar: Most public authorities consider economic valuations relevant for decision process and are in favor of cost benefit analysis, but rely on non-monetary values for their actual decision making, because of concerns about methodological issues, lack of resources and time, and lack of expertise and knowledge. Most studies have been carried out in developed countries, with some exceptions such as Silva & Pagiola (2003) who surveyed more than 100 environmental projects of the World Bank. They find that the Bank has promoted the use of economic valuation increasingly over the past years, but no valuation was *employed* in the majority of its projects. Reasons are likely to be found a range of contextual issues like poorly formulated directives, lack of funding, and legal support (IIED, 2012).

In response to the apparent weaknesses, guidelines were written to assist policymakers (PEARCE ET AL. 1994; LIPTON ET AL. 1995; WINPENNY 1995; ASIAN DEVELOPMENT BANK 1996) but according to David Pearce, “most valuation manuals do not in fact guide policymakers on how to engage in valuation” (PEARCE 2000). Valuation methods have been improved continuously in order to decrease methodological and technical weaknesses (CARSON 2008), but the rapid changes in the science of valuation have also let to “increasing scrutiny regarding their validity and reliability” (ATKINSON AND MOURATO 2008). In order to solve the cost problem and make values comparable across contexts and scales, the possibility of benefit (value) transfer has been investigated, with mixed results (BROUWER AND LANGFORD 1997; BROUWER 2000; BARTON AND MOURATO 2003; READY ET AL. 2004; NAVRUD AND READY 2007). These efforts mirror a common understanding and belief within the EVES research community that

“ecosystem service research *can* be designed to have strong policy foresight, broad cooperation between policy agents and scientists, and *possibly* strong implementation effects. Keys to success are *likely* to include making an economic argument, delivering results in common language, elucidating tangible benefits to livelihoods in the short term, and multiple points of contact with those involved in the policy process.” (FISHER AT AL. 2008, my emphasis)

In other words, there is a strong recognition for the potential of the EVES approach, paired with strong evidence that its theoretical ideal rarely translates into the practice of environmental management.



In the following I will develop my argument that an understanding of the political application of EVES requires awareness for the ideological framework that supports and legitimates the concept. This will serve as a base for the main idea forwarded in this paper: that in order to improve the political uptake of EVES, we need to untangle the *politics of economic valuation of ecosystem services*.

### **3. Of free markets and other institutions – the ideological-theoretical base of EVES**

EVES has been introduced into the global sustainability debate in the context of the neoliberal free market ideology and forwarded by the economic school of environmental economics, which has its roots in the neoclassical economic school<sup>5</sup>. Understanding this theoretical-ideological base is crucial for understanding the ongoing practical challenges of the EVES approach.

The theoretical base underlying the neoliberal free market economy has been developed by the Chicago and Austrian economic schools (see FRIEDMAN 1962, 1980; HAYEK 1973, 1976, 1979) and consolidated itself as the dominant economic ideology (replacing Keynesianism) in the late 1980s (STIEGLITZ 2003). The neoliberal development policy framework is based on the prescriptions of the Washington Consensus, formulated in 1989 by John Williamson (see WILLIAMSON 2004).

This evolution in mainstream economic thought has been reflected in the evolution of environmental policy. In the late 1960s and 1970, when first concerns about pollution, resource degradation and the limits to growth emerged<sup>6</sup>, political action and economic planning were seen as key pathways to environmental protection. From the 1980s onwards, market environmentalism and its tools (such as valuation of environmental externalities<sup>7</sup>, market-based policy instruments, ecotourism, privatization of nature reserves etc.) were advocated as new conservation paradigm. Underlying this development was the argument that the self-regulatory virtues of markets would lead to a more efficient regulation of the natural environment than state-centered command and control conservation and grassroots schemes (SMITH 1995; ANDERSON AND LEAL 2001; MCCARTHY 2004). The increasing power of international environmental NGOs (e.g.

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<sup>5</sup> Marshall's Principles of Economics (1890) established neoclassical economic theory as the mainstream economic theory

<sup>6</sup> triggered by Boulding 1966, oil crises, Silent Spring, Club of Rome Report (Meadows et al. 1972), Stockholm Conference 72

<sup>7</sup> benefits or costs generated as the result of economic activity that do not accrue directly to the parties involved in the transaction

Conservation International, The Nature Conservancy), often sustained by partnerships with transnational corporations and financial institutions (LEVIN 2002; CHAPIN 2004) is an additional effect of the consolidation of the neoliberal ideology in the environmental field.

Environmental economics, building on orthodox economic theory (and therefore affected by the same shortcomings, as SÖLLNER (1997) notes), understands environmental degradation as a negative externality that jeopardizes the efficiency of the market and results in market failure. Many environmental resources are publicly owned and do not have a predefined market value. However, they are valuable economic assets and, in absence of private property rights, they tend to be overused and abused. This phenomenon has been described as the *Tragedy of the Commons* by Garrett Hardin in 1968 (HARDIN 1968; See also OSTROM 1990). In neoclassical economic thought, negative externalities are seen as an undesirable, but solvable part of the market economy. They can either be internalized politically by means of taxation as proposed by Pigou (PIGOU 1932<sup>8</sup>), or incorporated into the logic of the market, as first argued by Ronald Coase (COASE 1960<sup>9</sup>).

Building on this rationale, methods for the monetary valuation of environmental externalities have been developed by scholars from the emerging fields of Environmental and Natural Resource Economics from the 1960s onwards (see seminal works of KRUTILLA 1967; KNEESE & BOWER 1968; DALES 1968). Unsurprisingly, environmental economics takes a purely instrumental perspective on the value of nature: The environment needs to be valued and protected to the extent that it generates economic or monetizable environmental benefit (THAMPAPILLAI 1991). To this end, non-market environmental resources are being transformed (via valuation exercises) into a substitutable category that fits it into the realm of the already existing market framework. Like any other commodity, ecosystem and biodiversity values have to be hedonistically and anthropocentrically determined, based on the utility functions (or preferences) of individuals. Individuals are here understood in the neoclassical tradition, as rational self-interested and profit-

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<sup>8</sup> According to Pigou, negative externalities arise when the welfare of one party is adversely affected by the actions of another party, and the loss in welfare is uncompensated due to a lack of liability to third parties who suffered the damages. The damage that occurs from negative externalities will translate into a loss of efficiency and is a market failure. he proposes internalization of the externality as solution

<sup>9</sup> Building on Pigou's initial ideas, Coase argued that private negotiation and well defined property rights are sufficient requirements to solve the problems caused by externalities.

maximizing individuals, which express their preferences by their willingness to pay for the projection of ecosystem resources and services, or accept compensation<sup>10</sup>.

What the orthodox economics approach to conservation does not consider is the apparent fact that any kind of conservation instrument must be set up and actively regulated by governance entities that are let by humans and, according to neoclassical thought, subject to failure and inefficiency. It is this disregard of the complex relationship between humans, the environment and the economy which makes the initial conceptualization of the EVES approach vulnerable to institutionalist critiques from both outside and inside the environmental economics discipline.

Environmental economist David Pearce points to the limitations of the mainstream EVES approach by arguing that ecosystem valuation should follow the paradigm of “demonstration and appropriation” (PEARCE ET AL. 1993): biodiversity values must be demonstrated to decision makers, then appropriated by them. Appropriation will only occur when market and policy failures have been corrected. Besides a recognition for policy failure (in addition to market failure), institutionalist approaches to EVES have called for a focus on the “right process” rather than “right numbers” (PEARCE ET AL 2000), a careful examination of how and why certain decisions are made, since “knowing who loses and who wins does not tell which decision to make” (BILLÉ ET AL. 2012), and investigations into stakeholder influences because “[w]hatever decision support system is eventually adopted, its value will be judged on how well it aids real policymakers operating iteratively in the nonlinear real world political economy” (TURNER 2007).

GROSSMAN and HELPMAN (1994) and AIDT (1998) analyze policy uptake of cost benefit analysis and propose to supplement the social welfare function with a political welfare function which goes beyond the government’s concern for the well-being of individuals, but incorporates also the attention it gives to (political) interest groups. In a similar argument, PEARCE ET AL. (2006) stress that

”government and its constituent decision makers, rather than merely maximizing social well-being as assumed in CBA textbooks, are faced with political realities that necessitate the reconciliation of conflicting interests, and giving prominence to CBA might not be the best way of serving those ends”.

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<sup>10</sup> direct use value is the contribution to current production/consumption; indirect use value includes benefits from functional services that the environment provides to support current production/consumption (e.g., ecological functions like nutrient recycling); option value is the willingness to pay for an unutilized asset, simply to avoid the risk of not having it available in the future (see "Discount rate, risk, and uncertainty in environmental decision-making"); and non-use value is the willingness to pay for perceived benefits not related to use value, e.g., existence value, which is based on the satisfaction of merely knowing that an asset exists, even without intending to use it.

In an earlier study, PEARCE (2001) found that political-institutional factors are responsible for a more widespread use of rational decision-making techniques in the US, as compared to Europe.

Only very recently, triggered by increasing evidence for climate change (EEA 2013<sup>11</sup>) calls for ‘better and new institutions’ to implement the ideas of TEEB and MEA, and increase the acceptance of economic valuation among decision makers have entered the mainstream of the ecosystem services debate (CARPENTER ET AL. 2009). It now has been widely accepted that “we must design effective and enduring institutions to manage, monitor, and provide incentives that reflect the social values of ecosystem services” (DAILY ET AL. 2009, 27).

In addition, there is an increased awareness that the complex topic of biodiversity protection and sustainable development can only be tackled successfully by multi stakeholder approaches that cut across policy sectors, academic disciplines and national boundaries (WRI 2008, LIU ET AL. 2010). As CARPENTER ET AL. (2009) stress,

“[t]he gaps in knowledge that exist today cannot be addressed through uncoordinated studies of individual components by isolated traditional disciplines [...]. To this end, it is imperative that the policy and science communities establish a capacity to create and implement policies for social-ecological systems, predict consequences, and evaluate outcomes”.

A more active science-policy-sphere, global cooperation and standardization of methods and values, and appropriate legal structures that oblige decision makers to use economic valuation approaches are now seen as the key to mainstream EVES globally (SCARLETT AND BOYD 2011, LAURANS ET AL. IN REVIEW, KUSHNER ET AL. 2012).

In order to put these ideas into practice, some initiatives have been launched. DAILY ET AL. (2009), in the context of the Natural Capital Project, propose a framework for the analysis of five central dimensions of ecosystem research: ‘ecosystems’, ‘services’, ‘values’, ‘institutions’ and ‘decisions’. One central goal is “to explore how a focus on decisions can motivate the integration of ecosystem services into management and policy decisions, and inspire a research agenda to support this change” (DAILY ET AL. 2009) In Europe, networks for policy-science exchange on ecosystems and valuation have been created with the objective to improve, standardize and globalize EVES tools and methods, and enhance communication across academic disciplines and government agencies involved in environmental management on national, regional and global

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<sup>11</sup> the 2013 Late lessons from early warnings report is the second of its type produced by the European Environment Agency (EEA) in collaboration with a broad range of external authors and peer reviewers. The case studies across both volumes of Late lessons from early warnings cover a diverse range of chemical and technological innovations, and highlight a number of systemic problems. The 'Late Lessons Project' illustrates how damaging and costly the misuse or neglect of the precautionary principle can be, using case studies and a synthesis of the lessons to be learned and applied to maximising innovations whilst minimising harms.,

scales (e.g. IPBES EU Biodiversity Strategy; KNEU, Germany; Ecosystem Services Partnership, Holland; OpenNESS, Finland).

However, these initiatives are likely to have limited success in improving the approach, because they continue to be let and pushed forward by actors and organizations from USA and Europe, and focus their efforts on the science-policy interface. As I will argue in the following, the ‘Northern dominance’, as well as the targeting of the public sector as responsible for the shortcomings of the EVES approach, mirror the ideological base on which the concept was initially built.

## **5. Tracing ideology in the real world**

In this part, I establish a link between the ideological foundation of the EVES approach in neoliberal economic thinking, and the dynamics of EVES debate and practice. The latter are dominated by Northern thought and action, and targeted on the public sector. Insights and contributions from developing and emerging economies are limited, and the role of private interest and influence in valuing nature widely sidelined. I argue that these shortcomings contribute to the limited political application of the EVES approach.

If the (economic) cake is made larger, everyone can get a larger piece. This metaphor resides at the heart of the neoliberal development model, which is the dominant philosophy of liberal states, transnational corporations and international financial institutions since the 1980s. In order for the cake to grow, market forces need to act freely in both international trade and investment, and domestic economy. The state is reduced to creating and preserving the institutional framework for the free market, and correct market failure as necessary.

In reality, it was evident by the end of the 1990s, after just one decade of neoliberal policy reform prescriptions following the Washington Consensus, that neoliberal development had resulted in an increase in income inequality, unemployment and decrease in basic living standards, which even the World Bank and the IMF had to admit (PALAST 2001). Besides widening the gap between rich and poor, the financial institutions promoting the Consensus<sup>12</sup> served the interests of the political elites of the developing world, thus indirectly contributing to bad governance (SERRA & STIGLITZ 2008). In response, strong manifestations for the crucial role of the state in development were

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<sup>12</sup> based in Washington DC, such as the International Monetary Fund (IMF), the World Bank, and the US Treasury Department

formulated (EVANS 1997; COLLIER 2007; WEISS 2003).

However, despite the apparent limits of free markets to solve the ‘classical problems’ of society like poverty, overpopulation, distribution, and unemployment, the market continues to be promoted as remedy for ‘modern day problems’, such as debt repayments and balance of payment deficits, crime, and pollution and natural resource degradation. This phenomenon supports the argument of post-development thinkers that the neoliberal ideology is protected by a power system made up of certain actors and geopolitical knowledge, and closed to others. This, they argue, allows for the continuous expansion of neoliberal logics into other spheres of social and economic life. The development world, in this context, is “categorically objectified” and its needs “externally decided” (ESCOBAR 1996).

Although not intended to forward a post-development argument, the analysis of the EVES debate and practice in this paper sustains this claim. Market-based conservation mechanisms in local communities in developing countries have typically been implemented in a top-down fashion by external demand from the World Bank, with limited impacts on conservation and, sometimes, disastrous effects on local communities (MARTÍNEZ-ALIER 2002; SALZMAN 2005). On the level of global development debate, the EVES approach has been forwarded by thinkers from the EU and USA who currently transpose their ideas about the mainstreaming and standardization of EVES to the rest of the world, while insights from emerging and developing countries to these debates are rare. Moreover, research into the barriers of the political uptake of the EVES concept has been focused on public sector agencies in Northern countries, while it is largely unknown how the EVES approach is being perceived and interpreted by decision makers in emerging and developing nations.

This is a serious limitation, given that these countries struggle most to align the conservation of their often extraordinary biodiversity with economic growth strategies (PEARCE 2007), and that it is often the poorest people that most rely on natural resources for food, housing, fuel and medicine (UNEP 2010). There is an urgent need for the governments of these countries to integrate biodiversity protection into their environmental, energy and agricultural policy and regulation frameworks. EVES methods may make an important contribution, but it is likely to fail if induced in poorly understood contexts in which conservation and development policies are historically separated and self-serving governments pose major barriers to innovative policy making. As long as we do not know how the concept is interpreted and which role it does - or does not - play in different institutional and political contexts, attempts to globalize the approach are likely to fail

(OSTROM 2005). According to Walker et al., “the challenge is not just to declare the principle but to ensure its acceptance and enforcement. Acceptance is needed for legitimacy, and enforcement will depend on whether states are willing to make the necessary sacrifices” (WALKER ET AL. 2009). Following this argument, it is unlikely that static policy templates and standardized valuation techniques designed by US and EU led networks and governance bodies will have the desired effect to successfully integrate ecosystem services into policy practice of these countries.

The negative evaluation of PES schemes on local communities, and the low political uptake of the EVES concept points towards important questions about equity and the distribution of gains and losses derived from EVES: Whose interest is actually served when assigning a monetary value to natural resources and services? Who benefits most from promoting market-based policy mechanisms? This takes us to another issue that has been widely ignored in the research literature on the EVES approach, and is a vital aspect of the neoliberal ideology: the centrality of private power and interest. Some Latin American countries (Bolivia, Ecuador and Cuba in particular) interpret the economic evaluation of ecosystem services as mechanisms for indirect privatization and resist to join the IPBES, and the PES approach has recently been challenged by the Constitutions of Bolivia and Ecuador (ZAFFARONI, 2012). The abundance of international publications developed or commissioned in the past decade by transnational institutions and organizations to promote the EVES approach globally sustains this claim and is an indicator for the great interest of the global political and economic elites in putting a value on natural resources.

The influence of private sector actors and interest groups (e.g. agribusiness, oil companies) on the specific uses of EVES in national decision making processes involving natural resource is a topic that has been widely sidelined in EVES debate and research. Evidently, there is much to win from manipulating the values which inform cost benefit analysis of investments with different environmental impacts; policy instruments such as tradable permits, green taxes and voluntary agreements; and prices for environmental resources, such as water pricing or entry to a recreational site. From this point of view, it is to be expected that the private sector exerts significant influence, and that it possesses stronger negotiation power than many other stakeholders with an interest in national environmental management, such as nongovernmental organizations, regulatory agencies, unions and members of the Opposition. The role of private interest in national government decisions involving questions of biodiversity conservation is currently demonstrated by the polemic about the keystone XL pipeline in the United States. On the 6<sup>th</sup> of March 2013, the British newspaper The Guardian reported that

“the State Department's conclusion that “the pipeline “is unlikely to have a substantial impact” on the rate of Canada's oil sands development, was based on analysis provided by two consulting firms with ties to oil and pipeline companies that could benefit from the proposed project.<sup>13</sup>”

The role of policy uptake, stakeholder influence and interest group dynamics in relation to EVES is likely to differ across political sectors, but research on the political institutional dimension of EVES has largely been directed to the environmental sector, while knowledge on the role of EVES in environmental-related sectors such as energy and agriculture is restricted. DEHNHARDT (2012), for instance, conducted an online survey to explore attitudes towards economic valuation and discuss their potential influence on the use of economic valuation tools within the German water administration, but “whether either the use of economic valuations or the attitudes depend on sector policies and styles of decision-making could not have been explored empirically” (DEHNHARDT 2012, 22). This is an additional shortcoming of the EVES research agenda, as environmental policy integration (EPI)<sup>14</sup> across economic sectors is considered a key condition to the sustainability of the whole social–ecological system (BALVANERA ET AL. 2012).

## **6. A call for research**

In light of the gaps pointed out above, I call for systematic research efforts that investigate the current role and future potential of the EVES approach in environmental management in different geographical places, and its prospects of achieving positive effects on a global level. Studies should take an comparative approach, given that state capacity, stakeholder engagement and interest group dynamics related to EVES are likely to differ across developed, developing and emerging economies (see e.g. the Varieties of Capitalism literature). Dependent on the choice of case study countries, it will be important to take into consideration that powers in the world have shifted considerably over the last two decades. This may have an additional influence on the acceptance of EVES in emerging economies. In terms of stakeholder influence, the cultural diversity and strong inequities between societal groups in developing and emerging economies may influence the role and nature of biodiversity protection in particular ways (BOVARNICK ET AL. 2010).

As proposed in this paper, research on the political uptake of EVES should take a political economy approach to conservation governance, which challenges “both the political economic system of

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<sup>13</sup> Accessible online: <http://www.guardian.co.uk/environment/2013/mar/06/keystone-xl-report-oil-consultants>

<sup>14</sup> a concept forwarded by the Brundtland Commission in 1987 (WCED, 1987) which places the environment at the heart of policy making in all other sectors such as transport, energy, or agriculture



capitalist production and social relations, as well as the political ideological framework that supports and legitimates it” (BÜSCHER 2009). However, such research should avoid radicalization. Despite the apparent shortcomings of the neoclassical and neoliberal foundation of the EVES concept, it would be wrong to equate utility-based approaches to ecosystem conservation with utilitarianism, or EVES with nature commodification. Likewise, economic instruments should not be evaluated from a ‘bad/good, black/white’ perspective, since evidence shows that e.g. well implemented PES schemes can have positive effects.

As J. Peck points out,

“just because neoliberalism does not, indeed cannot, satisfy absolutist, hyperbolic criteria, this does not mean that it is a figment of the critical imagination [...] Rather, we have to dissect, and indeed embrace, the unevenness, the ‘ill logics’ and ‘unsystematics’ in order to come to a deeper understanding.” (PECK 2010)

An analysis of the claims made against the EVES concept and its neoliberal foundations may start by investigating how their ‘products’, like the Green Economy project, or the TEEB study, are being perceived and adopted by decision makers in a wide variety of countries. To what extent, and how, are the broad ideas forwarded by these initiatives relevant to specific national or local policy-making contexts? Other important questions to be investigated are: How to different social groups perceive the valuation approach and its potential for policy making, and how do they promote or affect activities and practices related to valuation? How do power struggles and conflicts between interest groups affect the way ecosystem services are valued? How does acceptance differ across governance sectors and subsectors? How do national decision makers perceive the efforts of regional and global institutions and arrangements to improve the political adoption of valuation results and mainstream EVES?

Answers to these questions will enhance our knowledge on the ability of EVES methods to move across institutional and cultural contexts. Solid empirical evidence on the extent to which global standardization and mainstreaming of EVES is feasible and desired, is a prerequisite to develop it on a global scale – or not. In fact, solid empirical evidence about ‘non-acceptance’ can be used to pressure for alternatives or, at least, justify the need for greater plurality in the further development of the EVES concept. This may be an important step forward, given that the establishment of alternatives is not an easy task, as the limited political repercussion of e.g. no-growth ideas and alternative welfare measures shows.

## 6. Conclusions

Despite much development towards mainstreaming the EVES approach, and an impressive body of theoretical and empirical studies on the topic, decision makers involved in designing policy and regulatory frameworks for energy planning, industrial air emissions, and agricultural development – to name only a few sectors with significant impacts on our global biodiversity – continue to be designed with no or limited consideration for ecosystem services values.

This paper suggests that one reason for this failure is the lack of solid knowledge on how the political acceptance and use of EVES differs across governance sectors and between developed, emerging and developing economies. In order to create, on a global scale, institutions that actively support and enforce the use of EVES in environmental policy making, we need to understand the underlying political-institutional contexts and consider a broad range of actors that may favor or fear such innovative approaches.

The political-institutional-ideological context in which the concept has been developed and continues to be promoted fails to recognize this need. My criticism, thus, is not directed towards the EVES approach *per se*, but about how it has been introduced and how it is currently being promoted in the context of global biodiversity debate and practice, and how the academic community is restricting its efforts to improve political uptake to policy makers from the environmental sector, as only one group of actors of a much wider institutional context.

Tools for biodiversity protection are important and need to be implemented and made available on a global scale, but it is unlikely that static policy templates and standardized valuation techniques designed by US and EU let networks and governance bodies will have the desired effect to successfully integrate ecosystem services into policy practice of these countries. The experiences with PES schemes in developing countries sustain this assumption. Comparative studies that investigate differences in perceptions, expectations and acceptance of EVES across and within scales, sectors and stakeholder groups will permit a more targeted problem solving and will be an important step forward towards realizing the potential of the EVES approach.

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