International governance of biodiversity

Searching for renewal

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WAGENINGEN UR

For quality of life

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Abstract

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This study is about improving the governance of biodiversity. The challenges are many: low awareness leads to poor policies and insufficient capacity, and conservation appears unappealing compared to short-term economic exploitation. We searched the Internet for new types of initiatives, and found that many initiatives are based on the greening of decision making through capacity building and an area-specific focus where the approach includes developing new and better forms of finance. The main finding is that these types of renewal should be strengthened by investments in institutional crafting. We define institutional crafting as learning and being able to identify and interpret dominant institutions, understanding resistance to these institutions, and judging their strengths and weaknesses in order to act accordingly, e.g. by using and changing the institutions for biodiversity purposes. We regard this as a craft, which has to be learned and used to improve governance.

Key words: Governance, biodiversity, policy, institutions, Convention on Biological Diversity (CBD)

Contents

Summary

This study is about how the governance for biodiversity can be characterized, what the main challenges are and how it can be improved. Characteristic for the protection of biological diversity is that it is about dealing with a series of interlinked wicked problems that are wired into politics and a multitude of claims concerning rights to make decisions. This right is in turn linked to the capacity of making alliances that are able to frame dominant problem definitions and solutions over time. Being able to deal with formal and informal rules of play, as land use zoning, is here of major importance. A major challenge is to deal with the many (levels of) actors and interests involved, both public and private actors. The problem is the low awareness that leads to poor policy and an insufficient capacity to protect the biodiversity. In addition, there are many layered governance gaps due to the conservation discourse that has not been very attractive or inviting to many societal groups and citizens, and there is also the weak political clout of biodiversity. Challenging is also the often politicized sovereignty within a complex institutional setting, which makes it hard to deal with.

In this study, we searched internet for more or less new (types of) initiatives to improve the governance of biodiversity. We found that many of these initiatives are built on an approach explicitly aiming for a greening of decision making through capacity building and an area specific focus where developing or finding new and better forms of finance are included in the approach. Many initiatives are also directing towards the engagement of both public and private parties; at the (inter)national level and also the regional/local level. Many of them combine ecology with economy; connecting people and issues inside and often also outside the area. This is a work that usually takes place at many levels. These kind of initiatives have a great potential to help overcome the problematic sides of biodiversity protection: they create awareness and legitimacy through a mode of working that bridges the many levelled governance gaps. By making complex institutions workable, they appear attractive to both the involved and also others, for instance a government that otherwise might have chosen a different path of development than biodiversity protection. As such, their contribution to the challenges seems to carry the essence of what is needed to pursue a sound protection of biodiversity.

The main lesson for the governance of biodiversity is that there is a need for a more attractive storyline, which calls for a stronger emphasize on the benefits of nature and by that triggering or employing more of the societal engagement present in society. Although this is a major job in itself, we will here make a pledge for a stronger focus on learning how to deal with the formal and informal rules of play. We call this institutional crafting: learning and being able to identify and interpret dominant institutions, to understand resistance to these institutions, and judge their strengths and weaknesses in order to act accordingly, as in using and changing the institutions for biodiversity purposes. A programmatic process of investigating how institutional crafting can add to the governance and then stimulate action should be initiated.

Formal rules of play are laws and regulations, and informal rules are the common beliefs and practices, often taken for granted beliefs of what the problems are and how to solve them. Institutional crafting must then be linked to a greening of decision making, capacity building, area based planning and practices, and mechanisms and opportunities for green finance. We look at this as a craftsmanship, which is to be learned. It will provide better understanding of the problem at stake and improve action. by improving the achievements, it has also the power to strengthen the legitimation of the governance. The strength depends on a combination with an attractive storyline of the benefits of nature and the use of societal engagement. This might help raise the long term support for a governance of biodiversity by demonstrating that money is well spent and that the work actually makes sense for both wildlife and economy.

A lack of such powers and abilities makes people one-sided dependent of others and unable to speak out in a forceful way. This challenge is at the same time inevitably intertwined with a democratic problem, as it is often locals, indigenous and/or poor people that is suffering the most from a lack of

access to economy and politics, and thus require institutional craftsmanship. But also others, public or private, need to acquire such abilities and powers. The lessons formulated above are constructed on the observation that most of the building blocks for improvement are already present, but that they need further support and development. People and organizations at many levels are needed to make this work more according to the CBD aims.

1   Introducing the search for renewal

1.1   Setting the scene

The province of Aceh on Sumatra and the Indonesian Ministry of Forestry are currently drawing up a new spatial plan, allowing 1.2 million hectares protected forest to be converted to mining, logging and oil palm plantations. When the plan was made known by the mining company East Asia Minerals, it caused massive protest on Facebook, Twitter and the activist site Avaaz. In a couple of weeks a petition was signed by 1.3 million people. In support of the plan, Governor Abdullah explains that the previous Governor Yusuf never should have labelled this protected forest, as he only did this to earn money on the CO_2 trade. The whole idea of protecting a million hectare is madness, he states, and as Yusuf lost the election, Abdullah now feels entitled to make his own plan. Abdullah states that now the previously ignored interests of the local village people are considered, as they otherwise all of a sudden would have lived in a protected forest without any rights to act. The mining company adds the argument that this will be a green mining project which uses carbon and biodiversity offsets and the latest in environmentally friendly mining practices.

Those against the plan, as Dedi Ratih of WALHI (Friends of The Earth Indonesia), argue that the plan should be rejected immediately as it represents a permission to trash Aceh's forests. It leads to a massive exploitation of natural resources, and it is not in the interest of the local communities. It merely serves foreign business corporations interests, through a highly 'unhealthy' process, where a foreign corporation is allowed to intervene and drive local policy. Protesters argue that the Ache Parliament has passed an illegal by-law for the removal of the protected status. The Indonesian Ministry of Domestic Affairs has warned that the plan in its present state might be rejected, but the Ache Parliament intends to ignore this and pursuit as planned.[1]

1.2   Background

As the illustration above shows, protection of biological diversity is about dealing with a series of interlinked wicked problems. It is wired into politics and the right to make decisions. This right is in turn linked to the capacity of making alliances that are able to frame dominant problem definitions and solutions over time. In Ache we see that the government should not be looked upon as one single actor, as various parts of the government is struggling each other. Besides, formal political rights are also challenged by a more informal opposition fuelled by social media triggering rapid public mobilization. Being able to deal with formal and informal rules of play, as land use zoning, is here of major importance. We also see that many (levels of) actors and interests are involved, both public and private actors.

The Ache example shows many aspects of the problems at stake. It might stand for the global situation, where the biological diversity in general is under great pressure from the combined activities of the now more than seven billion people on earth. The pressure leads to loss of habitat, degradation of land and coast, acid rain, pollution and (over)exploitation of natural resources (Global Biodiversity Outlook 3, 2010; Global Biodiversity Outlook 4, 2014). At the Earth Summit in Rio de Janeiro in 1992, government leaders joined in on a new and ambitious strategy for protecting the biodiversity, the Convention on Biological Diversity (CBD). The CBD contained ambitious objectives and a framework for action that was supposed to be and also became implemented by many actors at many levels:

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[1] http://www.change.org/p/president-susilo-bambang-yudhoyono-cancel-aceh-s-illegal-spatial-plan
http://www.redd-monitor.org/2013/04/19/canadian-mining-company-east-asia-minerals-is-working-closely-with-indonesian-government-officials-to-destroy-acehs-forests/
Volkskrant, 31/5 2013, *Atjeh wil ook eens wat bos kappen*.

local, regional, national and international. In this way, the loss of biodiversity was meant to be brought to a halt. Since then, much is said and done, but the sum total of the achievements is a sober reading. The international governance of biodiversity does not produce the results aimed for by the 193 parties of the CBD. Instead, the biodiversity has even been declining ever since 1992 (PBL, 2012). The need to renew the efforts and improve the ability to reach results have become pressing for the CBD parties and the 10th Conference of the Parties in Japan in 2010 paved the way for a new plan and the targets sets are called the Aichi Biodiversity Goals 2011-2020, named after the Conference location. The UN Conference Rio +20 in June 2012 ratified the coming of this new Strategic Plan 2011-2020.[2] This plan is made for improving the achievements, but much work is still to be done.

This study is dedicated to a search for such new ways of protecting the biodiversity. The next section is about the problems at stake (1.3). Then we spell out the targets of the CBD Strategic Plan 2011-2020 (1.4). Based on 1.3 and 1.4, the main challenges approached here are presented in an additional section (1.5). Then a section is devoted to the aim and questions of the study (1.6), before the conceptual framework and method are laid out (1.7). Chapter 2 contains the findings of the search for new initiatives. In Chapter 3, we turn to the matter of how these initiatives could add to the improvement of the international governance of the biodiversity. The study is commissioned by the PBL Netherlands Environmental Assessment Agency.

1.3 The problems at stake

In order to provide a view to the problems at stake, we will here present three (interlinked) issues: First, we state that low awareness leads to poor policy and an insufficient capacity to protect the biodiversity. Secondly, there are many layered governance gaps due to the conservation discourse and the weak political clout of biodiversity. And thirdly, it is about an often politicized sovereignty within a complex institutional setting.

Low awareness leads to poor policy and insufficient capacity
The influential Global Biodiversity Outlook 3 (2010) declared the limited awareness of biodiversity issues as the most important governance problem, as low awareness leads to or amplifies a range of other shortcomings; in particular limited (willingness to invest in) capacity building and poor efforts to develop action that works. Awareness, as used here, is not merely a matter of providing more information. It is much more about a lack of recognition of the both the problem and the direction of the solution, in a specific context and situation. Environmental decision makers are very much aware of the urgency and the need to strengthen the approach. But many decision makers are not working towards solutions that are favourable to such protection.

In the foreword of the Global Biodiversity Outlook 3 (2010), the UN Secretary-General Ban Ki-moon states that much is being done, more land and sea areas are being protected, more countries are fighting the serious threat of invasive alien species and more money is being set aside for implementing the CBD. But these efforts are too often undermined by conflicting policies, Ban Ki-moon states, and to tackle the root causes of biodiversity loss, we must give it higher priority in all areas of decision making and in all economic sectors. Assistant Secretary-General Djoghlaf, in his preface, adds that there are positive signs, as in better legislation, environmental assessment mechanisms, participative management, cooperation and community involvement. But, besides a limited awareness among the public at large and among decision makers, there is also a limited capacity to deal with biodiversity protection, both in developed and developing nations, including financial, human and technical capacity.

There is also a lack of access to scientific information about the state of the biodiversity, the mainstream of policy is not guided towards the protection of biodiversity, decision making is fragmented and the communication between different ministries or sectors is limited and an economic

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[2]http://www.cbd.int/sp/elements/default.shtml

valuation of biodiversity is absent (Global Biodiversity Outlook 3, 2010:7). And all this, it is concluded in the executive summary of the Global Biodiversity Outlook 3 (2010:13), calls for more awareness and better decision making at all levels and in all sectors, with the government in a key enabling role to support effective bottom up community, local authorities and business initiatives. This many layered character of the problems at stake; the intertwined links between the international, national and regional/local level is important to the governance of biodiversity, as also is pointed out in the literature (Swiderska *et al.*, 2008). At the level of national governments Billé *et al.* (2010:39-40) states, bureaucratic inertia and compartmentalization of policy are factors weakening coordination.

Many layered governance gaps: due to conservation discourse and weak political clout
The problematic side of the many layers of governance is linked to the dominant discourse of how to conserve nature. Over the last two decades, Swiderska *et al.* (2008:viii) explain, the prevailing top-down and exclusionary conservation approach has been increasingly questioned, due to the many layered problems at stake. The governance was never much inviting to societal parties outside the conservation discourse but the implementation nevertheless depended on these forces:

- On the local level, there is an emergence of local community based conservation seeking to engage people in management decisions. But, these efforts often remain small-scale and isolated, poorly integrated into relevant institutions.
- On the national level, biodiversity is degraded by agriculture, tourism, extractive industries and other economic activities. Economic activities are attractive to many while biodiversity remains economic invisible and seen as a constraint to development.
- On the international level, the biodiversity governance institutions have a weak political clout compared to those of trade and development, which are often in conflict with biodiversity goals.

Swiderska *et al.* (2008) found that these problems are related to gaps between the CBD policies on paper and their implementing powers in practice: implementing shortages leads to a rapid growth and multiplication of CBD decisions, targets etc., which in turn makes it even harder to implement. The multilevel gaps between the CBD on paper and in practice has also been discussed on an E-Forum[3], initiated by the CBD. The parties conclude that the CBD does not have sufficient mechanisms for implementation. It has limited power and a lack of mandate to influence the often fragmented decision making. Besides, worldwide there is also a huge lack of field staff and budgets to manage the areas that actually are protected.

A politicized sovereignty in a complex institutional setting
Yet another set of problems is related to the CBD call for a stronger role for international institutions. As this turns into concrete issues, many countries oppose this by pulling the national sovereignty card. Governments usually find their right to sovereign rule within national borders as essential. However, the question is then, what is sovereign rule? On the one hand, if any principle of the international order is undisputed at a general level, it must be that the world is divided into sovereign states, i.e. states with an own jurisdictional authority within their borders (Barkin and Cronin, 1994). However, Barkin and Cronin (1994) also point out that the essence of the sovereignty is rarely defined and this essence is about what men regard to be legitimate rule. The matter at hand is how independent a government is in its decisions.

An important distinction is the one between a strict political/legal national sovereignty and a broader understanding of sovereignty which rest on the assumption that the ruler rules on behalf of the ruled, i.e. that the legitimacy derives from the consent of the people[4], or commitments through membership for instance the CBD, where these sovereign states commit themselves to protect biodiversity. The latter understanding of sovereign rule takes the a broader dependency into account. But this is just one setting limiting governments freedom to act. There are others, as the trade agreements of the World Trade Organization, which in turn puts its own limits to the national government's freedom to act (Welch and Kennedy-Pipe, 2004). Limitations to any freedom to act comes from both the international scene as well as domestic settings of various kinds. Put together, they make the notion of sovereign rule in practice about dealing with an ensemble of preferences. Governments act amidst

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[3]http://www.cbd.int/sp/post2010forum/question.shtml?number=1&set=a
[4]http://adminscience.blogspot.nl/2011/05/type-of-sovereignty.html

other actors and institutional forces meeting up at various levels and divers settings, to paraphrase Rhodes (2003:47) and Jessop (2000:16). Governments engage in international agreements from a motivation based on national interests, which turn out to limit their own action later.

Besides, within the ensemble of interests and preferences of a sovereign state, there are many levels of governments and non-governments involved, all with their specific decision making powers, their own interests, concerns, goals and means, and these might not always match the CBD objectives. In addition, the problems tend to overstep the political, administrative and policy borders and demarcations. In dealing with these problems, one can face both institutional voids; as in a lack of institutions, as also an overload of institutions through a vast array of rules and praxis. Protection rules made (inter)nationally might compete with a regional praxis without much institutional constraints, as in illegal logging.

1.4   The CBD Strategic Plan 2011-2020

The CBD Strategic Plan 2011-2020(CBD, 2010) consists of a framework that is designed to improve the CBD by enabling the actors and enhance the institutional framework. The plan is made up around five strategic targets:
- address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society;
- reduce the direct pressures on biodiversity and promote sustainable use;
- to improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity;
- enhance the benefits to all from biodiversity and ecosystem service;
- enhance implementation through participatory planning, knowledge management and capacity building.

Essential to the approach is the promotion a green economy for sustainable development and poverty eradication and enhancing the institutional framework by taking into account the contribution of biodiversity and ecosystem services in economic decisions. The plan is meant as a compelling vision and an enabling framework for the realization in a participatory and inclusive manner. The goals and targets comprise both aspirations for achievement at the global level, as well as a flexible framework for the establishment of national or regional targets. Parties are invited to set their own targets within this flexible framework, taking into account national needs and priorities, while also bearing in mind national contributions to the achievement of the global targets.

The Strategic Plan (CBD, 2010) provides detailed guidance for the implementation, and the CBD offers a number of support mechanisms for capacity-building, financial resources, partnerships and initiatives to enhance cooperation.[5] But, as the previous sections show, the governance of biodiversity is a highly challenging endeavour. The CBD stresses that successful implementation requires new and innovative approaches to link biodiversity conservation and sustainable use to development as well as the removal of perverse incentives. And the means for implementation are built on a multilevel approach where the activities primarily take place at the national or subnational level, with supporting action at the regional and global levels.[6] The next section spells out the main challenges for this study, as a foundation for the further research.

1.5   Challenges ahead

Pivotal to the implementation is that all action depends on voluntary contributions and no binding agreements were made between the participants of Rio +20. Thus, for this to work, broadening political support is viewed to be necessary. Heads of States, the parliamentarians of all parties and government officials in general need to understand more of the value of biodiversity and ecosystem

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[5]http://www.cbd.int/sp/elements/default.shtml
[6]http://www.uncsd2012.org/index.php?page=view&type=1000&nr=498&menu=126

services. It is explicitly stated that partnerships at all levels are required for effective implementation at the scale necessary, to garner the ownership necessary to ensure mainstreaming of biodiversity across sectors of government, society and the economy and to find synergies with national implementation of multilateral environmental agreements. In this work, the CBD aims for activities that will not rest upon governments alone. During the 11th CBD Conference of Parties in October 2012 in India, it is stated that "sustainable development can only be achieved with a broad alliance of people, governments, civil society and the private sector"(UN 2012). This is underlined by an expressed need for action that embraces many sector-crossing issues that will be carried out throughout the whole UN system, and not only within the CBD framework.[7]

It is stressed that biodiversity must come higher on the agenda, and a greening of the decision making and the economy are musts for such a change. The PBL (2012:228) stated that there is no obvious route to a green economy, but it stands for an increasing interest in international policy-making for sustainability that is concerned with integrating environmental and social issues in economic decision making. PBL also signals that there are parties embarking on green development pathways that work within their own specific context. Further empowerment of the implementation should then make better use of these opportunities. It is widely acknowledged that much more and not in the least different types of involvement are needed from the business community, the NGOs and the citizens. Collaboration and networks must be enabled or triggered to provide new forms of financing and practical mechanisms for implementation. Governments need to be involved, but also public-private partnerships and networks are proclaimed to be a sheer necessity.

To conclude on the challenges ahead, and to provide the study with some focus, four thematic challenges or issues stands out as central, and we expect much of the renewal to be linked to these four issues, which also are parts of our conceptual framework:
• Greening of Decision Making: the cornerstone of any change;
• Capacity Building: mobilizing and empower change;
• Area based planning: towards an inclusive approach;
• Green Finance: new ways of financing.

Greening of Decision Making: the cornerstone of any change
It is clear that a greening of decision making at all levels and among all actors is by the CBD seen as a core challenge for a better balance between economy and biodiversity protection. This calls for a new look at the way decisions are made and pursued. A greening of the decision making might lead to new arguments and solutions, where also new forms of legitimate rule might emerge. A greening of decision making might frame the discourse in a different way, producing new solutions which have remained unthinkable or unfeasible in the past. Markets that often have been destructive to biodiversity, and using empty promises producing smokescreens and greenwashing, might change and enable us to think different.

Capacity Building : mobilizing and empower change
The decline of biodiversity is related to a lack of institutional, financial, social and technical knowledge and capacity. Many citizen initiatives, grass root movements, businesses, NGOs and nature field agencies suffer from a lack of capacity. Capacity building is a powerful tool to combat obstacles of various kind, as abuse of power, corruption and lack of financial means or implementing tools. Building capacity can lead to small ad-hoc improvements but it can also trigger much larger transition processes of democratization and sustainability. The challenge concerning capacity building is however a many sided task of empowering and mobilizing ideas, actors and networks.

Area Based Planning: towards an inclusive approach
Area based planning has a long history but is still a very powerful concept as it provides focus on the particular qualities of a certain geographic area, with a bundle of forces towards the achievement of the goals. However, the traditional conservation approach was to designate an area as protected area, and then ban all economic activity, and often setting the local community at distance. In addition, the means and funding were often insufficient for implementation and enforcement, , leading to the not so

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[7] http://www.un.org/en/sustainablefuture/stories_ga3.shtml

flattering term Paper Parks (Mullan and Swanson, 2009:6). A more inclusive approach would combine ecology and economy in a commitment where the local wishes and incentives are better integrated with the conservation, built on a tailor made approach that is regarded as legitimate by the involved.

Green Finance: New ways of financing
In much of the debate of the role of international agreements on the protection of biodiversity the bottom line is money. The Dutch ministry of Economic Affairs (2012) stated for instance that all parties might agree on many things but the financing is a tricky issue. Matters of finance are also baked into issues as awareness and sovereignty, and it is central to the highly sensitive relationship between so-called developed and developing countries. Finance is a persistent and enduring issue and often a barrier to the protection of biodiversity. It is also a controversial issue. During international conferences it is often pointed to western governments for finance, while the willingness to pay is declining among these same western governments (ELI, 2012; UN, 2012). Besides, finance has often been about a time-limited funding of the conservation matters, with little consideration for development. As a consequence, it might be wise to look for new ways of finance by for instance redefining issues and types of payments. There are many ways of dealing with public-private and public-public co-financing, price mechanisms, citizen and consumer contributions.

1.6 Aim and research questions

The aim of this research is to offer new insights into how to protect biodiversity, and in particular how improvement can be achieved through multi-level governance.
- How can the current CBD governance for biodiversity be characterized and what are the main challenges? (Section 1.2-1.5);
- Which initiatives and projects are now emerging in terms of governance for biodiversity? (Chapter 2);
- How can the emerging initiatives and projects contribute to the challenges ahead (Chapter 3);
- Which lessons are there for the international governance of biodiversity? (Chapter 3).

1.7 The conceptual framework and method of analysis

Three topics are central to the framework. First, we need some framing of two the carrying concepts in this study: innovation and governance. Then we spell out how we are searching the internet by using sensitizing concepts. And thirdly, we explain how we are assessing the contribution of the initiatives found to the challenges ahead, in chapter three.

Defining innovative governance
When we speak of innovation here we mean "ideas, products or practices that are perceived to deviate from standard ideas, products or practices (Rogers, 2003:12). The novelty might vary from improving existing products and services to deeper and more fundamental value transitions where creating meaning and deliberations on values is taking place (In't Veld, 2005:27). It might vary from simple organizational improvements to increasingly complex processes of conceptual and institutional innovations, all the way to deep changes in societal patterns and values (Fischer, 2003). We search for new initiatives and projects that add value to the challenges ahead. These might be rather early and even premature signs of change, but there must be some traces of the idea in an actual practice, i.e. embedded in some kind of governance setting and not merely being an idea without any root in any actual reality.

The concept 'governance' carries in the literature a wide range meanings. It can refer to a general and neutral process of governing, whether it is public or private. But governance can also in essence be seen as a style of government more focused on cooperation, in which government, market and NGO's participate in a large number of policy processes (Hajer and Wagenaar, 2003). And with Stoker (2000:3) we also see governance as a process of achieving collective action in the realm of public affairs, in conditions where it is not possible to rest on recourse to the authority of the state. For the

purpose of this study, we note the general process of governing, and we point to the ongoing discussion of the role of governments versus other actors. We do add that, in the case of biodiversity, governance processes often involve many levels: international, national, regional and local. Our concern is to find ways to improve either the governance itself or the conditions for governance.

Searching the internet by using sensitizing concepts
The core of this research is a web based search for new initiatives for biodiversity governance worldwide. In order to create a certain categorization upfront, or even a story-line for the search, without limiting the search too much, the four selected issues presented in Section 1.5 represent a set of sensitizing concepts (Blumer, 1969): a greening of decision making; capacity building; area based planning and green finance.

We choose these because we consider these to be among the most essential challenges, and that we also will find traces of innovation around these topics. The sensitizing concepts are landmarks for the orientation rather than parts of a 'testable' causal model. Relevance stands above rigidity. The aim of the search was to find interesting initiatives and not to reach a representative selection. The concepts are points of reference, they are our conceptual starting points and not necessarily our ending points (Bouwen, 2006:3). The initiatives might originate from all over the world, we do not limit the search to certain parts or regions. In chapter three we will reflect on the use of the internet scan as a method to search for renewal for biodiversity governance.

Assessing the contribution of the initiatives found to the challenges ahead
In chapter three we engage in an assessment of the contribution of the initiatives found to the challenges formulated in Section 1.5. In an early stage of the project we aimed for an explicit assessment based on three indicators, formulated by Hajer (2010): enhancing the legitimacy; strengthening the implementation; and increasing learning capability. Hajer (2010: 25/26) signaled these three aspects as central to improving policy. He saw a legitimacy deficit where governments are disconnected to citizens and society at large, while the legitimacy depends on such participation in decision making processes. He also saw a implementation deficit, as implementation can no longer be ruled single-handedly by governments, it needs a broad involvement.

In addition, he signaled a learning deficit, as a strong governmental domination prevents the mobilization of the broader society it depends on for long lasting change. However, the material does not lend itself to any detailed or extensive assessment of these three aspects. But we do look for the essence of it, as far as the material allows it: the legitimacy and implementation deficit in terms of the expressed need for new roles and a broader involvement of societal actors in approaching the challenges ahead. Classic trade and production certification systems are left out of the search. Such systems have profound effects on the protection of biodiversity, but they have been covered by earlier research (Selnes *et al.*, 2013).The initiatives and projects presented in chapter two are mainly of a descriptive character: what is it about, where and who are involved, for instance initiators or participants, and how is it organized and performed. We then add the source and provide some key words. In chapter three we categorize the initiatives and projects and discuss their contribution of to the four challenges we identified: Greening of Decision Making, Capacity Building, Area based planning, and Green Finance.

2   The search for renewal

This chapter contains an overview of the initiatives and projects found during the search. We do not categorize the findings in this chapter, as many initiatives shows an overlap with other possible categories.

2.1   Extreme Citizen Science Group: participatory monitoring in the Congo-Brazzaville

Citizen Science is a rather new concept, referring to the rapid development of information technology: smartphones, mobile internet, cloud computing. Many different initiatives are now emerging out of the new opportunities. The label Extreme Citizen Science is an initiative from a group of scientists from London that defines the initiative as "a situated, bottom-up practice that takes into account local needs, practices and culture and works with broad networks of people to design and build new devices and knowledge creation processes that can transform the world." In 2013, Citizen Science spills over to biodiversity through the Extreme Citizen Science Group by a project that is part of the ExSiteS projects to develop a system of participatory monitoring for forest management – specifically focusing on the social impact of logging Congo-Brazzaville. Local people in remote areas are equipped with smartphones, enabling them to map the locations of their important resources, make observations concerning any evidence of illegal logging activity and report on problems. By that, local people are enabled to give direct feedback on the activities of the logging companies who control the areas in which they live.

The approach is called the IM-FLEG: Independent Monitoring – Forest Law Enforcement and Governance). Local NGO can then get into action. The ExCiteS group, contracted by the international NGO Forest Monitor, collaborates with local watchdogs to introduce the FLEGT law in Congo (Forest Law Enforcement, Governance and Trade). This Congolese FLEGT Voluntary Partnership Agreement accords a number of new rights to local communities, and places obligations on logging companies to respect the local people and the resources they use and depend on. To make this work, enforcement on the ground is needed, as the legal framework itself is unlikely to make a big difference. The problem approached here is that local people are threatened by the logging within their own areas while these communities do not see much benefit from the logging; and they have little say in how the logging concessions are managed. Whenever loggers destroy resources on which the local people depend, there is not much they can do. As this is a major activity in Congo (the timber industry is the second most important source of income for Congo after oil), the consequences are also huge. By this initiative, local communities can take action in their own environment, and by that also save the rainforest.

Source: http://www.ucl.ac.uk/excites/home-columns/full-what-is-extreme-citizen-science
Keywords: greening of decision making, capacity building (citizens and local communities)

2.2   Shaping up policy: the India-Norway think-tank on biodiversity policy

In Chennai, India, on April 23 2013, The Indian National Biodiversity Authority and Norway Government's Division of Nature Management decided to set up a Centre for Biodiversity Policy and Law. The agreement will lead to a Centre for renewing the policy in Chennai and according to the Indian Biodiversity Authority's Chairman P. Balakrishna, the Centre is a pioneering initiative in addressing biodiversity related policies and issues. The Biodiversity Authority was set up under the national Indian law, the Biological Diversity Act of 2002, for conservation and management of the diverse forms of life. The Authority is meant to act as a regulator to prevent over exploitation. Now, it will work with its Norwegian counterpart, the Division of Nature Management, to shape policies and

laws to manage (global) biodiversity. The contribution to biodiversity governance is that the Centre will work towards bringing biodiversity issues to the mainstream of debate and informed decision making. The initiative is part of India's new ambition to revising its National Biodiversity Action Plan by 2014 to make it more responsive to present day needs.

Source: http://www.thehindubusinessline.com/economy/india-norway-to-set-up-thinktank-on-biodiversity/article4647741.ece
Keywords: greening of decision making (public-public collaboration, planning process)

2.3 EcocityCoLab: Coworking as a learning laboratory for urban innovation

Coworking is an emerging issue to address the need for more collaboration. EcocityCoLab is an example of this type of renewal. It is an Oakland based network of professionals dedicated to making cities more sustainable. The people come from diverse backgrounds and have various skills ranging from education to engineering. At the moment it sets out to encourage experimentation and innovation through directed inquiries and initiatives, working with cities and citizens around the world. It offers facilitated events, training, professional development courses, discussions and symposiums in order to advance awareness of trending topics in the field, as well as providing a forum for members to connect and brainstorm. This process will be paired with mentorship by experts in their field who will be able to give advice and guidance that will bring projects to the next level. The partners include UC Berkeley/Walter Hood, British Columbia Institute of Technology, and CONSENSUS Institute. This CoLab represents new forms of urban planning that also includes biodiversity. The praxis is rooted in the concept that cities are both the problem and the solution. The value added is the realization that there needs to be more collaboration between groups who are working on sustainable development issues, and that if this collaboration happens in the right environment, the intended social change can be accelerated. In 2013, they are seeking co-workers who are already involved with or are coming into an ecocity-related discipline which could include: urban design, transportation, building and architecture, energy, water, food, soil, air quality, education, community capacity building, quality of life, economics, equity and social justice, carrying capacity, biodiversity and/or anything having to do with making cities, towns and villages, and citizens, healthier, and in closer balance with living systems.

Source: http://www.ecocitybuilders.org/what-we-do/education/ecocity-colab/
Keywords: greening of decision making (collaboration, learning)

2.4 An Untold Story

An Untold Story is a Both Ends project (2012-2014) aiming for increasing visibility of five environmental- and human rights organizations active in Brazil, India, Eastern Europe and South Africa. Both Ends wants to show the crucial role these organizations play in making the global economy more sustainable. These organizations function as redistributors, connecting local projects and grass roots organizations to grants. Major donors often lack the infrastructure and administrative capacity to divide their resources between small scale projects. By telling stories and video making, these organizations can share their experiences with a broad audience and thereby expand their services. One of the mediators that partners with Both Ends is the NGO Environmental Monitoring Group of South Africa, concerned with the social justice aspect of water delivery in Cape Town. In the Untold Stories series, this group will make a collection of stories on video that capture the spirit of its work. In the new series, the river that meanders along the edge of Makhaza will be the focus point. The idea is that local organizations often can do a lot with small grants (up to € 10,000). Mediators play a crucial role in connecting these local organizations with large international donors of grants. This project can contribute to the access of grants for minor organizations, by strengthening the position of mediators. The EMG in South Africa experienced that since their first video, the group has evolved and they attracted new leaders and members.

Source: www.bothends.org; www.emg.org.za/news/113-searching-for-a-lead-finding-a-river.
Key words: green finance, capacity building (inspiring storytelling).

2.5   Local access to the Green Climate Fund

In 2013 and 2014, Both Ends is working with four southern partners (Philippines, India, Ghana and Argentina) to enable access of local organizations to the Green Climate Fund, which was established as part of the United Nations Framework Convention on Climate Change (UNFCCC) in 2010. The Green Climate Fund wants to make a significant contribution to the global efforts to combat climate change. The fund catalyses public and private climate finance at international and national levels and chooses to do so with a 'country-driven approach', to strengthen engagement at country level through effective involvement of relevant institutions and stakeholders. Both Ends fears that a large part of the money will be channelled through large institutions such as the World Bank, and end up at large scale projects, probably at the private sector. Both Ends wants to make the money of this fund also accessible for small grassroots organizations. A position paper of how the Green Climate Fund should be designed is presented at the board meeting in March 2013 in Berlin. A central ambition is to provide direct access of local organizations to a powerful institution such as the Climate Fund. It is about redistributing power and money and about democratization of global institutions. The Climate Fund seeks to distribute the money through a country based approach; Both Ends aims at direct access of small organizations.

Source: www.bothends.org; www.gcfund.net
Key words: green finance, capacity building (democratization of institutions).

2.6   Ya'axché Conservation Trust: uniting local stakeholders

In 2012, Lisel Alamilla, won a Whitley Award[8] for her work as Executive Director of the Ya'axché Conservation Trust because it promotes consistent involvement of local stakeholders in landscape protection. It is an organization in Belize (Latin America) aiming to develop capacity for the "wise use of land and natural resources in and around the Maya Golden Landscape in Toledo, through protected area management, advocacy, and working hand in hand with communities". 45% of Belize's land surface is protected but threatened by population growth, agricultural expansion, the discovery of oil and huge public debt, which pressures the government to deregulate protected areas to enable unsustainable exploitation of natural resources. The Maya Golden Landscape is a mosaic of protected areas, commercial and subsistence farmland and Mayan villages that covers roughly 302.000 acre. The Ya'axché Conservation Trust was established in 1997 as an NGO and it delivers leadership training to the next generation of village leaders. Besides nature management, the Trust has a "Community Outreach and Livelihoods program". It assists local communities with sustainable agriculture, small business initiatives, education about the environment and aids in strong governance throughout the local communities. This initiative places the ownership and responsibility for the protection of the landscape at the local community, while at the same time it benefits from scientific expertise of an international staff. Because the program creates economic benefits for the local population and delivers trainings, it could contribute to learning processes and enlarges the legitimacy of wildlife conservation in the area.

Source: www.yaaxche.org; www.whitleyaward.org
Key words: area based planning, capacity building (local leadership, community involvement.

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[8]The Whitley Fund for Nature is a UK registered charity since 1994, offering awards and grants to nature conservationists around the world. The fund attracts applications from individuals in remote locations where international funds are hardest to raise, most needed, and make the largest conservation impact. The fund supports passionate individuals who are committed to precipitating long-lasting conservation benefits on the ground.

2.7   Pakke Tiger Reserve, India: local traditions and conservation

The Pakke Tiger Park (established in 2002) combines local leadership with protection of wildlife. Originally, it was a hunting reserve and was used for forestry, logging and extraction of cane. The local community that lives around the park, Nyishi, is traditionally a hunting tribe. Village elders (Gaonburrahs, GBs) play a major role in village development and have legal powers to enforce customary laws and dispute settlement. The park management decided to build on the power of village chiefs to enhance wildlife conservation. This led a participatory process with the park ranger and the village elders. In 2007, a body of 'village fathers' was established, based on administrative and traditional practices that were already in place. Their responsibilities now include to reproach offenders and to report illegal activities to the forest department. Also Self Help Groups for women were formed. At present there are 17 women self-help groups, while 16 village elders from nine villages form the body of the village fathers. This body adopted regulations and sentence fines on wildlife offenders. The women self-help groups give information to the elder son illegal activities such as poaching and receive in return 50% of the collected fines. In the beginning the Wildlife Trust of India sponsored this project. Also the village chiefs receive a honorarium. The program has been beneficial for wildlife recovery. Hunting of mammals, such as elephants that pass through human habitation, has almost stopped. Park authorities have tried to make wildlife conservation everybody's responsibility. The model of the village chiefs serves as an example for the larger wildlife conservation community. To work with these tribes has enlarged the legitimacy of wild conservation. The fact that the local chiefs and women self-help groups get a financial benefit from their wild life activities, has helped to create their support.

Source: www.rwcindia.org/2012/08/hunters-are-invited; www.pakketigerreserve.org
Key words: greening of decision making, capacity building, area based planning, green finance (regulation through collaborative local tribes involvement).

2.8   Hornbill Program India: community based conservation

Mrs. Aparajita Datta won a Whitley Award in 2013 for her program to conserve hornbills in the Eastern Himalayan forests of Arunachal Pradesh in India. This program tries to improve the status of the bird's populations outside protected areas by spreading knowledge on their importance for forest ecosystems. The goals of the project are to expand the Hornbill Nest Adoption Program from the current 9 villages to 14 villages and to give local people a sense of ownership; to set up a pilot forest restoration project and to establish a festival to popularize the role played by local tribes in conserving hornbills across the region. An interesting aspect of this species protection program is the 'eco-cultural' character. For example, they organize a drawing competition for children to create a connection between children and the Hornbill. The Whitley grant will be used to generate awareness and get monetary support for the program from the state by initiating the 'Hornbill Nyishi' festival. The program is a shared effort of the Eastern Himalayan Program of the Indian Nature Conservation Foundation (NCF), the Arunachal Pradesh Forest Department and the society of village chiefs (Ghora-Aabhe). The program focuses on protection of the species outside protected areas and seeks to expand the program to new municipalities and look for new participants in several 'jungle camps' (eco tourisms) to join in the next program.

Source: www.whitleyaward.org
Key words: greening of decision making, capacity building (awareness building by spreading knowledge and developing a sense of ownership).

2.9 Blue Economy: Protecting the Coral Triangle

The Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI-CFF) is a multilateral partnership of six countries (Philippines, Indonesia, Papua New Guinea, Malaysia, Timor Leste and the Solomon Islands) formed in 2009 to address the urgent threats facing the coastal and marine resources of one of the most biologically diverse and ecologically rich regions on earth. More than 150 million people live in the Triangle. Commercial reef fishing are worth $3 billion and it hosts four highly valued tuna species, producing approximately 40 percent of the world's tuna market. The Asia Development Bank reports that some 4.9 million people work as fishermen across the 6 countries. Because of this huge importance for economics and livelihood and employment, the "Blue Economy" recognizes the ocean-related links between the private sector and sustainability. While incentives such as the Marine Stewardship Council (MSC) and Aquaculture Stewardship Council (ASC) certification may resonate in US and European markets, they are not as successful in the Coral Triangle where the majority of production is destined for domestic markets and consumer choice is largely influenced by price and availability. Through the Coral Triangle Initiative, governments have developed commonalities to derive more sustainable fisheries both for their populations and for exports. The CTI-CFF also started to organize an annual Coral Triangle Regional Business Forum. Over the last three years, these events have helped pave the way for multi-sector partnerships that cultivate sustainable growth across the region. Fishing companies, seafood retailers, financial institutions and tourism operators have publicly announced concrete steps to reduce their impact on the marine environment by adopting responsible business practices at this forum. Partners, besides the 6 countries, are for example Conservation International, the Nature Conservancy, WWF and business networks cooperating with NGOs. It is a large scale program that raises awareness about biodiversity, reef protection and economic exploitation.

2.10 ICLEI - the global cities network

ICLEI is a cooperation between what it calls 12 mega-cities, 100 super-cities & urban regions, 450 large cities, 450 small & medium-sized cities & towns in 86 countries. These are dedicated to sustainable development. ICLEIs mission is to build and serve a worldwide movement of local governments to achieve tangible improvements in global sustainability with specifically focus on environmental conditions through cumulative local actions. The network promotes local action for global sustainability and supports cities to become sustainable, resilient, resource-efficient, biodiverse, low-carbon; to build a smart infrastructure; and to develop an inclusive, green urban economy with the ultimate aim to achieve healthy and happy communities. ICLEI is governed by its Members through a Global Council, which represents ICLEI's global membership by way of representative democracy. It is the supreme decision-making and oversight body of the global association, and it has sole power to amend the Charter, to elect members to the ICLEI Global Executive Committee and establishes directions for the Association and adopt the ICLEI Strategic Plan. ICLEI has six Global and Thematic Centers to support the entire organization with leadership, coordination, expertise and resources. Issues are: competence, knowledge management, urban research, database and process management, training and capacity building, system solutions and ICT, success stories, policy models and good practices related to local renewable energy.

ICLEI came into being in 1990, and is since then a dynamic movement that allows the participants to learn about and learn to work with the institutional context. It has an enormous spread as more than 50.000 local governments have benefited from capacity building activities. ICLEI promotes itself as the world's leading association of cities and local governments dedicated to sustainable development. Its strength is the global reach and its ability to develop ideas and tools and let good ideas flourish and spread. Its importance is also connected to the fact that a majority of the world population live in

urban conditions. One of the programs of the ICLEI network is the Biodiverse City. It is supported by a ICLEI Cities Biodiversity Center in South Africa, regional secretariats and offices. The program works to strengthen the role of cities and local governments. The focus on collaborative design and implementation of biodiversity management is at the heart of the approach, with tools for management, strategy and evaluation. The mode of thinking also includes the notion of biodiversity as not only being about conservation, but also about ensuring that cities are able to provide for more of their resource needs by being able to produce more of what they consume. The ICLEI site states that it offers locally tried and tested tools and services for improving urban ecosystem services.

Source: http://www.iclei.org/
Key words: greening of decision making, capacity building, area based planning, green finance (through collaboration and a learning oriented management among local governments).

2.11   Business and Biodiversity Offsets Program

Economic business-as-usual practices often results in loss of biodiversity. The Business and Biodiversity Offsets Programme (BBOP) is working to change that by helping companies to conserve biodiversity in an ecologically effective and economically efficient manner. BBOP is an international collaboration between more than 75 companies, financial institutions, government agencies and civil society organizations. The members develop best practices in following the mitigation hierarchy (avoid, minimize, restore, offset). The approach is about how to manage biodiversity-related risks, achieving more and better conservation outcomes that result in no net loss of biodiversity while addressing the needs of local communities. The coordination is taken care of by the NGOs Forest Trends and World Conservation Society (WCS). Currently, BBOP also works on new guidance to help financial institutions to measure their own greenhouse gas emissions from lending and investment portfolios. Many financial institutions measure and report their own emissions, but the real impact is in their value chains. In 2013, only six per cent of financial companies in the FTSE Global 500 reported any emissions associated with lending and investment portfolios to CDP. To help reporting emissions, the Greenhouse Gas Protocol (GHG Protocol) and the United Nations Environment Programme Finance Initiative (UNEP FI) have begun developing guidance to help financial intermediaries assess the emissions from their lending and investments portfolios. The need for this guidance initiative is reaffirmed through an extensive, eight-month scoping exercise and the protocol will be developed over the next two years through an inclusive, multi-stakeholder process.

BBOP has established tools for compensation of biodiversity loss (a standard). They also provide training, a community of practice and good practices for learning for their participants. The work on emission measuring tools must be seen in relation to many other initiatives by many partners, such as: the 2° Investing Initiative, Allianz Group, Asset Owners Disclosure Project, Banamex, Bank of America, Carbon Tracker Initiative, CDP, EY, Investors Group on Climate Change, HSBC, International Finance Corporation (IFC), Local Government Super, London School of Business and Finance, Pax World, Prudential Investment Management, PwC, Wells Fargo, RBS, State Street, WWF US, UniCredit, and YES Bank. This work represents the creation of new conditions for action through large scale macro working tools for day-to-day business.

Source: http://bbop.forest-trends.org/
Key words: greening of decision making, capacity building, green finance (business management, best practice, tools for compensation of biodiversity loss

2.12   In the Amazon: Incorporate Nature's Value into Peruvian Economy

The initiative stems from a team working on the Ecosystem Values Assessment and Accounting (EVA) project, a collaboration between Conservation International, Moore Center for Science and Oceans, Conservation International-Peru, the World Bank and the Peruvian government. The impetus behind

the project is that, as long as economies fail to account for humanity's reliance on nature, they will never accurately reflect how well or how badly a country is performing. This two year initiative with a start in 2013 is meant to test potential methodologies to incorporate the value of ecosystems and their services into the System of National Accounts (SNA) of a country. In the autumn of 2013, project members went to Peru for setting the wheels in motion. Their Peru colleagues had then developed a great knowledge and understanding of the region through the many projects that CI-Peru has operated with the government. The proposed site for the case study is San Martín. The purpose is to determine its viability as a case study, as a preliminary ranking of potential site candidates in Peru suggests that this region is ideal, given its diversity of ecosystem services provided by a wide range of biomes in the region (mountain forests, floodplain, dry forest); the availability of datasets that have been produced in recent years (land cover, land use); and the overlap with other current investments and projects in the region. Collaboration is sought with representatives from local businesses, such as producers of agricultural commodities (coffee, stevia, rice, charcoal bricks made from coconut). Also meetings with local communities depending on the flow of ecosystem services, as Awajún groups living in the Peruvian Amazon for millennia and now are struggling to preserve their culture and traditions. Eventually, San Martín is found to be an ideal testing ground to explore the relations between natural capital, ecosystem services and their inclusion in economic accounting systems. There is community support, and also a strong political buy-in which will be critical when the government is to be convinced to adopt changes in their accounting systems.

The initiators see this as an adventure that will require patience and dedication, detailed observation and imagination, and rigorous analysis. They see a challenging task, on the forefront of research and innovation. This is a micro level initiative, but one with a potential of achieving change at the local level where little attention has been paid to such issues. The project members argue that there are many places as this, where for instance fresh water is crucial for agriculture, manufacturing, mining, energy and household sectors, but no systematic means to measure water use exists. As a result, they have a limited understanding of the dependency of different economic activities on water, and how their current use may be unsustainable given nature's diminishing capacity to provide this critical resource in the future. This type of accounting for nature is especially critical for countries like Peru, whose economy is heavily linked to natural resources, the project members state.

Source: http://blog.conservation.org/2013/09/new-initiative-in-amazon-aims-to-incorporate-natures-value-into-peruvian-economy/#sthash.Oodk0k2J.dpuf
Keywords: greening of decision making, capacity building, area based planning, green finance (micro level initiative to tackle complex issues).

2.13   The Africa Biodiversity Collaborative Group (ABCG)

The recent development of broader, collaborative and cross-cutting solutions for conflicting land use through the Africa Biodiversity Collaborative Group (ABCG) calls for attention. Seven international conservation non-governmental organizations based in the USA carry out field programs in Africa, in collaboration with African Wildlife Conservation International; the Jane Goodall Institute, the Nature Conservancy, Wildlife Conservation Society, the World Resources Institute and the World Wildlife Fund. Founded in 2000, the approach of the ABCG is to explore emerging and high priority African conservation issues, share the lessons learned, and identify opportunities for collaboration. The mission is by ABCG described as to tackle complex and changing conservation challenges by catalysing and strengthening collaboration, and bringing the best resources from across a continuum of conservation organizations to effectively and efficiently work toward this vision of Africa. The group works on the promotion of networking, awareness building, information and experience sharing, as well as on critical approaches to land use planning, competing demands for resources and collaborative conservation work. Funding comes from The John D. and Catherine T. MacArthur Foundation, the Critical Ecosystem Partnership Fund, the U.S. Agency for International Development, the U.S. Fish and Wildlife Service, and the members.

The point of departure for the ABCG was the perceived clear need to go beyond what any U.S - based NGO until then had been doing or could possibly do on its own. The reason was that biodiversity conservation in Africa had become very and increasingly complex, as social, economic and political pressures on biodiversity and natural resources grow. But at the same time, the available resources to address the myriad threats to Africa's biodiversity are inadequate. These conditions, with complex problems coupled with a relative scarcity of human and financial capital for addressing the problems, have created a climate in which strategic alliances are an increasingly attractive and effective response. In addition, the complexities of many of these issues require a range of expertise and experience that no one institution currently possesses.

Source: http://www.abcg.org/
Keywords: greening of decision making, capacity building, area based planning, green finance (by rising the awareness and learning to deal with the institutional context and collaborate).

2.14   Biodiversity & Mining Guidelines: mainstreaming biodiversity

The mining industry plays a vital role in South Africa's growth and development. But mining also has very negative impacts on biodiversity and ecosystems. The new initiative Mining and Biodiversity Guideline: Mainstreaming biodiversity into the mining sector, published in 2013 the best available biodiversity knowledge and science in terms of implications and risks for mining in a practical and user-friendly guideline for integrating relevant biodiversity information into decision making. The development of this guideline was initiated by the Chamber of Mines and the South African Mining and Biodiversity Forum (SAMBF), in partnership with the Department of Environmental Affairs and the Department of Mineral Resources, and with technical input and coordination by the South African National Biodiversity Institute's (SANBI) Grasslands Programme. SAMBF is in itself launched as an innovative platform that brings together stakeholders from industry, conservation organisations and government. The SAMBF was established because many of the involved felt a strong need for urgent dialogue on the accelerating loss of natural capital, the concomitant risk to the integrity of ecosystems, and the role of the mining sector in contributing to this loss, was critical.

The forum promotes cross-sectoral interaction and cooperation, aimed at improving biodiversity conservation and management in the mining industry. The approach is built on a series of measurements that is meant to improve the decision making, as a better understanding of the legal framework and the environmental impacts of mining. It also contains guidelines for how to manage and minimize the impact of mining, and it prescribes a continuous dialogue with stakeholders.

Source:
https://www.environment.gov.za/sites/default/files/legislations/miningbiodiversity_guidelines2013.pdf
Keywords: greening of decision making, capacity building, green finance (better understanding of the institutions through a network dialogue).

2.15   Biodiversity Professionals! LinkedIn

A private discussion group at LinkedIn. Any member of LinkedIn can become a member, if only accepted by the group manager. There are more than 10.000 members of this biggest biodiversity-related group on LinkedIn. This group was started when the UN's Year of Biodiversity 2010 highlighted the plight of countless plant and animal species. The group provides professionals working in biodiversity and related fields the opportunity to share knowledge, air thoughts and opinions and to learn from each other. The only requirement for the members is to show respect and civility in the discussion. Also, posting a commercial message (in order to sell a product, fund-raising, etc.) must go through the Promotions tab. Careers-related messages will be guided towards the Jobs tab. The most important message to the members is to explore, enjoy and have fun. It is stressed that this is your own group, and the more you put in, the more you will get out of it. So, the credo is participate: post,

comment, like, congratulate, rant, rave, or whatever comes to mind.The strength of this site is the many different contributions and comments that are delivered from all over the world. The effect however depends on how people pick up on signals and bring them further themselves. It is not so much a place for lengthy debates but more a place for inspiration.

Source:http://www.linkedin.com/groupItem?view=&srchtype=discussedNews&gid=3667510&item=5799928671040987138&type=member&trk=eml-anet_dig-b_pd-ttl-cn&fromEmail=&ut=0UQCSOtbIWL5Y1
Keywords: greening of decision making (sharing knowledge and inspiring).

2.16   Biodiversity in a Rapidly Changing World LinkedIn

This LinkedIn group is made for the US National Council for Science and the Environment's 9th National Conference on Science, Policy and the Environment: Biodiversity in a Rapidly Changing World. It is meant as a platform for scientists, conservationists and policymakers to re-examine the biodiversity issue. The group has about 3.000 members and the group is meant to provide for opportunities to look both retrospectively at a quarter-century of "modern" conservation efforts – what has worked well and what hasn't, but also prospectively at the greater challenges of the next quarter-century. It is also meant for looking broadly at the many scientific discoveries and the many issues involving the use, abuse and conservation of biodiversity including cultivated as well as wild species and ecosystems.

Source:http://www.linkedin.com/groups/Biodiversity-in-Rapidly-Changing-World-829797/about
Keywords: greening of decision making (deliberating on institutions through the sharing of knowledge, discussion and joint learning).

2.17   BiodiversityKnowledge Network

BiodiversityKnowledge is an initiative by researchers and practitioners to help all societal actors in the field of biodiversity and ecosystem services to make better informed decisions. It is funded under the European Commission's Framework Seven Programme and guided towards the issue of Green Infrastructure, a main issue of the EU Biodiversity Strategy 2020. The central part of the work is to develop a joint innovation called Network of Knowledge - an open networking approach to boost the knowledge flow between biodiversity knowledge holders and users in Europe. Based on the mapping of biodiversity knowledge landscape in Europe, a BiodiversityKnowledge network prototype is being developed. A recommended design of a future Network of Knowledge on biodiversity and ecosystem services in Europe was discussed at a conference in Berlin September 2013. The options for the Network of Knowledge has been developing over the past two years through a broad consultation with more than 300 active participations of representatives of the biodiversity and ecosystems services knowledge community. Stakeholders involved ranged from practitioners, researchers to policy makers. The initiative is still being developed and it is still at the stage of research, but the broad participation provides opportunities for further practical usage.

Source: http://www.biodiversityknowledge.eu
Keywords: greening of decision making (knowledge network).

2.18   BIOTA AFRICA

BIOTA is a joint invention of African and German researchers for the establishment of research supporting sustainable use and conservation of biodiversity in Africa. Initially, the German Federal Ministry of Education and Research (BMBF) was open to fund the initiative, but now several African countries and partner institutions are funding the initiative. The BIOTA network follows a governance model giving equal rights to all participating researchers and institutions. The participating institutions

of each country elect representatives for a national BIOTA steering committee which controls the daily business and enables national strategic discussions and decisions. Decisions on the future course of action are made jointly at regular plenary meetings. This large project is for practical purposes subdivided into four regional networks: BIOTA West Africa, BIOTA East Africa, BIOTA Southern Africa and BIOTA Morocco. Within these networks, a large number of subprojects are bundled into work packages. Every regional network and host country has a scientific chair, a logistic coordinator and a decision-making board (Steering Committee). There is also a large number of additional participants ("associated participants"), which includes land owners (such as individual farmers), communities, companies, NGOs, and scientifically cooperating individuals, communities or institutions. Also stakeholders are linked to BIOTA for the aim of transforming the scientific results into practical decision-making. In total there are 478 participating actors from 13 countries.

The potential of BIOTA is connected to its ability to connect a whole range of actors important to decision making: science, landowners, farmers, NGO's and governments. The project aimed from the start for a very visible continent-wide approach and it is still expanding especially with regard to its role as a "Biodiversity Observation Network" on the African continent. BIOTA AFRICA has a potential to expand as it welcomes new partners; individuals, communities and institutions, wishing to make use of the research platforms or aiming at establishing new observatories in regions and countries not yet covered. BIOTA makes its resources available to these actors and seeks further data exchange through its protocol and Memorandum of Understandings.

Source: http://www.biota-africa.org/
Keywords: greening of decision making and capacity building(research for better institutions and governance through knowledge exchange and partnerships).

2.19   Bridging the Gap: Para-Ecologists in Action

Local people living close to nature often have an almost encyclopedic knowledge of the natural world around them. Their existence relies on detailed insight into plants, animals and the functioning of the eco system. These are often gifted and resourceful people without much formal education. This knowledge can be developed by basic training and applied for local leadership and further grass root education and also conservation efforts and research purposes. Through such training, these people become para-ecologists. This approach started already in 2000 but today the number of areas where para- ecologists actually have become a practice, is rising. It is practiced in Papua New Guinea, Costa Rica and in South Africa. In South Africa, a documentary has been conceived and filmed by eight BIOTA para-ecologists during a training workshop in the village of Nieuwoudtville in South Africa in April 2009. With this film the para-ecologists aim to introduce the program to a broader audience and to present their skills and knowledge to other research projects, conservation and development agencies, NGOs etc. The use of this practice is growing, and more initiatives are expected. Its value in the field of biodiversity monitoring, biological research, conservation projects and knowledge exchange between land users and researchers will then also increase. These skills are particularly relevant for documenting and protecting the richness of the flora and fauna in the areas in question.

Sources: http://www.entu.cas.cz/png/paraecologists.htm; http://vimeo.com/32897437
Keywords: greening of decision making, capacity building (expanding and improving the use local knowledge and local institutions, also by improving monitoring and land use practices).

2.20   Blog on strong No Deforestation Commitments

In a blog by Scott posted on September, 2013, he quotes K.C Cole: "How do you hold a hundred tons of water in the air with no visible means of support? You build a cloud". Scott state that we, as a global community, have so far failed to answer this most pressing question; we have yet to build our cloud. Deforestation rates are down in some places, but overall, our forests continue to disappear much as they have for the past 50 years, driven principally by increasing global demand for food. Can we feed the world and save our forests? Yes, we can, and the solution lies in the global supply chain

and the message some companies are now sending their suppliers: "If you cut down trees, I won't buy your product." This has the power to silence bulldozers. It's already doing so and now it's time to go to scale". Scott analyses that, though very important, certification schemes and programs such as REDD+ and Payment for Ecosystem Services (PES), they are "not off the ground enough to make anything but a restricted local impact". They're not new initiatives, they're just not happening, and it's not for lack of money – there's something inherent stopping their uptake. All the while, global supply chains are chopping trees. He stresses the need forNo Deforestation commitments enforced by companies throughout the supply chain with mechanisms to reward and teeth to punish. They fit with the market and are simple: "Deforest and I will not buy your product". Such commitments held and enforced by everyone in the supply chain act like the Brazil soy moratorium – they restrict land available for cultivation to non-forest land.

In Scott's view, "we push roundtable certification, REDD+ and PES and celebrate weak No Deforestation commitments because our analysis of the problem is lazy – we've failed to push our thinking right down to the Lowest Common Denominator (LCD). Soy, cattle, rice, palm oil and wood fiber are agro-industrial commodities exploding in scale at the expense of forests because globalized supply chains demand them. Globalization is the LCD, the principal driver of deforestation, not soy or rice farmers, cattle ranchers, palm oil plantation or forest managers. All our efforts to control deforestation so far focus on these people. We see them as the problem and so develop standards to guide and control their activities, all the while hoping that industries full of them will go our way. They haven't because their customers haven't yet asked them to do so; it's that simple". For him, "change is happening.

The world's largest food company, Nestle, the world's second largest palm oil grower, Golden-Agri Resources and now, the world's third largest pulp and paper company, Asia Pulp & Paper, have already made super strong No Deforestation commitments that are being implemented as we speak. Such commitments turn bulldozers off – now. They do not require workshops, meetings, millions of dollars or the creation of complex markets with thousands of mitigation measures. No Deforestation commitments send strong signals through the existing multi-trillion dollar globalized market – via global supply chains – and forests are being protected today as a direct result. "It is hard to assess the impact of an article posted on the internet. However, Mongabay.com is one of the world's most popular environmental science and conservation news sites, with more than one million unique visitors per month. 'Scotts' blog was placed on the site as part of a series of perspectives that aim to answer the question: how do we feed the world and still address the drivers of deforestation?, which Mongabay.com is organizing together with the Skoll Foundation on the Skoll World Forum on Social Entrepreneurship. We would like to add that now the Zero Deforestation Commitments are already started up.

Source: http://news.mongabay.com/2013/0312-swf2013-poynton-no-deforestation.html
www.mongabay.com
Key words: greening of decision making (awareness building).

2.21   Big think

Big Think is a web based place to expand one's horizon and explore new thinking in various ways. Its point of departure is that we live in a time of information abundance, which far too many people see as information overload. We then need inspiration and guidance for the choice of which ideas we should engage with, and why. Big Think announced itself as an evolving roadmap to the best thinking on the planet — the ideas that can help you think flexibly and act decisively in a multivariate world. Big ideas are lenses for envisioning the future. Every article and video on bigthink.com and on the learning platforms is based on an emerging "big idea" that is significant, widely relevant, and actionable. "We're sifting the noise for the questions and insights that have the power to change all of our lives, for decades to come." The themes are the seven broad umbrellas under which the platform organize the hundreds of big ideas that populate Big Think. They include New World Order, Earth and Beyond, 21st Century Living, Going Mental, Extreme Biology, Power and Influence, and Inventing the Future.

With regard to biodiversity, Big think offers the suggestion that developing nations need much stronger incentives to regard their biodiversity as wealth to be preserved, rather than a resource to be processed in the pursuit of growth. It is argued that this is where the climate change agenda needs to reinforce the biodiversity agenda. It includes the rather radical idea that fiscal transfers need to be made from wealthier nations to developing nations that preserve their forests. Forests are seen as crucial because they are not only absorbers of carbon emissions but are also the home of much of the planet's biodiversity.

Source: www.bigthink.com
Keywords: greening of decision making (learning and inspirational ideas for new institutions).

2.22   TanguarHaor: Community Based Sustainable Management

In February 2013, the Community Based Sustainable Management of TanguarHaor Project (CBSMTHP) in Bangladesh took part in a Development Fair at the Rajshahi University campus, organized by the Embassy of Switzerland in commemoration of 40 years of friendship between Bangladesh and Switzerland. The project is funded by the Swiss Agency for Development and Cooperation (SDC).The Development fair brought an opportunity for IUCN to display and showcase the co-management approach for wetland management designed and practiced in TanguaHaorRamsar site.

Tangua Hoar is a unique wetland in Bangladesh, covering an area of100 km2 which includes 46 villages. In the TanguarHaor Project, the IUCN Bangladesh, on behalf of the Ministry of Environment and Forests and in association with local communities, is working to establish a co-management model to conserve and develop the natural resources of Tanguar Hoar for the benefit of its dependents. The approach has a strong focus on access rights, local empowerment and capacity building to institutionalize and follow the Ramsar wise-use principles in natural resource management. Key activities are to facilitate delivery of social and economic services, to increase capacity of local communities to take control over the management of natural resources to generate income, to develop a community led monitoring system to track trends and understand the ecological dynamics of Tanguar Hoar and to facilitate coordination of environmental protection measures and resource extraction. Since 2006, the project has offered financial support to assist members to conduct alternative income generation activities, restore habitats for fish and birds by planting trees and reeds, restocking endangered fish and establishing bird sanctuaries and no fishing zones. The project has led to an unanimous agreement to treat the wetland as a single water body to be managed by a single organization. It has established a three tier organizational structure in the community, which restricts outsiders in the decision-making process. The project developed an information centre and database to document census, progress and socio-economic data.

Source: www.iucn.org/about/union/secretariat/offices/asia/asia_where_work/bangladesh/?11875/
Key words: greening of decision making, area based planning, capacity building, green finance (joint management practices, local empowerment and service facilitation).

2.23   The Peatland Code: A new era for UK's peatlands

The UK Peatland Code is a joint idea of researchers, business, NGO's and policy makers emerging from the IUCN UK Peat land Programme conference in Stirling in 2011. It is anchored in the Government's 2011 Natural Environment White Paper, where the creation of new markets to pay for nature's services is central. The following Ecosystem Markets Taskforce ranked the initiative as their joint top opportunity out of 44 initiatives submitted. The government expressed its support for achieving the target of restoring up to a million hectare of peat lands in the country by 2020.The Peat land Code will help companies contribute to peat land restoration. For business, it is a way to show their corporate social responsibility, but also to comply to future regulation and to promote brands and products. The Peat land Code is a voluntary standard for peat land restoration projects, designed to support funding from businesses, providing them with 30 year contracts. Peat land conservation can be further

supported and funded by a number of EU policies and programs, including the EU Water Framework Directive, the national programming on the new Common Agricultural Policy, as well as the EU Biodiversity Strategy to 2020. The UK government also shows budgetary commitment to safeguard peat lands through funding and research, as for developing the Peat land Code and phasing out extraction of peat for horticultural purposes. The Scottish Government has for instance also committed to £6.7 million funding. In the period 2013-2015, this is a pilot project, organized by IUCN UK to set up and to attract businesses and other sponsors for participation. The UK Peat land Code is governed by a Steering Group with members from the four UK governments and relevant agencies, the IUCN UK , scientific experts and representatives of the business and landowning communities. The Code itself is owned by the IUCN UK National Committee. A sub-group from the Steering Group oversees a R&D project feeding the development of the Code. At present, 15 area projects are up and running.

Source: https://www.iucn.org/news_homepage/all_news_by_region/news_from_europe/?13745/New-era-for-UKs-peatlands
Key words: greening of decision making, capacity building, area based planning, green finance, (conservation work, business participation).

2.24   WCS: Trade-offs with industry at the Albertine Rift

Over the past 10 years there has been increasing interest in the search for the enormous mineral resources in East Africa and Eastern DRC, much of it driven by China's needs for raw materials for its industries. Large mining companies are moving into eastern DRC, although the government put a ban to it in 2010, also due to mass scale looting and major environmental and social problems. Oil prospecting has also been taking place around most of the lakes in the Albertine Rift with significant finds occurring in Uganda around Lake Albert. These industries are already leading to major development projects and the WCS's Albertine Rift Program and Uganda Program have been engaging with the oil industry in Uganda to minimize the impacts of oil exploration and production in the region. This approach was adopted because the Wildlife Law in Uganda allows exploration for oil within national parks and the potential revenue it could generate for the country made it unlikely that it could be stopped. However, tourism is currently the main foreign currency generator for the country, and it would be unwise for the country to destroy this industry which will last a lot longer than the 20-30 years it is predicted that the oil will last. Based on an environmental impact assessment (EIA) and future estimates, a major program was launched to build the capacity of stakeholders from the oil industry, the governmental Petroleum Department and Wildlife Authority, EIA practitioners, civil society groups, in best practice methods and ways to minimize impacts. WCS Uganda also worked with the National Environment Management Authority (NEMA) to develop an Environmental Sensitivity Atlas and a Strategic Environmental Assessment of the cumulative impacts that oil drilling will have on the environment. Narrow impact analysis of a particular oil pad or drilling rig project is insufficient, as it ignores the cumulative (and often severe) effects of many rigs. An SEA will address the wider impacts over time and the oil companies have agreed to move ahead with this. A training DVD is developed and supported by the Uganda Christian University, who agrees to incorporate training materials in their courses on oil and gas, environment, business, legal and community action.

WCS Albertine Rift and WCS Uganda together with the Uganda Wildlife Authority also established a monitoring program in Murchison Falls National park to monitor the impacts of oil drilling and oil pad establishment on large mammals and birds. The results show that most species react to the presence of the pad by moving away up to 750-1000 meters from the pad when the pad is being constructed or drilled but that when the pad is just being maintained they will return to within 250 meters of the site. This shows that a single pad may not cause undue harm, but that multiple pads at close range will have an undesirable impact over a much larger area. It is thus of great importance to the biodiversity to avoid such impacts. Important is also the efforts to assess trade-offs in options for land use in order to plan and adapt to the increasing industrialization of the Albertine Rift region.
This approach uses conservation planning software to help identify which areas are critical for conservation of the endemic and threatened species, and which areas are less critical and where there are different options when taking decisions about where to target conservation activities. Sites where options are possible can also be sites where biodiversity offsets could be applied. It should be noted

that adding one person skilled in environmental assessment is seen as a crucial trigger for the whole process. Minor change can thus trigger a larger process of change.

Source: http://www.albertinerift.org/
Key words: greening of decision making, capacity building, area based planning, green finance (to improve institutions and how to deal with unruly institutions).

2.25 Community Conservancies: Kenya Wildlife Trust

Kenya Wildlife Trust has long been a pioneer in the creation of community conservancies, but in the last year it has gone a step further, and become a pivotal member of a group that includes the Kenya Wildlife Service, The Nature Conservancy and AWF that has promoted the introduction of new legislation in the Wildlife Bill to explicitly recognize the existence of "wildlife conservancies". The trust has also contributed both financially and technically to the creation of a national umbrella body for wildlife conservancies across Kenya – the Kenya Wildlife Conservancies Association – and assisted to form the regional Maasai Mara Wildlife Conservancies Association. Community Conservancies are crucial to the survival of Kenya's wildlife, both within and outside of the Parks system. In the Meibae Conservancy, for instance, KWT is the principal donor and is heading the work on responsible grazing regimes, rehabilitated rangelands and encouraging livestock destocking. Similar activities also takes place in theWestgate Wildlife Conservancy and the Naboisho Conservancy.

To illustrate the work, KWT's flagship projects at the southwest border of Amboseli National Park, the new Kitirua Wildlife Conservancy is taking off by partnering up with the local Maasai community to secure 30,000 acres of habitat critical for Amboseli's famed elephants, lions, cheetahs, and hyenas, and for sustainability of the pastoralists' way of life. The goal here is to install and support professional management and good stewardship of the land and wildlife in and around this private, community conservancy, including ecological monitoring, security for both wildlife and people, training and salaries for community rangers, habitat restoration in certain areas, facilitation of low-impact, high-fee tourism, a grazing program, and the implementation of the Lion Guardians program. In general, KWT also works on wildlife corridors and buffer zones to protect against expanding agriculture, charcoal burning and conflict with humans. It is within Naboisho conservancy that we find the KWT supported Mara Cheetah project and the Koiyaki Guiding School.

Approximately 70% of all Kenya's wildlife resides on community or private land outside Parks. The 30% of the wildlife that resides in the Parks often spends much of the time outside the Parks, and is therefore often heavily dependent on both the pastures and the tolerance of the community and private landowners for its survival. At the equally important grass roots level of the individual conservancies, KWT partners closely with several conservancies across the country. Despite the political volatility and insecurity in the area, the regular patrols of the conservancy and improved security has resulted in reduced wildlife poaching and an increased sighting of initially rare wildlife species.Sometimes, even relative minor investments might trigger great change: KWT donated a car to the Olare – Orok and Motorogi Wildlife Conservancies. As a consequence, the community outreach and empowerment program could get wheels. By that, a process of bridging the relationship between land owners, local community around the conservancies and tourism investors could evolve. The car will ensure that more communities can be reached and the future of these Conservancies safeguarded. Also surprisingly solutions emerges through this approach: in the Olare Orok Conservancy

KWT rents land from 277 Maasai landowners on a monthly basis to safeguard the wildlife and habitats. As a result, Maasais have reduced their livestock herd sizes in core conservation areas, some of which are havens for big cats, and it has provided the local ecosystem with 'comfort' zones. A success factor is the earning of goodwill of surrounding communities, to reduce wildlife persecution. The community outreach program adds to that in-house training of wildlife rangers that acts as scouts sending positive messages about wildlife and the Conservancy to their communities, and become informal leaders.

Source: http://kenyawildlifetrust.org/
Key words: capacity building, area based planning (nature conservation by creating quality management and goodwill, dealing with institutions).

2.26   Smart Development Projects: The Nature Conservancy

Smart Development Projects of the Nature Conservancy are guided towards the support of energy, mining, and infrastructure development done in the right way and in the right places. "Decisions are being made today that could change the way we develop these important natural areas, and the Nature Conservancy has developed the science to enable governments, companies, and communities to use and share space, protect natural areas, improve resource management, and invest more wisely for a sustainable future. Development by Design (DbD) provides a holistic view of how future development could affect our natural systems and offers solutions for ensuring their health over the long-term for the people and precious wildlife that depend upon them." Development by design are projects in which the stakeholders together design integrated plans in which all their interests are planned together, including impact studies. Pilot projects involve oil and gas fields and renewable energy sites in the United States and pilot regions of Colombia and Mongolia where energy and mining exploration is advancing rapidly. The principle is to avoid negative impacts, then mitigate, then compensate impacts of development on natural resources. The Nature Conservancy is working with governments, industry, NGOs, communities, and academic researchers. These projects could help to enlarge the legitimacy of economic development, but also could lead to effects in terms of less loss of biodiversity.

Source: www.nature.org/ourinitiatives/urgentissues/smart-development/pilot-projects.xml
www.nature.org/ourinitiatives/urgentissues/smart-development/science-based-approach/index.htm
Key words: greening of decision making, area based planning (sustainable economic decisions and growth)

2.27   Business Deal: The Coca-Cola Company and World Wildlife Fund (WWF)

The Coca-Cola Company and World Wildlife Fund announced new 2020 environmental goals for the Coca-Cola system, including efforts to sustainably source key agricultural ingredients. Goals focus on sustainable management of water, energy, and packaging use as well as sustainable sourcing of agricultural ingredients through 2020. Coca-Cola and WWF began collaborating in 2007 to form conservation goals for the Coca-Cola Company and its nearly 300 bottling partners in more than 200 countries. New 2020 environmental sustainability goals for include to improve water efficiency by 25 percent. This target complements the 21.4 percent improvement in water use efficiency achieved from 2004 through 2012, according to the announcement. A second is to expand water conservation efforts to 11 regions across five continents, including river basins of the Amazon, Koshi, Mekong, Rio Grande/Bravo, Yangtze and Zambezi; the catchments of the Great Barrier Reef and Mesoamerican Reef; and key regions in the Amur-Heilong, Atlantic Forests and Northern Great Plains. Further goals are to reduce CO2 emissions by 25 percent; to use up to 30 percent plant-based material for all PET plastic bottles by 2020; to use sustainably source key agricultural ingredients, including sugarcane, sugar beet, corn, tea, coffee, palm oil, soy, pulp and paper fiber, and orange. In addition, the announcement said Coca-Cola is working to sustainably source lemon, grape, apple and mango. On top of the goals jointly developed and announced with WWF, Coca-Cola reaffirmed its goals to replenish 100% of water used and reach a 75% recovery rate of bottles and cans in developed markets.Coca Cola and WWF already work together for several years. Results have been realized with regard to impact reduction of Coca Cola on the environment, reduction of water use, sustainable energy (CO2 reduction), development of a certification scheme for sustainable sugar cane, and investment in nature restoration projects in river delta's and other protected areas.

Source:http://www.agri-pulse.com/Coca-Cola-WWF-set-new-conservation-goals-7-9-2013.asp;
www.wnf.nl
Key words: greening of decision making (business deal)

2.28   The Coalition for Planning Reform Australia

Conservation Council South Australia have formed an alliance of organizations collaboratively campaigning on shared issues with the planning system in South Australia. The Coalition for Planning Reform (CPR) consists of Conservation Council South Australia, Community Alliance South Australia and National Trust South Australia, representing more than 120 community groups. CPR has lost faith in the State Government's current system as it lacks real, strategic planning; transparency, accountability and independence in decision-making; and fails to ensure genuine community engagement. They call for a new planning system that reviews the 30 Year Plan or delivers a new planning strategy to replace the old one.

Although it is still unclear what the impact will be, it is meant to address long-term, critical issues including sustainability, climate change, transport, infrastructure, food and water security, biodiversity, social aspects, health and economic viability. A major part of this work is to create genuine and meaningful community engagement where engagement will occur earlier in the process with more genuine options given. Essential is also the aim of reaching a transparent, accountable decision-making with an independent and open review process, resulting in outcome-based and enforceable commitments.

Source: www.cpr.org.au
Key words: greening of decision making (democracy and community engagement)

2.29   Building with Nature: new large scale planning

Building with Nature is a Dutch innovation program heading for mainstream applications in large scale infrastructure projects. The approach is built upon commitment to the integration of infrastructure, nature and society in new or alternative forms of engineering that meet the global need for intelligent and sustainable solutions. The program is carried out by EcoShape, a consortium of private parties, government organizations and research institutes. It involves disciplines from natural sciences, technology and social sciences to successfully operate in the continuum between nature, engineering and society. EcoShape has carried out this work in a number of areas in the Netherlands, Building with Nature instead of Building in Nature is by now widely supported within the Dutch water sector and embraced and employed by a number of governmental institutions concerning infrastructure and nature ecosystem development. The consortium has now also carried out a project in Singapore. The current project in Indonesia is about creating new conditions for a coastal defense. By a combination of dams, land reclamation and new mangrove forests that will thrive in the area, the consortium is building on a 20 kilometer coastline where combatting erosion and avoiding floods are crucial objectives. By that, they are creating conditions for a large scale coastal recovery that is much more useful to the population and its economy than traditional approaches.The consortium sees a many opportunities for this kind of large scale planning, as there are tens of thousands of kilometers of such coast to cover in countries as Thailand, Vietnam, Colombia and Surinam.

Source: http://www.ecoshape.nl/overview-bwn.html
Newspaper Volkskrant "slappe hap veranderd in stevige kust", September 23, 2014
Key words: greening of decision making, capacity building, area based planning and green finance (large scale infrastructure and coastal planning).

2.30   Urban gardening in Bolivia

The "HuertosEducativos Cochabamba" team and the Dutch Society NME Mundial engaged in cooperation in Bolivia, giving education to schoolchildren about school gardens. In de period between 2006 and 2012, the founder of the organization NME Mundial and his agricultural engineers, gave taught at four schools of the peri-urban area on the Southern side of Cochabamba. Students from elementary schools passed weekly theoretical and practical classes on urban gardening focused on the

production of healthy organic food crops. The idea behind the project is to motivate families from marginal sides of the city to produce their own vegetables. More recently, in 2010, the team "started to give workshops on urban gardening to adults and the team started a pilot project on small intensive square foot gardens which are being installed at the homes of the interested families". They started a project with 205 poor families, who have little space and they developed the minimum garden, "square-foot-garden" a vegetable garden of 1,20×1,20 m, ideal for poor families. The Foundation NME Mundial was founded in 2007, with the aim to increase the quality of education about nature and environment for children and adults, through a network of educational projects. NME Mundial Works with the program 'HuertosEducativos Cochabamba', a project team of VOSERDEM (Voluntarios al Servicio de los Demas). The initiative results in school gardens and small vegetable gardens for poor families. The projects result in enlarging the food security of poor people. This small scale initiative can be important from the perspective of raising awareness among children and adults and to provide food security.

Source: www.myworld.nl/2013/06/mini-moestuin-in-bolivia/; www.nmemundial.org
www.cocha-banner.org/issues/2010/october/urban-agriculture-in-cochabamba/
Key words: capacity building (food security, poverty, small scale, environmental education)

2.31   Bio DiplomacyInitiative

The Biodiplomacy Programme United Nations University – Institute of Advanced Studies engages in research relevant to international and national debates on the links between biological resources, climate change, traditional knowledge and sovereign and cultural rights. Increasingly the programme is looking at biodiversity issues at the community level. New Projects in 2010-2012 focus on Community Wellbeing Assessments; Biodiversity Health and Traditional Knowledge; Rights Based Approaches; Trade-offs between Conservation and Development (the cases of land use change in Malaysia and Indonesia)and:Landuse Options to Reduce Biofuel-Driven Biodiversity Loss".The program is based on the observation that in the last few decades, international biodiversity diplomacy has undergone deep changes in both its nature and scope. This includes the involvement of new actors, an increased complexity, and a broadening of the diplomatic agenda to include areas with a strong connection to science and technology policy, business, standard setting, and rule making. Recent reports are beginning to emphasize the vital relationship between biological resources, well-functioning ecosystems, and economic development at multiple levels, particularly emphasizing the vulnerability of local communities. Increasing attention is being placed at community and national biodiversity policy planning levels on human wellbeing, which implies an overall sense of welfare of people, and the socio-ecological interactions in bio-cultural environments. This research program contributes to biodiversity through the scientific world, by putting local communities and their relation with biodiversity loss on the agenda of academics.

Source: http://www.ias.unu.edu/sub_page.aspx?catID=107&ddlID=125
Key words: greening of decision making, capacity building (institutions, collaboration, planning, research)

2.32   Community Biodiversity Management (CBM) South Asia program

Community Biodiversity Management (CBM) is a community-driven participatory approach that empowers farmers and communities to organize themselves and to develop strategies and plans that support on-farm management of agricultural biodiversity. This approach is based on the fact that the maintenance of a large diversity of landraces depends on farming practices driven by farmers' own customs, traditions and livelihood needs, all of which affect the movement of seeds among households, within and among villages, and in a larger geographic area". Recent work is on community seed banks. In 13th March 2013, a national farmers' workshop on community seed bank was held at the Agriculture Development and Conservation Society (ADCS), Kachorwa, Bara, with a

grassroots focus on the challenges faced by farmers in maintaining community seed bank at local level. The Community-Based Management of Biodiversity Programme is funded by the Development Fund in South Asia and coordinated by LI-BIRD in Nepal. The CBM approach is being implemented in 29 sites across four countries with technical and organizational support from four partner organizations: LI-BIRD in Nepal, Anthra and Green Foundation in India, Green Movement in Sri Lanka and UBINIG in Bangladesh. All partner organizations focus on plant genetic resources, except for Anthra, whose focus is on animal genetic resources and associated wool-based craft and culture. CBM strategies can be used to strengthen farmers' seed systems by improving access to diversity and by recognizing and reinforcing the farmers' role as plant breeders. This method results in the community taking more control of their resources, with increased ownership for the on-farm conservation and sustainable livelihood options, and with carefully selected and appropriate external inputs and risks. The CBM approach helps to facilitate social processes that contribute to the conservation and utilization of biodiversity.

Source: www.cbmsouthasia.net/; www.norad.no/no/resultater/publikasjoner/gjennomganger-fra-organisasjoner/publikasjon?key=396453
Key words: greening of decision making, capacity building, area based planning, green finance (institutions,agricultural biodiversity).

2.33   Wetland Biodiversity Rehabilitation Project (WBRP)

The Wetland Biodiversity Rehabilitation Project (WBRP) in Bangladesh started a project (2009-2015) with the aim of improving the management of selected wetlands and floodplains by the local population, the related sectoral government agencies and the local authorities. This program is a reaction to previous efforts to control floods, which eventually have had negative impacts on the livelihood of wetland dependent people, as well as wetland biodiversity. In the 1990s the Pabna Irrigation and Rural Development Project (PIRDP) was implemented, in order to control floods and increase agricultural production in Pabna district. However, the hydrological regime within the flood-controlled areas was altered reducing wetland area and water depth and affected the capture fishery, wetland biodiversity, other natural resources and ecosystem resulting the loss of income of wetland dependent people. Construction of river embankments, flood control structures and roads, improper sluice gate management, increased irrigation for agriculture and over exploitation of aquatic resources made huge negative impact in the region. These enhance the loss of fish production and biodiversity in floodplain ecosystems. As a result wetland dependent community people have lost their livelihoods. It is a project of the Ministry of Fisheries and Livestock (MoFL), Government of Bangladesh implemented by Department of Fisheries (DoF), Bangladesh with the support from German Government through Deutsche GesellschaftfürInternationale Zusammenarbeit (GIZ) GmbH/German Development Cooperation. The Ministry of Land, Ministry of Water Resources and Bangladesh Water Development Board (BWDB) are the co-implementers of this project. WBRP is a six years project starts from July 2009 and will continue until June 2015. As the projects aim to increase the income of wetland dependent families as well as fish production, to increase the populations & numbers of species present for key wetland dependent wildlife and the biodiversity of the wetland, it could restore the support of the local population.

Source: http://203.112.195.237/WBRP/WBRP%20Leaflet.pdf
Key words: capacity building, green finance (improvement of community livelihood).

2.34   Managing Trans-boundary Natural Resources, Southern Africa

This initiative is a transnational cooperation between 15 states in southern Africa. The fifteen Member States of the Southern African Development Community (SADC) have, since its foundation, acknowledged the importance and the potential of the unique biodiversity for their socio-economic development. Enshrined in their Regional Indicative Strategic Development Plan (RISDP), the Member

States agreed in 2004 on priority projects and established the Food, Agriculture and Natural Resources (FANR) Directorate with the coordination of their joint activities. Additional policy documents such as the Protocol on Wildlife Conversation and Law Enforcement, the Protocol on Forestry and strategies for biodiversity and forest-management were developed and agreed upon. Against the backdrop of the current threats on national and regional eco-systems, implementation of SADC policy is key to ensuring the sustainable protection and use of these natural resources. The current program supports the implementation of relevant SADC Protocols and strategies for the sustainable management of natural resources by regional and national stakeholders. The program builds on the regional policy framework developed by the SADC Member States and coordinated by the Food, Agriculture and Natural Resources. The Federal Ministry for Economic Cooperation and Development (BMZ) commissioned the German GesellschaftfürInternationale Zusammenarbeit (GIZ) to foster the implementation of SADC Protocols and strategies at a regional and national level. This cooperation builds upon the successful GIZ SADC Sustainable Forestry Management program that was jointly implemented between 1996 and 2012.

The program has therefore agreed upon three components:
- the implementation of the SADC Regional Programme for Trans frontier Conservation Areas (TFCAs);
- support to the regional SADC programs for cross-border fire-management and Reducing Emission from Deforestation and Degradation (REDD);
- and, the integration of climate change and biodiversity conservation into regional and national programs.

This program builds on a transnational cooperation between 15 states in southern Africa and theGerman government, who have created several protocols for sustainable management and now want to implement them. The initiatives seems to institutionalize biodiversity into the plan making of these 15 countries.

Source: www.giz.de/en/downloads/giz2012-sadc-botswana-office-en.pdf
Key words: capacity building, greening of decision making (transnational cooperation).

2.35   Environmental Rating Loans

In April 2013, Sumitomo Mitsui Trust Bank, Limited, (Japan), a member of the Initiative Biodiversity in Good Company, started to provide Sanden Corporation with a product named "Environmental Rating Loans with the Evaluation of Natural Capital Preservation". The finance is based on the evaluation of the borrower's activities and its contribution to the preservation of natural capital as criteria. "Natural Capital" consists of natural elements such as plants, animals, soil, air and water. Corporate activities such as the supply of raw materials also depend on the natural capital significantly. In recent years, governments, local associations and corporations are more actively making an effort to recognize the economic value of natural capital. On the other hand, the natural capital is limited and threatened by the shortage risk caused by the rapid economic expansion and explosive population growth in developing countries. It will be very important for corporations to know how much they depend on natural capital through the quantitative observation expanding its objective area to the upstream of the supply chain in view of not only environmental preservation but the method of management strategy which leads to the reinforcement of the risk management of raw materials procurement. Sumitomo Mitsui Trust Holdings, Inc. became a signatory to "The Natural Capital Declaration" as part of the UNEP Finance Initiative in June, 2012, and has been developing financial products and services including the concept of preserving the natural capital. "Environmental Rating Loans with the Evaluation of Natural Capital Preservation" was developed through the collaboration with PricewaterhouseCoopers Aarata Sustainability Certification Co., Ltd."

The product was evaluated by Sanden Corporation, the first to receive such a loan. "With this product, the evaluation results along with the environmental rating assigned in consideration of the strategies for climate change, the circulation of natural resources and environmentally friendly property will be fed back to Sanden Corporation. The evaluation results include how much the activities of Sanden

Corporation affected the fundamental elements of natural capital such as soil, air and water in the upstream of the supply chain in addition to the data regarding the amount of water consumption, occupation of land surfaces, greenhouse gas emissions, etc. in the upstream of the supply chain classified by area, country and by item procured".

Source: http://www.smth.jp/en/news/2013/E130405.pdf
Key words: green finance, greening of decision making (loans to enhance natural resources).

2.36   Rwanda Biodiversity Media Group: Narratives of Science

Rwanda Biodiversity Media Group is a newly founded nonprofit, youth based organization. It is founded on the conviction that media tools including audio-visual media are important tools in conservation. The aim is to stimulate the use of media tools to promote love of nature, attitudes of respect toward other species, understanding of the value of biodiversity, and informed action to protect nature.RBMG uses storytelling about biodiversity conservation in the way that makes sense to the audience, in order to inspire them to be conservation advocates. Rwanda Biodiversity Media Group works both independently and in partnership with other conservation organizations. Many of the involved are professionals and scientists, communicating to peers, to policy makers and the public at large. They facilitate community based campaigns as well as on-going national and international conservation efforts. New social media are actively used to provide platforms for community participation in wildlife conservation campaigns (LinkedIn, Facebook, Twitter).

The severe problems connected with biodiversity loss, conservation needs and lack of information in local communities is becoming increasingly complex in Rwanda. The Narratives of Science tool developed by RBMG is guided towards sharing perceptions with different groups as a way to develop and implement realistic plans for sustainable use. The group sees this as a method to provide individuals and communities with a basic knowledge and understanding of the environment, biodiversity and their interrelationship with humans. In addition, it also promotes awareness and sensibility in individuals and communities and it encourages individuals and communities to value the biodiversity and environment and consider their importance in order to inspire participation in the process of improving and protecting the biodiversity and environment for the betterment of their livelihoods. For the RBMG this also provides people with skills to identify, predict, prevent and solve environmental problems and to make them capable of utilizing limited resources in a sustainable way and of coping with unexpected vulnerabilities. At the same time, individuals and communities are then equipped with the opportunities to actively participate in solving environmental problems and to make educated decisions about biodiversity conservation.

Source: http://rbmg.weebly.com/
Keywords: greening of decision making, capacity building (awareness and dealing with institutions).

2.37   Biodiversity of India: A Wiki resource for Indian Biodiversity

This project is website, the Biodiversity Of India website. The website is part of the larger Project Brahma Initiative. Project Brahma aims to create awareness of common people about biodiversity and biodiversity loss in India, by increasing participation of the people in biodiversity documentation and conservation. It is "an open-source, community driven project, much like Wikipedia, where anyone - regardless of their religion, nationality, language, expertise - can contribute their knowledge of India's biodiversity". The website now lists over 200 species, 60 stories and, 100 videos. With this initiative, the participants want to stress the relation between biodiversity and socio-cultural practices. The reason for the website is that, due to population explosion, climate change and lax implementation of environmental policies, species are facing the threat of extinction. This affects the livelihood and the culture of millions of Indians who depend on this local biodiversity. The initiative is based on the idea

that "knowledge is the first step towards any kind of change." They want to create awareness by the common man of the domino effect of species loss. Also conservation organizations should be able to use the website, as a central resource where conservation organizations can access all kinds of knowledge about Indian biodiversity. The initiators expect the Biodiversity of India website toenhance environmental conservation efforts in India.

Source: www.biodiversityofindia.org
Keywords: greening of decision making, capacity building (local knowledge building).

2.38   Japan funds biodiversity project in Bengal

Japan International Cooperation Agency (JICA), an administrative body of the Japanese governance for among others (bilateral) development aid, finances a biodiversity project in Bengal that has man-animal conflict resolution and habitat improvement as the key component. The project started in 2012 and will end in 2019-2020. The two-year preparatory phase is currently under way. An important component of the project is placing (electronic or nylon) fences and mobile squad to keep wildlife such as elephants and tigers away from tracks and villagers. The plan also provides for rescue, transport and treatment mechanism for animals. Focus areas will be the tiger-human conflict in Sunderban Tiger Reserve and the elephant-human conflict in jungles of North and northwest Bengal. All wildlife sanctuaries and reserves will be covered by the project. The forest conservation project will cover 18,970 hectare. Important here is the strong link to community development and livelihood improvement. The forest coverage enhancement program will include assisted natural regeneration, soil moisture conservation and plantation. Most of the project activity targets degraded forest lands and aims for quality improvement of forest in the state. Tree species and the number of saplings will be decided jointly by the forest department along with each joint forest management committee based on micro plan for the village that will be prepared with the help of NGOs. The project also includes activities to enhance institutional infrastructure of forest department needed to implement the activities. JICA is the largest donor to the forestry sector in India. The finance is an ODA (official development assistance) loan, a long-term low interest rate loan advanced to the developing countries (OECD). The project combines forestry and livelihood program with protection of villagers from damage by wildlife, and this might a key issue for its success.

Source: http://articles.timesofindia.indiatimes.com/2013-05-23/kolkata/39475016_1_forest-villages-forest-official-forest-department
Key words: man animal conflicts, livelihood development

2.39   Performance Based Governance Indonesia

In Indonesia, some of the most pristine forests have been gazetted as protected areas. These are the cornerstone of ecosystem and wildlife conservation, and to a large extent, have provided human populations with valuable goods and services, including water and local climate regulation. Performance-based systems are based on the principle of management in all areas, regardless of the level of protection. Many areas are now protected in the name but not in substance. The actual protection terms and the activities actually allowed (as timber concessions if that is allowed) could be made more explicit and be better understood and supported by all levels of government and by that help the government to reward improvement in management and penalize failure, and increasing the accountability of those in charge. The performance approach should be coupled to sustainable management of the remaining forest areas from which timber can be legally harvested, as a second key strategy. President Yudhoyono committed in 2012 to maintaining at least 45 percent of Kalimantan's land area as forest. Achieving such a target requires integration of forest estate planning, including prevention of further conversion of the remaining forests and ensuring that other development planning, both at sub-national and national levels, is synergized. Also, such an improved governance of forests requires further reforms in forest and land use licensing and management. The new REDD+ agency could be a key supporting actor of such an approach.

The richness of biodiversity of Indonesia depends on the protection of the huge forest areas still left. Approaching the core weaknesses of the present protected area management system is an urgent matter. But, the improved governance requires a joint venture within and between government, private sector and public. Decisions are continuously made and these have to become more guided towards sustainability. The level of sustainability depends on the acceptance and the support for such a scheme. And that again requires actions that will both boost the current economic growth but also sustain it and secure the country's future economy by keeping and sustainably managing our forests. The International Union for Conservation of Nature has started to recognize this conservation potential of well-managed timber concessions. The approach however, requires that the government does not license the conversion of these natural forest concessions to non-forest land uses, such as oil palm plantations, which are of far less value to wildlife, ecosystems and people's livelihoods.

Source: http://www.thejakartaglobe.com/opinion/improved-governance-crucial-to-protect-our-most-pristine-forests/
Key words: area based approach, capacity building (new types of sustainable managementregulation).

2.40   Polycentric Governance: Resilience in Agricultural Landscapes

Researchers at the Ecosystem Services Partnership Conference, held in August 2013 in Bali, Indonesia, presented an approach to enhance resilience in agricultural landscapes. The approach is based on six key principles. The first principle is to maintain (bio)diversity and redundancy, which gives farming practice options, lessens the impact of diseases, increases nutritional and health benefits and provides for social diversity (better living conditions). The second principle is to manage connectivity, by a spread of information on disturbances and recovery strategies, as access to markets, channels for commerce, biological sharing, infrastructure, information and community facilities. The third one is to manage key variables and regulating services. These are seen as slow variables, as soil composition, cultural norms, increasing antibiotic/herbicide/pesticide resistance, and farm profitability can change potentially unnoticed. These are establishing the underlying structure and conditions of the system. Change in them can lead to abrupt changes in the core functions of the system, a regime shift. The fourth principle is to encourage learning and experimentation by expecting change and encouraging learning, enabling adaptation to change in a range of ecosystem services in addition to food. The fifth principle is to broaden participation, which increases legitimacy and facilitates learning. The sixth principle is to promote polycentric governance systems, which is essential to the encouragement of the other principals. New partnerships and bridging organizations across scales are seen as necessary for this work, in order to address issues of healthy agricultural landscape; public health, food production, poverty alleviation, sustainability.

It is emphasized that the effectiveness depends on the context, and it is important to be aware of power relationships, levels of trust, and the institutional setting of the agricultural system in focus. In addition, it is stated that the next step is to test these principles in practice. The potential is substantial, it is argued, as farmers are the largest group of ecosystem stewards on earth and their management practices directly influence ecosystem services. Important for the understanding is that ecosystem services are ecological features providing benefits to humans, but that this is not a one way relationship. The management influences the environment, which in turn influences back to people's wellbeing. The ecosystem service concept, it is concluded, helps articulate this relationship. The ecosystem services are the results of ecological processes and social dynamics, and are in that sense co-constructed. A resilient approach makes use of both the ecological and the social dimension, nested and influenced across scales. The approach is also meant to create an expectation of change, rather than stability. But the practical testing will show hoe workable the approach is.

Source: http://blog.ecoagriculture.org/2013/08/28/a-bundle-of-ecosystem-services-principles-for-resilience-in-agricultural-landscapes/ based on a blog by Megan Meacham, Stockholm Resilience Center and Beijer Institute of Ecological Economics, august 28, 2013.
Keywords: a greening of decision making, capacity building (ecosystem services)

2.41   Engaged and pioneering local collaboration, South Africa/ Mozambique

Illegal hunting and poaching threaten many nature areas. Much effort is needed to combat the hunters and poachers, but often the incentives and means are lacking. Yet there are examples of how to combat the illegal hunting while at the same time creating alternatives to the loss of income generated by the hunt. The property owner Christensen is demonstrating a way to approach the problem. He owns the Sabie Game Park in Mozambique with 40 km of border with South Africa and the Kruger park. But illegal hunting threatens the survival of the rhino, whose horn in Asia is sold for some 65.000 $ per kilogram, a price higher than gold. The struggle against the poachers is often bloody and ruthless. Christensen uses high tech drones and planes, and hires highly trained and armed people on the ground. The poachers, on the other hand, hire young people from nearby villages, and their effort is highly valued by fellow villagers, due to the income they generate. Their money provides the village with means to breed their own cattle stock, to buy equipment and suchlike. Recently, Christensen has become involved in a unique collaboration with nature rangers of the Kruger park and the Southern Africa Wildlife College. The aim is to engage the local communities in alternative ways to provide a living and at the same time protect the nature. The local people must be engaged in learning how to deal with nature, legal issues, economy, entrepreneurship and openness. By that, it will eventually become more attractive to protect the rhino than to kill it.

It is clear that this is a small scale local mode of working. But if it is successful, it might spread out further, although the very price of rhino horn might stand in the way. Yet, this type of engaged institutional work and local collaboration is pioneering and important for the ability to deal with these persistent problems. The solution should however include a broader international collaboration, as the hunts often are financed by international criminals. And the market in Asia could also be included by public campaigns, border security and police work, and regulations.

Source: http://www.dagbladet.no/2013/06/17/nyheter/mosambik/utenriks/travellers/organisert kriminalitet/26957699/
Keywords: capacity building, area based planning, green finance (learning to deal with institutions though local collaboration).

2.42   South Africa: flooding the market

A recent plan by the South African government is to sell some of its $1 billion stockpile of rhinoceros horn to flood the illegal black market and cause prices to plummet. South Africa will seek permission from CITES, the Convention on International Trade in Endangered Species, to sell some of its 16,400 kilogram stockpile of rhino horn. "South Africa cannot continue to be held hostage by syndicates who are slaughtering our rhinos," Environment Minister Edna Molewa said to Reuters. And this plan would also enable the country to further finance the conservation efforts. The ancient trade of rhino horn comes from its usage as medicine, jewelry and status symbol. The Nature World News reports that a newly affluent class in Vietnam views acquisition of rhino horn as a status symbol, which has driven up the price and fueled the business of poaching and international organized crime.

Poaching of rhinos is on pace this year to be at an all-time high. South Africa expects to lose 800 of its 20,000 rhinos to poaching by the end of 2013. After 2010, the number of rhinos poached skyrocketed, fueled by an increased demand over a rumor that a Vietnamese minister claimed it cured a relative of cancer, the Guardian reported. But in the Nature World News, it is warned that this plan may backfire by further increasing demand in Asia. "Recent research suggests that there is a latent demand for rhino horn in Vietnam and it is unclear whether a sustainable legal supply would be able to satisfy it," Alona Rivord of the conservation group WWE International, told Reuters. For the preservation of rhinos, this is important work, as nearly three-quarters of all the world's rhinos live in South Africa.

Source: http://www.natureworldnews.com/articles/2803/20130704/south-africa-flood-illegal-black-market-rhino-horns.htm
Keywords: greening of decision making (awareness building, market, trade)

2.43   New Sovereignty in Food: Vandana Shiva and the Power of Biodiversity

The Indian scientist and activist Vandana Shiva is pledging for a more democratic usage of seed for food. Local people and communities should have more of a say in the use of seed, a certain sovereignty of the local usage and production of food. Agricultural productivity per hectare should no longer be the focus, instead nutrition per hectare should be the leading principle. Shiva is against the current logic of the agro-industry where seeds are merely seen as commodity. Such a 'mechanic view', as Shiva calls it, leads to a one-sided mono-culture approach in favor of the agro-industry and not the local farmers and communities. It also leads to declining biodiversity. The seed diversity is according to Shiva disrupted by unlawful appropriation through genetic manipulation, patents and a concentration of power. Today, Shiva claims, 90% of the market is in the hands of 10 businesses. Shiva argues that the mono culture produces a mono thinking that is very disruptive on the long run. And the focus on agro-industrial output clouds discussions on the democratic rights of local communities. This initiative comes as an attack on proposals from the EU to simplify and modernize the regulation in this field. As such, Shiva's input has the potential to change the discussion. She launched this alternative in a reading in Gent on September 17, 2013, invited by the thinktankOikos. The motto of Shiva is catching: 'what is the power of five companies compared to the combined force of 300.000 plant species'.T he big question is whether decision makers in Brussels are influenced by this pledge.

Source: http://www.dewereldmorgen.be/artikels/2013/09/18/vandana-shiva-in-gent-de-macht-van-biodiversiteit
Keywords: greening of decision making (democratic rights, regulation).

2.44   The Bridging Agriculture and Conservation Initiative

There is a development towards new ways of bringing agriculture and conservation sectors together for solutions that work for both parties. An example is Pokhara Valley in Nepal, where a diversity of crops is cultivated, with varieties within those crops. River banks vegetation protects water sources and provides habitats and corridors forbiodiversity. Wildlife habitats are mixed in with agricultural fields, and sustainable use of wild areas ensures the provision of timber, food and medicines, mountain ranges provide fresh water. Protected nature areas provide safety for wild biodiversity and ecosystem services, but also opportunities for ecotourism. Farmers conserve biodiversity through its use in their fields and benefit through better market access. Diversity is used and conserved at the genetic, farm and landscape level. According to Lindiwe Sibanda, CEO of Food, Agriculture and Natural Resources Policy Analysis Network, "we cannot talk about agricultural intensification without addressing conservation, ecosystem services and biodiversity." In general, the Bridging Agriculture and Conservation Initiative aims for the provision of evidence-based solutions to feed a growing population, while ensuring long-term conservation of agricultural biodiversity. Biodiversity is leading and the initiative combines science, policy and advocacy to influence global policy agendas through evidence. Global leaders and scientists from many agricultural, development and conservation organizations have committed to researching, communicating and advocating for new solutions that are built on scientific evidence and experience. The initiative will result in a global synthesis of the research, identifying gaps in evidence, and providing a critical tool for sustainable development.

The philosophy of the initiative is that current approaches to agriculture, with a strong focus on agricultural productivity of a few major crops, will not be a sustainable route to better food, nutrition and resilient, productive agricultural systems. But the current approaches to conservation, with focus primarily on conserving biodiversity in a limited number of geographic locations, is not enough either. These two must be combined. As a main driver of land use and land conversion, it is argued that agricultural landscapes and their ecosystems have to be part of the conservation agenda. Although the CBD already has embraced this initiative, the work of raising the awareness and increasing the utility of it is just begun. It is still far from mainstream.

Source: http://www.bioversityinternational.org/about-us/news/bridging-agriculture-conservation/
Keywords: greening of decision making, capacity building (agenda setting, agriculture, conservation).

2.45   Conservation focus: change from animals to politics

According to UK wildlife presenter Chris Packham, environmental campaigners should stop wasting money trying to save "totemic symbols of cuteness" such as the giant panda and focus instead on more pressing political conservation issues. The Independent reports on an impassioned plea ahead of a major debate at the Royal Society of London for Improving Natural Knowledge, UK,, where Packham, described as the patron of the World Land Trust said Britain had traditionally ignored the political challenges of conservation, choosing instead to focus on the plight of popular animals. His statement is that "for too long we've toyed with single-species conservation which focused on individual animals and pouring huge resources into those at the expense of doing too little about others." And: "It's not possible to save everything. The burgeoning human population and lack of resources for ourselves and other species mean we'll have to play God at some point and decide what we're going to do." Packham added: "I have previously picked on the panda as a whipping boy. It is a very obvious totemic symbol that was picked on by campaigners for its cuteness and not its conser-vation value." Instead, he adds, a handful of unglamorous policy changes could do substantial good. "Intensification of agriculture needs to be moderated. The [European] Common Agricultural Policy is in need of radical reform. In his view, just these two things alone would have a profound and immediate impact on our landscape in terms of plant fauna, insect fauna and everything else that feeds upon it." He also want Britain to confront China with its record of animal crime and for "politically robust steps" to clamp down on demand. As living standards rise in China and the Far East, so too is demand for rhino horn, ivory and products made from parts of tigers, turtles and other endangered species. He is disappointed in the lack of action: "We must address it. And that means talking about it and coming to a solution. At the moment no one has the balls to stand up and say it."Packham intends to raise awareness of this at the Controversial Conservation debate in London tonight, which he will chair alongside environmentalist Mark Avery and conservation biologist Vivek Menon.

Source: http://www.independent.co.uk/environment/nature/conservation-must-stop-wasting-money-and-energy-on-giant-panda-and-other-cute-animals-warns-chris-packham-8877739.html?goback=%2Egde_3667510_member_5798052431245893636#%21
Keywords: greening of decision making (institutions, politics, conservation).

2.46   Foundation for Natural Leadership

The Foundation for Natural Leadership is an international non-profit organisation supported by various paid staff and a group of enthusiastic volunteers. It is installed for the creation of a new form of leadership for the 21st century. It sees the way in which our society and private sector use the Earth's limited resources as unsustainable, and we have drifted far away from the key to our existence: living with each other and with nature. Most of the potential we possess as human beings remains untapped, and this creates incredible opportunities, it is argued. The programmes are devoted to developing leadership qualities that can help finding answers. Each programme focuses on four inextricably linked domains, with four primary activities:

1) *Wilderness Leadership Transformation Programme*: a weeklong expedition though the African wilderness in groups of five to seven participants from many organisations. Workshops prepare participants and various events afterwards help to create further context for their experiences. The participants form 'circles of natural leadership'.
2) *European Leadership Nature Retreats:* In Europe, short-term retreats of three to four days form a miniature version of the Wilderness Leadership Transformation Programme. Groups of five to seven participants trek through remote European nature areas, with a trip introductory afternoon and finishing group meetings and one-to-one interviews.
3) *Corporate Leadership Journey*: senior managers walk an African trail in groups of five to seven people. Intensive preparations in the form of penetrating structural interviews and workshops is addressing generative leadership. Afterwards, the participants attend several individual coaching sessions and joint events in order to share their experiences. This trip helps the participants to transform as individuals and produces a change of mentality within the organisation.
4) *Annual get-togethers:* this offer participants opportunities to share experiences and expand their network in the field of natural leadership.

This awareness and experience program is a micro level initiative to really get under the skin of individual leaders. Board members as Jane Goodall and other prominent people ensure a broader support. In South Africa and Botswana, the Foundation collaborates with the Wilderness Leadership School, established by Ian Player. This gives access to decades of experience in nature conservation and nature knowledge.

Source: http://www.naturalleadership.eu/
Keywords: greening of decision making, capacity building (micro level leadership based on natural experience).

2.47   RSPB: UK search for innovative sources of finance

The Royal Society for the Protection of Birds (RSPB), a large nature conservation organization in the UK, is currently committed to establish new, innovative sources of finance for the natural environment in Europe and the UK. Direct revenues from charitable contributions and memberships are for the RSPD only one source of potential income. Public funding from the government still is an important source of finance, and RSPB work hard to make the case for the natural environment in Westminster and Europe, to win funds and drive nature and wildlife up the political agenda. However, in addition to public finance, it is important to stay open to potential sources of private finance that could become available from green minded firms and investors. Government initiatives to encourage private investment in environmental industry, such as Green Investment Banking, could lead to crucial finance for environmental enterprises. The strength of this work is not yet established. But RSPB is involved with a number of policy steering groups, such as the Aldersgate Group, which is a coalition of progressive businesses, environmental groups and individuals intent on securing high environmental standards that will lead to economic growth and international competitiveness. The Aldersgate Group Report - Green Foundations from 2009 described the benefits of better regulation to higher environmental standards, and it also noted that environmental regulation can be a driver of sustainable economic growth by stimulating the efficient use of scarce environmental resources. RSPB regards this collaboration as essential stepping stones in bridging the gap between the values of membership, and those in the corridors of power who can act to protect those values.

Source: http://www.rspb.org.uk/ourwork/policy/economics/betterfuture/financingnature.aspx
Keywords: green finance, greening of decision making.

2.48   Mount Mantalingahan: Prize Winning 'Best Protected Area'

On October 1, 2013, the Mt. Mantalingahan Protected Landscape (MMPL) won the Best Protected Area and the Civil Society Partnership Category at the first Protected Area Awards and Recognition, by the Department of Environment and Natural Resources (DENR) through the Protected Areas and Wildlife Bureau in the Philippines. DENR created the Protected Area Awards and Recognition to highlight key national players and their innovative practices and initiatives in the field of protected area management.

The area is a mountain range of 120,457 hectares in Southern Palawan, Philippines, and home to indigenous Palaw'ans, and it falls within the jurisdiction of the municipalities of Bataraza, Brooke's Point, Quezon, Rizal and Sofronio Espanola. It has been a protected area since 2009. It is a key biodiversity area, as one of ten areas of the Alliance of Zero Extinction in the Philippines. This largely forested mountain range is critical for providing various ecosystem services that benefits the local communities These ecosystems services include water, soil conservation, flood control, carbon sequestration, non-timber forest products and the high potential of waterfalls, caves and other areas for tourism. But it is also under threat of illegal, uncontrolled and unregulated usage of the forest, including timber and wood for fuel. In addition, there are other major threats as: increasing conversion of forest to agricultural land; tan barking and mangrove conversion; wildlife poaching; mining, population growth; destruction of watershed areas and water reservoirs.

The approach is built upon engagement of governments, NGOs, and the private sector in a science-driven process of designing and creating networks of protected areas. The research provides information, tools and options advising the partners. The partners work to reduce the human impact and pressure on the limited natural resources. They demonstrate the linkages between good natural resources management and human well-being, for instance by providing communities with services as health and family planning; income-diversification schemes; information-sharing and training on improved natural resource use and management practices. The consequences of ecosystem modifications is in this approach meant to be understood and incorporated into policies, markets, as well as in the conservation and development strategies. These are Integrated into the appropriate management actions for each type of ecosystem, providing tailor made solutions for every sub-area.

As such, this represents an ecosystem services approach, and how protected area management supports human well-being. The area actions are further supported by regional, national and local level policy development, or at least, that is the aim. Another important part of this work is to develop and apply sustainable financing mechanisms to achieve desired conservation outcomes and to ensure the protection of the ecosystems and the services they provide to the community. From implementation of payments for ecosystems services and establishment of endowment funds. The partners are working to empower communities for the protection of their own natural resources. Through mechanisms like conservation agreements, capacity building for protected area managers and training on sea and forest guard patrolling and management planning, local stakeholders are awakening to their role as environmental stewards. To ensure sustainability of efforts, various financial mechanisms and income diversification approaches are also being explored.

One of the actors involved is Conservation International Philippines's. The work in the Philippines goes back to 1992, when the National Integrated Protected Areas System (Nipas) Law was passed. It is stressed that there is much work is yet to be done. But the prize is seen as public support of the work and gives the actors greater confidence in the cause. The idea is to inspire other such projects in the Philippines, and by that create a spread of the approach they call green development solutions. Several other nominees from the more than 200 protected areas in the country were also part of the selection process. A third party team of evaluators/reviewers identified the finalists. Award categories included: engagement with local communities, partnership with local government units, partnership with private sector, functional institutional organization, maintenance of various ecosystems and law enforcement.

Source: http://bayanihan.org/2013/10/03/mt-mantalingahan-award-recognizes-importance-of-protected-area-conservation/
http://www.conservation.org/global/philippines/where/palawan/Pages/palawanmantaprofile.aspx
Keywords: greening of decision making, area based planning, capacity building, green finance (green development solutions through ecosystem services management).

2.49 World Economic Forum Davos 2014: global dialogue on a green economy agenda

The World Economic Forum (WEF) is a dialogue of world leaders and CEO's on the future economy. It is a macro level initiative to push for a further development towards a green economy and not in the least a greening of decision making. The overall issue at stake in 2014 is climate and the need for transformational change towards sustainability. Although critics might say this is not new and mostly a see and get seen scene, many theme's are also brought up and discussed. Its value is probably its impact on the agenda's for tomorrow. One of these theme's concerned the climate debate being slowly reframed into the world of investment risk and business opportunity. A troublesome position of the current debate, it is argued, is the poor communication of the uncertainties and risks involved, and that we overlook the biggest uncertainty in the climate debate: the human factor. Many refer to upcoming matters as Big Data and the need for new types of leadership. One of the challenges brought forward is also that progressive business is outgunned by the high carbon lobby. Another matter of discussion is the need for business to advocate a better and more sustainable public policy. But also: the business supply chains are rarely sustainable. Besides, business and cities must join

forces and become more forceful than until now. Nike's vice-president Hannah Jones stated for instance that we need to collaborate to tackle systemic challenges. She talked about the immense complexity of mainstreaming the principles of the circular economy into the company's core operations. Nike needs to catalyse capital, capabilities, science, technology and resources far beyond the boundaries of its own supply chain. This is argued to be critical to Nike's future success.

The international director of Greenpeace, Kumi Naidoo, stated that we are on the verge of a possible game-changing intervention on deforestation. Some governments and some businesses are driving the change. He mentioned a significant shift by the Indonesian government and increased interest from for instance Norway. On the business side, he mentions Nestle and Unilever. But also a producer as Asia Pulp &Paper, who, as the name suggests, used to be in aggressive opposition to Greenpeace, has now invited Greenpeace to help the company transform to sustainability. Also the 2030 Water Resources Group held a meeting as a part of the World Economic Forum. The participants worked on the mobilization of stakeholders and building coalitions from the public and the private sector, civil society, academia and financing sector. The executive director of the WRG said that one of the biggest impacts could be to break down the silos between government ministries, as water is often shared between different ministries: health, economy, mining, and thus definitely not only environment.

In general, the WEF does contain much nice talk and bold statements but its potential in shaping the agenda is also immense. When it comes to debate, mainstreaming ideas, spreading the word on opportunities and to upscale initiatives and investments, the Forum is of importance. Today's media is also helpful in this process, as the Guardian Sustainability Business Blog.

Source: http://www.theguardian.com/business/davos-2014
Keywords: greening of decision making and capacity building (dialogue)

2.50   Global Forest Watch

This is a new and dynamic online forest monitoring and alert system came into being that empowers people everywhere to better manage forests. The initiative is called Global Forest Watch and it unites satellite technology, open data, and crowdsourcing to guarantee access to timely and reliable information about forests. The website[9] states that government and corporate leaders on February 20, 2014 convened to explore how governments, businesses and communities can halt forest loss. The initiative appears as a large scale high end tech project. At the same time, it is also made as a citizen science project. The Dutch newspaper Volkskrant reported on the initiative March 14 2014, The idea behind it is that transparency is needed to combat deforestation. The system keeps track of fire and data on land use as palm oil and logging. Governments can use it for their policy enforcement, indigenous people can empower their protests with this information, companies as Nestle and Unilever can control the compliance of their subcontractors and nature protection organizations can signal problems or feed their campaigns with it. The system is called a game changer, although the system still has many weaknesses. It does for instance not make any distinction between natural forest and palm oil plantations, for instance. But due to cloud computing via the Google Earth Engine, the data computing has become much better and it cost a fraction of the price paid 15 years ago. The ambition of this Big Data initiative is to show who is governing the area in question and who has logging concessions in which areas.

Source: http://www.globalforestwatch.org/
Keywords: greening of decision making, area based planning (monitoring technology).

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[9]http://www.wri.org/our-work/project/global-forest-watch

3 Reflecting on the search for renewal

What has the search brought us? What do we learn from this exercise? This chapter offers reflections on the material found in the scan. In Section 3.1 we look back at how the internet search itself worked. In Section 3.2 we take a closer look at the contribution of the initiatives found to the challenges ahead for the governance of biodiversity. In a final Section 3.3, we offer three lessons for policy makers.

3.1 How did the search go? A reflection of the method

On the question how the search went, we can conclude that it did not entirely go as planned. We started with the sensitizing concepts as search terms in Google, i.e. biodiversity and then biodiversity in combination with greening of decision making, capacity building, area based planning and green finance. These words did however not work very well as search terms, especially the greening of decision making and green finance. For the latter, we came into the field of finance covered in previous research (Selnes *et al.*, 2013). This was nevertheless not much of a problem. As we found an interesting initiative, we used clues in the text or website links to surf further from one site to another whenever it seemed suitable. This meant we did not fixate on any given search term or site but moved on to further links whenever it suited our purpose. During the search, we were open to emerging concepts or theme's that could add to our understanding or even alter pre-conceptions. It follows from this that the landmarks by no means acted as static concepts. A limitation was the restriction to sites using the English language. Another restriction was that we did not search for novel ideas from other sectors, let's say public health or education, although this could have been a valuable entrance. But focusing on biodiversity gave already such a vast array of possibilities that it was more than sufficient.

For the further selection to include or exclude an initiative, we aimed for a certain balance between the various theme's. At times, this meant that we had to let go of 'more of the same' type of initiatives and projects. Furthermore, we aimed for a geographic spread, to avoid ending up with initiatives from one or few countries or even continents. However, this never became an issue, as the spread seemed to come natural from the internet surfing. Before we started, we also had formulated a rule that we would have a preference for initiatives with at least some traces of multi-level or international involvement. We were willing to make exceptions for potential good initiatives that are not (yet) picked up by (any fragment of) the (inter)national community. In practice, we saw hardly any initiative without any trace of such a multi-level character.

One aspect we did not foresee was that the approach resulted in a time and researcher specific web scan. While we starting the web search with the same search terms, we ended up with quite different findings. Upfront we never realized the effect of the fact that the two researchers are also two individuals searching the web without being physically close to each other. We informed and consulted each other, but the internet is very dynamic and individual choices brought us to different paths and places. With hindsight, this was probably a rather useful way of working, as we ended up with a greater variation. It must be noted that as we did not try the opposite, as in a joint search with one computer, we cannot be overly conclusive on this point.

For the text, i.e. the choice of words, we have often chosen to stay close to the text on the website or document, although it is usually adjusted for our purpose and format. At times we chose to present an issue as if they are two distinct initiatives, although they come from the same program. An example of this is the collaboration of cities and urban regions ICLEI. As ICLEI in general is relevant to biodiversity protection and we present it as such. However, ICLEI has also a separate program for biodiversity, which we present in an additional, separate section. In total, we present fifty initiatives. This is a rather random number but it reflects our need to show a broad variety of initiatives without exceeding the pragmatic limits to our project capacity. Eventually, we left an early idea of grouping

the findings according to the four sensitizing concepts. Our finding on this point was that many initiatives and projects did not easily fit into one basket. Besides, the purpose is not to compare the value or spread of the sensitizing concepts but to generate new insights into how to strengthen the governance for biodiversity.

3.2   Contribution to the challenges ahead

A core finding is that many initiatives are explicitly focusing on raising awareness and improve policy achievements by enhancing various forms of capacity. First we reflect on initiatives that explicitly cover all the four challenges ahead. Then we take a closer look at each of the four challenges. In addition, we present briefly two (intertwined) issues of great importance: i) the role of the government amidst the broadening of societal engagement; and ii) the role of economy in rising the awareness and improving of the biodiversity governance.

Initiatives covering all the four challenges ahead
One of the findings in the material is that quite some initiatives cover all the four terms used. These initiatives are thus built on an approach explicitly aiming for a greening of decision making through capacity building and an area specific focus where developing or finding new and better forms of finance are included in the approach. We saw this in the Mount Mantalingahan on the Philippines; the Pakke Tiger Reserve; the Coral Triangle; the urban initiative ICLEI, ABCG in Africa; but also in new area of UK's peatland and others. A core feature of these initiatives is that they engage both public and private parties; they combine key (inter)national players with regional and local forces; they combine ecology with economy; and they try to both engage people/groups inside the area, as well as spreading inspirational lessons to other areas. In short, they have a great potential to create awareness and legitimacy through a strong approach that bridges the many levelled governance gaps other initiatives at times are suffering. By making complex institutions workable, they appear attractive to both the involved and also others, for instance a sovereign ruler that otherwise might have chosen a different path of development than biodiversity protection.

The greening of decision making: often the explicit target
A greening of decision making is essential to the improvement of biodiversity governance. Yet it is striking to note how many initiatives explicitly are targeting such a shift, instead of treating it is an outcome one hope for in the end. At the same time, there are many different types of decision making, thus it might not be much of a revelation after all. We have noted that there is a wide variety of types and also novel types of such a greening. One of those is the Extreme Citizen Science Group in Congo, which allows local people to reveal what they see as bad decisions and practice (illegal logging for a start)) through the use of mobile telephones. By that, they are able to force decisions to be reconsidered, as it leads to a public display of decisions and practices that are even against the law. Interesting here is that this is a citizen takeover of the most classic government roles: law enforcement. It represents a coercion weapon made possible and triggered by the social media. In fact, also the driving forces for this approach are non-governmental actors. It does bind together citizens, local communities, national and international forest law enforcement. This is the world of modern information tech and social media influencing decision making. And there is much more to come.

The United Nations News Centre just released the following:
"10 October 2014 – Accurate information is crucial for governments to manage their natural resources sustainably, the United Nations Food and Agriculture Organization (FAO) said today as it announced the launch of new software it hopes will help developing nations monitor the state of their forests." Many countries simply do not have a full picture of what is happening in their forests, and without that knowledge it is hard to develop effective forest policies to combat deforestation and forest degradation or to advance national climate change strategies," said Eduardo Rojas-Briales, Assistant Director-General for FAO Forestry. As it stands now, nearly 80 percent of developing countries have difficulty obtaining and using basic information about their forest resources. "Open Foris" is a FAO-led initiative designed to assist countries in forest inventory – from assessment, design and field data collection to analysis and reporting. Released today at the International Union of Forest Research Organizations'

World Congress in Salt Lake City, Open Foris tools are already being tested in more than ten countries in Africa, Asia and Latin America. "We hope that Open Foris will be a game changer, as it is the first comprehensive open source tool that will not only guide the countries through the whole process of data collection and analysis but will also encourage and facilitate open knowledge sharing in an innovative way," said Mr. Rojas-Briales.

The example from the Congo is quite the opposite of for instance the India-Norway think-tank where learning is the centerpiece for the greening of decision making. But it is also an initiative where two governments engage in a process of voluntary learning, with governments as the driving force. These two types of greening decision making represent two poles of a scale: from law enforcement to joint learning– from a coercive to a voluntary greening of decision making. It shows that not all innovative greening of decision making needs to be based on voluntary learning. It can also be used to make legal rules more effective and by that vitalize the legitimacy of institutional (and democratic) authority. In the Pakke Tiger Reserve, we also found an initiative that combines both a coercive approach and voluntary learning.

Another distinction that appear from the material found is that of direct or deliberate efforts of a greening of decision making versus indirect or conditional efforts. The multinational partnership in the Coral Triangle is an example of direct efforts, as are also found in the dialogue between global companies and nature organizations that leads to business deals as those between the World Wildlife Fund and Coca Cola. These business deal processes, where nature interests are entering the board rooms of large companies, might have great impact due to the size of the business. Even a minor change of course could then have substantial impact. Indirect or conditional efforts to stimulate a greener decision making are found in community based conservation as the Hornbill Program. Here, focus is on increasing the knowledge and the creation of a sense of ownership, and by that laying the foundation for shifts towards a greener decision making. Hornbill is also a multi-level and multi-actor oriented program where citizen participation is a driving force.

Some initiatives are very much directed towards large macro level ideas, as the emerging Big Think that triggers multi-disciplinary out of the box thinking. Also the World Economic Forum WEF is a macro level initiative where dialogue of world leaders and CEO's on the future economytakes place. This is a forum with a huge networking and agenda setting potential for possibly far reaching initiatives, but in essence, it is about changing the way one thinks, and by that laying the foundation for and promoting a greener decision making.

Greening of decision making also come from initiatives where tradeoffs with industry with an area based or a sector based approach attached to it, as at the Albertine Rift, the Peatland Code dialogue in the UK and the Biodiversity & Mining Guidelines in South Africa. Much of these initiatives have a meso-level character, as they emerge from collaborative platforms or some kind of area based planning. This is a level where dialogue can lead to the contours of new practices that might enable business to exceed narrow short term economic concerns and reach broader assessments with a view to new forms of legitimacy. The mining and also for instance the oil industry are not known for their sustainability. But it might make a difference if the mining or drilling activities are based on an assessment of a best practices built on the accumulated effects of the activities, and not the effects of single drill sites seen as isolated cases. If huge companies institutionalize such 'small gains' if you like, it might have effect.

In Scott's blog on a Strong No Deforestation Commitments, we showed how a greening of decision making might come from a micro level as well. An interesting aspect here is that Scott emphasizes that there are already institutional mechanisms able to turn of the bulldozers. People just have to realize this and learn how to go and do it. Eventually, Scott states, money will talk: "Deforest and I will not buy your product". An important part of the reason why big business should listen to Scott is that social media has and internet technology has created a whole new game for mobilizing people to push for a greening of decision making.

An overall conclusion of the greening of decision making however, is that it is one of those nearly ubiquitous elements of the kind of initiatives we are looking for here. But it is also neatly intertwined into the matter of capacity building.

Capacity building through the rise of engagement

Our scan also reveals many initiatives focussing on capacity building, for example the Africa Biodiversity Collaborative Groep (ABCG), the para Ecologists in South Africa, Ya'axché Conservation Trust and the Pakke Tiger Reserve, India. These initiatives involve training of local stakeholders for more officially recognised and institutionalized roles. In these initiatives, conservation leans on local/tribal structures and local leadership. Often this is combined with efforts to improve the livelihood of local communities, i.e. to increase the access to economic benefits from wildlife or wildlife protection. Two initiatives explicitly use local knowledge of the 'common man': Bridging the Gap: Para-Ecologists in Action and Biodiversity of India: A Wiki resource for Indian Biodiversity. Capacity building is however also a many-sided category where the need for support of bottom up initiatives and projects is clearly expressed, as in the Community Based TanguarHaor project in Bangladesh, where the issues at stake are access rights, local empowerment, co-management and capacity building, related to the use and conservation of a wetland. An interesting case is the Africa Biodiversity Collaborative Groep (ABCG), which explicitly aims to go beyond what other US based NGO's ever done before.

A key general finding here is that capacity building is linked to the rise of engagement. Many initiatives are guided towards the mobilization of creativity from many people and organizations. These initiatives make use of or are triggering engagement to pull often sector-crossing initiatives from the ground and get going; in close interactions between many types of actors, often involving NGO's and business partners. Such an engagement seems to require a certain process of building up joint experiences and a common language where one as a start understands the position of others. Such joint ventures allows a joint framing of the issues at stake, and might lead to a new repertoire of action where convictions are combined with practical solutions. The EcoCityCoLab is constructed on these premises, and much of its work is devoted to why one should collaborate, and not only how. It is also central to the India-Norway think tank set up in 2013 to improve governance and mainstream biodiversity into decision making. Such efforts empowers networks in terms of an immense amount of energy.

From that, new practices emerges, with engaged, concerned, interested or otherwise involved actor: local residents, activist or business minded private actors, academics, administrators and politicians. The initiatives create an arena and rules of play for defining problems, sharing ideas, knowledge and means about biodiversity, policy, economy, culture and power. They facilitate and organize decision making, monitoring, dispute resolutions and provide means and manpower. The rise of engagement is neatly intertwined with the rise of social media that creates entirely new ways of joint motivation and awareness building, ways of exchanging insights, triggering an elaboration and spreading of new modes of working. It has a huge potential to mobilize people and to create new ways of conducting policy. For instance, a new generation of possibilities for participatory monitoring processes is on its way, as shown by the Extreme Citizen Science initiative in the Congo. Social media has also triggers new ways of meeting and discussing issues at stake.

A site like Biodiversity Professionals! LinkedIn has almost 15.000 members and lively discussions. Biodiversity in a Rapidly Changing World Linkedin has also some 3.500 members. In addition, there are also platforms like BiodiversityKnowledge network, Big think and My World. Through the formation of such digital platforms and collaborative networks, new ideas or even new opportunities might be born or further developed. That internet and digital media plays a vital role in contemporary networks is also clear if we look at the ICLEI - the global cities network or the EcocityCoLab. Interesting is also the role of audio-visual media as important tool in conservation, for raising awareness, and involving people, such as the Rwanda Media Group and the role of video in the Both Ends Untold story.

Another key finding is that governments work closely with other parties to create protection schemes that actually enjoy support and legitimacy in the area of work. The prize winning Mount Mantalingahan is an example. The government does not stand outside watching the capacity building through the broadening and deepening of societal engagement, it stands right in the middle of it, working closely with them as partners. These are clues to how the role of governments should be filled in. But being a partner is just one role to fulfill by the government. Taking the work of the UK based Royal Society for the Protection of Birds (RSPB) as an example, we also see that governments are very much wanted as political agenda makers for nature and wildlife, and also institutionalizing the regulation regime. By

stimulating the efficient (sustainable) use of environmental resources, the government creates new capacities and conditions for the protection of biodiversity. Dialogue with citizens, NGO;s and the business community is often at the core of this work. Note that this demands a government that is very much engaged itself, and not acting at great distance of other actors. The government brings the core biodiversity values into the corridors of power, and by that increasing the capacity to govern by realizing that a government is no unitary actor but a bulwark of various interests and demands.

LinkedIn also reveals a more grave threat to the governance of biodiversity, a danger from within. With the CBD there is a framework for biodiversity protection governance, which is well established and formalized with decisions, plans, protocols, programs, networks and partnerships at many levels: local, regional, national and international. Much effort is devoted to this and much money is also being spent on the issue. But the LinkedIn reveals major weaknesses in the way we spend these resources. Many seem to agree that much of the money, in one way or another, is creamed off by businesses and consultants. Contributors on these LinkedIn networks often report that business programs for natural resources time and again fail to train local people properly and they are not building real capacity, despite carrying such objectives. Moreover, they report that efforts tend to collapse once the consultant is gone. Money also tends to stay inside the business and corporate program reports, being spent on technical reports, trainings and meetings. Often engagement concerns government-managed protected areas while contributors at the LinkedIn argue that this should be broadened up to new forms of engagement and alternative approaches, with tailor made private or public-private conservation management and revenue taking. It is exactly this type of tailor made capacity building we see in many of the area based planning approaches.

Area based planning: tailor made collaboration
In the scan there are several area based planning- and there could have been many more. This is a field of interest where many examples can be found. Often they are also designed and practiced as integrated planning concepts (sector-crossing), built upon collaboration between NGOs, governments and business. For example: The Africa Biodiversity Collaborative Group (ABCG); Blue Economy: Protecting the Coral Triangle in South East Asia; the Community Based Sustainable Management of TanguarHaor Project and the Wetland Biodiversity Rehabilitation Project in Bangladesh; and the Managing Trans-boundary Natural Resources, Southern Africa. The areas, topics and partners that these projects cover vary considerably, from a collaboration of 6 international NGOs focusing their efforts on the African continent (the African Biodiversity Collaborative group); a collaboration between governments of 6 countries, businesses and NGOs, working on sustainable economic growth related to marine resources (the Blue economy), and more regional approaches such as the Biodiversity Rehabilitation Project in the Pabma district in Bangladesh, where NGOs, governments and local population work together on food related problems. All these cases represent regional or transnational engagement in the development of hands-on and tailor-made solutions for sustainable economic growth in a certain area. The example of the Blue Economy is illustrative: they find that the worldwide well know instruments such as the MSC certificate are less suitable for their specific economic situation and look for tailor made solutions by collaborating in the region.

Among the most telling examples of how to work for people and nature is the initiative Engaged and pioneering local collaboration in South Africa and Mozambique. The concrete problem at stake here is illegal hunting. But despite the many efforts to combat the hunters, the incentives and means are lacking. But the poachers depend on local people to pursue their deadly activities. The property owner Christensen in his Sabie Game Park in Mozambique, with 40 km of border with South Africa and the Kruger park, shows that creating a well-functioning plan must involve the creation of alternative income schemes. Many locals earn good money on the illegal hunting. But as this struggle between park rangers and poachers is often bloody and ruthless, with high tech drones and planes, and highly trained and armed rangers on the ground. The (often) young people from nearby villages, generate much money and status among fellow villagers. Yet, it is dangerous and although their money supply the village with means to live for, many would turn to other forms of earning money if offered a chance.

At least, Christensen is convinced of this, and he started a collaboration with nature rangers of the Kruger park and the Southern Africa Wildlife College. Note that this is a private initiative that tries to mobilize public actors and resources. With this initiative, a process of engaging the local communities

in alternative ways to provide a living and at the same time protect the nature. Much of the work is about giving the local community opportunities to learn how to deal with nature, legal issues, economy, entrepreneurship and openness. People would then realize it is more attractive to protect the rhino than to kill it. This is a rather small scale area initiative, based on local modes of working. But it does have a potential for further spreading, if it is successful over time. It is an example of an area based engagement for new ways of dealing with institutions in a specific context, a pioneering example of how local/regional collaboration can lead to solutions for persistent problems. Christensen stresses that the solution also should include a broader international collaboration, as the hunts often are financed by international criminals. And the market in Asia could also be included by public campaigns, border security and police work, and regulations. A multi-level solution is thus required.

Green Finance: fuelling a multi-level engagement
Green Finance is a subject that often is hidden or concealed in for instance an area plan or a collaborative platform. Some initiatives are however directed specifically on Green Finance, as the Environmental Rating Loans and In the Amazon: Incorporate Nature's Value into Peruvian Economy. In both cases, the value of nature is incorporated in economic activities. In the first case in loans to businesses, and in the second case into a System of National Accounts. The work of Both Ends to provide access to the Green Climate fund for local organizations in the Philippines, India, Ghana and Argentina, which points out what is at stake in this topic: climate change must involve local communities. The Community Based TanguarHaor project in Bangladesh is also a project where green finance and local community work are playing roles of great importance, as the creation of new types of nature friendly incomes by triggering public-private funding.

And the RSPB work on innovative sources of finance in the UK demonstrates the need to create stronger ties between nature and business. This is very much related to the most interesting finding when it comes to Green Finance, which is that a new role of the economy in biodiversity protection is on its way. These might become a real game changer for how we deal with the economy. In this new economy, a shift is needed in the conservation focus from totemic symbols of cuteness as the panda, to the enormous potential of unglamorous politics, as the EU agricultural policy, world trade, animal crime, corruption and (semi-)illegal land use. To realize such a shift we need such politics, but we also need business markets and a world of intermediary actors and active citizens, which continuously can feed the governance of biodiversity with in the end financial means. In the material collected we see such needs for and efforts to strengthening engagement and participation within practice based engagements. It is part of the work in the TanguarHaor project in Bangladesh, it is the core aim of Both Ends Untold Story; strengthening the position of redistributors, who connect international funding to local projects and grass roots organizations. It is part of the efforts by BIOTA Africa to link stakeholders and alter practice.

These initiatives, and others, are in short about access of all kinds of participants to larger structures and the creation of new ways of thinking about economy and ecology. We see this in initiatives as the Ya'axché Conservation Trust, Pakke Tiger Reserve and the community based Hornbill Programme in India, where local tribes are offered access to conservation efforts and the sharing the benefits. Also the Para-Ecologists are recognizing the value of local values and knowledge in a turn to a more sustainable economy, and they are practicing this in Papua New Guinea, Costa Rica and in South Africa. Also the Smart Development Projects of the Nature Conservancy are guided towards a new role of the economy. In this initiative, the central issues is to support energy, mining, and infrastructure development in doing things the right way and in the right places. The Nature Conservancy brings together and enables governments, business companies and communities to use and share space, protect natural areas, improve resource management, and invest more wisely for a sustainable future.

The Dutch Building with nature is similar to this initiative, but it goes further in the delivery of design and implementation. But in both cases, the potential effects are huge. The CBD addresses similar issues as well, with its work on and call for adequate and appropriate institutional mechanisms and infrastructure, well-trained human resources, adequate funding, access to relevant information and other types of capacities. But this work should then be intensified and directed towards links between the social-economic conditions/context and nature. Also the effect of and for democratic rules and structures is an issue of great concern. This calls for further attention to links between biodiversity and the livelihood of local communities, to empower and unite local stakeholders and increase the access

to economic benefits from wildlife or wildlife protection. These are also examples of what PBL in the Roads from Rio+20 call for in its pledge to build more on societal initiatives to form new coalitions of the willing, where we are loosening up the multilateral approach and focusing on new groups of non-state actors such as multinational companies, regions or cities that are willing to adopt changes. Reframing sustainable development might help to find new concepts and narratives that can mobilize citizens, businesses and governments in many different circumstances worldwide.

Another finding concerning green finance is that the micro level also might contribute to such change, where small means (as in little financial support) serves as accelerators for change. There is a vast array of community based projects and initiatives that help capacity building and area based processes with often very little resources. Investments in for instance a single car or employee, or a training program, might trigger much effect. Often this concerns the capacity of local communities or local tribes, respecting and building on local traditions and also local economic benefits for the people involved, combined with a growing awareness of the value of wildlife. Two examples are the collaboration between nature rangers of the Kruger park and the Southern Africa Wildlife College in South Africa, as well as the man-animal conflict resolution and habitat improvement project in Bengal, that recognize the need for poaching as a start to involve people in wild protection. Small means also applies to a group of small private initiatives and foundations of Western individuals who work for improving livelihoods in relation to natural resources all over the world. This is a world too large to cover, but we included one example: urban gardening in Bolivia, in which a small foundation invests in urban gardens and education about food in the urban areas of Cochabamba in Bolivia.

Concluding findings
To conclude on the findings above, and creating a bridge to the lessons in 3.4, we state that there is much engagement and energy concerning the governance of biodiversity and that the further work could gain by strengthening this engagement further. Here is a role for the government, not just by stimulating a broad societal engagement, and also being a part of it, but also to work for a stronger storyline for biodiversity governance and also improving conditions and institutions. In the next section, we spell this out in three lessons for the governance of biodiversity.

3.3 Lessons for the governance of biodiversity

Three lessons are here formulated for the governance of biodiversity. The aim is to formulate lessons that enables both public and private actors and institutions to enhance the support , the legitimation and the implementation powers of the governance. The lessons are:
- To address the problem in ways that attract attention and real interest by more emphasize on the benefits of nature as a way to stop the devastation of nature.
- To employ the rise of engagement as for nature, from the full scale of societal actors: citizens, NGOs and businesses, but also governments. Both of these are changes that are already on the road. It is the (link to the) *third lesson* that represents a novel way forward. This concerns a new way of dealing with these wicked problems: institutional crafting as a tool to arm people and organizations for the challenge of dealing with the multitude of formal and informal rules.

The benefits of nature: a discursive approach
The first lesson is to address the problem in a way that attract attention and real interest. Currently much attention is paid to the benefits of nature, but this must not be a situation where the government is pulling back, leaving the field to others, as powerful business actors. Benefits of nature should be part of a new discourse where protecting biodiversity is the core, and this is brought to practice through an emphasize on the benefits of nature. As there is not one single dominating governance model active and there is not just one arena, it is of importance to bring an attractive storyline into the protection of biodiversity. A danger here is that the discourse lean heavily on voluntary private/business participation, without the participation of governments. Governments should recognise and work on their own continuous responsibility to follow the accomplishments and pursue dialogue on the involvement and division of labour to produce the benefits of nature. In that, governments have a particular role in promoting democracy and access to means and decision making.

This might for instance mean that future diplomacy is equipped to advocate biodiversity interests, as in the Bio Diplomacy Initiative. A part of the problem here is that focusing on decline of the biodiversity is not sufficient. In an interview, Peter Kareiva, the director of science of the Nature Conservancy[10], argues that this is essential. He states that when he talks about (evident) decline of species to business people, they are simply not impressed or convinced. Instead, he argues, we have to talk about the future of land and water, the effects (of roads being built, development, forest cleared, mining) on water supply, water quality, flood control, storm surge reduction, fish production and sediment retention. His finding is that those are the things governments, stakeholders and businesses often care about. It is more useful to talk about ecosystem services than biodiversity. But he adds that we should use another language than ecosystem services. We have to speak of benefits of nature, a language that inspire and engage people, both the powerful and the powerless. This is a call for a more practice based approach built on often unconventional alliances, with sufficient access to means, also for the poor. Governments should also work to change the economy by politicizing the economy as part of an approach that takes out destructive market and government forces. A stronger focus on biodiversity by public organizations and the diplomacy could be very supportive for this task.

The rise of engagement: a foundation for action
The second lesson is to employ the rise of engagement as a foundation for improved governance. More societal engagement should for governments be more than just a trend, it could be a key to create the support needed for a transition to benefits of nature. In many of the initiatives found in this study, we have seen efforts to mobilize and activate a broad engagement and make use of the creativity of the many. This is more than nice, it is necessary for stimulating important sector- and boundary-crossing work. Crossing boundaries is not literary about crossing national borders, it is more about crossing sectors and interests. The governance must guide and facilitate such crossings, because they are sources of conflicts and other obstacles. Governance of biodiversity is, as Jepson (2014) argues, is a field where centralized authority has given way to messy networked governance organized across many levels. Jepson (2014) also call for a re-engagement of the powerful, as conservation used to be good at. Now it is a question of open up, loosen the corporate structures and let leaders from other walks of life contribute their opinions, insights and influence.

Governance is therefore about the building of a joint agenda based on joint experiences and a common language. Engagement rises as one start to understand the position of others. Not only does it produce a new framing of the issues at stake, it is the foundation for a new repertoire of action where convictions are combined with practical solutions. A programmatic approach to why one should collaborate is essential, not only how. We have seen that private engagement is rising, and often focussing on triggering governments to join in. But we have also seen public-public collaboration, as in the India-Norway think tank set up mainstream biodiversity into decision making. The importance of such efforts might very well be an empowerment of networks in terms of an immense amount of energy. For a strong governance, plenty of such various combinations of actors in joint action is needed. Together, they continuously create new practices among a large variety of actors; not in the least engaged, concerned, interested or otherwise involved local residents. But also activist or business minded private actors, academics and policy makers. As they share ideas, knowledge and means about biodiversity, policy, economy, culture and power, there should be facilities to follow up these actions.

Facilities that might serve to organize decision making, monitoring, to resolve disputes and provide means and manpower. Much of the governance for the future might be organized and go through social media, which creates entirely new ways of joint motivation and awareness building, exchange of insights, and serves as a trigger for the elaboration and spreading of new modes of working. It has a huge potential to mobilize people and to create new ways of conducting policy. We are already witnessing a whole new generation of possibilities for participation and new ways of meeting and discussing issues at stake. This is often a weapon for the citizen, but for the future it might be much more a tool for governments. Such collaborative networks and social media in general might also help us overcome weak decisions and institutions create support for change. It is clear that internet and digital media already plays a vital role in contemporary governance, but at the same time, it has also

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[10] Published at www.biodiverseperspectives.com, through the digital network at LinkedIn.

just started. The use of such technology is rather fragmented and individualistic in use, and the opportunities and ability to make it work for the governance of biodiversity is likely to increase.

Institutional crafting as a tool to governance

Much effort is put into planning and capacity building but it is now time to explore new ways forward. Together with more emphasize on the benefits of nature and employing more of the societal engagement, it is now time to learn how to deal with the formal and informal rules of play. We call this institutional crafting. We define it as learning to and being able to identify and interpret dominant institutions, to understand resistance to these institutions, and judge their strengths and weaknesses in order to act accordingly, as in using and changing the institutions for biodiversity purposes. This is a call for a process of investigating how institutional crafting can add to the governance and then stimulate action. Formal rules of play are laws and regulations, and informal rules are the common beliefs and practices, often taken for granted beliefs of what the problems are and how to solve them. In a programmatic approach, institutional crafting should then be coupled to a greening of decision making, capacity building and better area based planning and practices, as well as the development of mechanisms and opportunities for green finance.

To look at this as a craftsmanship is to take serious the need to attach action to the situational and wider context, and understand how this context sets limits and create space for action. It is an entrance to a broad and better understanding of the problem at stake and to improve how we spend money on biodiversity. Its value might then also be in the legitimation of a forceful approach, in particular in combination with an attractive storyline based on the benefits of nature and making use of the engaged society. This might help raise the long term support for a governance of biodiversity by demonstrating that money is well spent and that the work actually makes sense for both wildlife and economy. Biodiversity governance might then be better equipped to supply itself with legitimacy.

The idea of more focus on institutional crafting also builds on the findings in Selnes and Kamphorst (2014), where we first formulated the need for more attention to making institutions work, as for example to increase citizens knowledge of and opportunities to complain against large companies in the context of (sustainable) production processes, by using dispute settlement facilities with regard to land use and land rights. This is further triggered by the findings here, as for instance by discussions on LinkedIn Biodiversity in a Rapidly Changing World on the need for enhanced awareness of the importance of biodiversity. Institutional crafting might be seen as a special case of capacity building, with focus on skills to deal with means. But it is more than that, it is about understanding, applying and learning to develop institutions, as a craftsmanship. A lack of such powers and abilities makes people one-sided dependent of others and unable to speak out in a forceful way. This challenge is at the same time inevitably intertwined with a democratic problem, as it is often locals, indigenous and/or poor people that is suffering the most from a lack of access to economy and politics, and thus require institutional craftsmanship. But also others, public or private, need to acquire such abilities and powers.
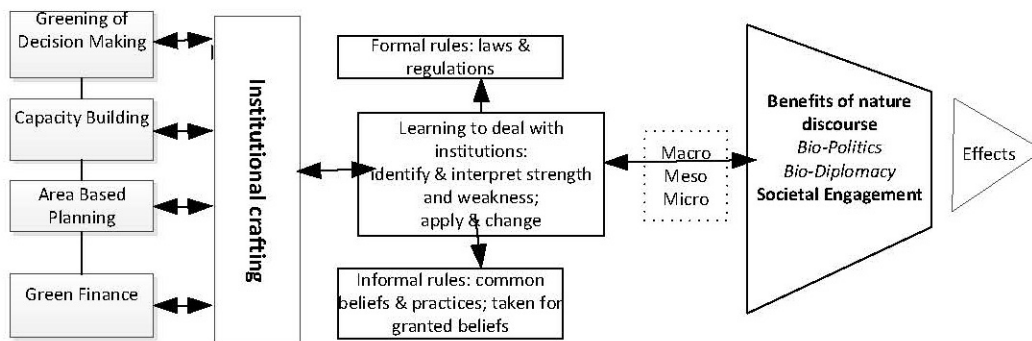

Figure 1: *A schematic set-up for a programmatic approach to institutional crafting*

The call for more attention to institutional craftsmanship has been put on the agenda by Yale University in a conference already in April 2003, titled Crafting and operating Institutions. A more recent example is Hurenkamp *et al.* (2012), Crafting Citizenship. Negotiating Tensions in Modern Society. The argument in this study is that it could be a powerful entrance to strengthen the governance of biodiversity. An example from the initiatives here is the Engaged and Pioneering Local Collaboration in South Africa where an alliance of a property owner, nature park rangers, local community and the education facility Southern Africa Wildlife College. Together, they engage in learning how to deal with nature protection, regulation and legal issues, local economy and entrepreneurship, decision making and openness. The ultimate goal is to make it more attractive to protect the Rhino than to kill it. The way the goals is pursued can be seen as an investment in institutional crafting. For the Dutch governance of biodiversity, this could be a way to enhance the coherence of the policy and reduce the fragmentation of policy and the compartmentalization of the ministries, issues brought forward in the evaluation conducted by Wilms *et al*. (2012).

4   Conclusions

In this final chapter we present the main conclusions from the study. This is here viewed to be the main answers to the research questions and presented in Section 4.1. In Section 4.2 we end the study with a conclusion on the more general aim of how to improve the protection of biodiversity, and the role of multi-level governance for such an achievement.

The main research questions formulated in Chapter 1 are the following:
- How can the current CBD governance for biodiversity be characterized and what are the main challenges?
- Which initiatives and projects are now emerging in terms of governance for biodiversity?
- How can the emerging initiatives and projects contribute to the challenges ahead
- Which lessons are there for the international governance of biodiversity?

This section provides the main conclusions to these question, although question two, on the initiatives found in chapter two, is viewed together with question three.

A characterization of the CBD governance and its main challenges
Protection of biological diversity is about dealing with a series of interlinked wicked problems. It is wired into politics and the right to make decisions. This right is in turn linked to the capacity of making alliances that are able to frame dominant problem definitions and solutions over time. Being able to deal with formal and informal rules of play, as land use zoning, is here of major importance. A major challenge is to deal with the many (levels of) actors and interests involved, both public and private actors. The problem is the low awareness that leads to poor policy and an insufficient capacity to protect the biodiversity. In addition, there are many layered governance gaps due to the conservation discourse that has not been very attractive or inviting to many societal groups and citizens, and there is also the weak political clout of biodiversity. Challenging is also the often politicized sovereignty within a complex institutional setting, which makes it hard to translate CBD ambitions into practice.

How the emerging initiatives and projects contribute to the challenges ahead
Many initiatives are often built on an approach explicitly aiming for a greening of decision making through capacity building and an area specific focus where developing or finding new and better forms of finance are included in the approach. Many initiatives are also directing towards the engagement of both public and private parties; at the (inter)national level and also the regional/local level. Often it is about some kind of combination of ecology with economy; connecting people and issues inside and often also outside the area. This is a work that usually takes place at many levels. These kind of initiatives have a great potential to create awareness and legitimacy through a mode of working that bridges the many levelled governance gaps. By making complex institutions workable, they appear attractive to both the involved and also others, for instance a government that otherwise might have chosen a different path of development than biodiversity protection. As such, their contribution to the challenges seems to carry the essence of what is needed to pursue a sound protection of biodiversity.

Lessons for the governance of biodiversity
The main lesson for the governance of biodiversity starts with the need for a stronger emphasize on the benefits of nature and by that employing more of the present societal engagement. Although this is a major job in itself, we will here make a pledge for a stronger focus on learning how to deal with the formal and informal rules of play. We call this institutional crafting: learning and being able to identify and interpret dominant institutions, to understand resistance to these institutions, and judge their strengths and weaknesses in order to act accordingly, as in using and changing the institutions for biodiversity purposes. A programmatic process of investigating how institutional crafting can add to the governance and then stimulate action should be initiated. Formal rules of play are laws and regulations, and informal rules are the common beliefs and practices, often taken for granted beliefs of what the problems are and how to solve them. Institutional crafting must then be linked to a greening of decision making, capacity building, area based planning and practices, and mechanisms

and opportunities for green finance. We look at this as a craftsmanship, which is to be learned. It will provide better understanding of the problem at stake and improve action. by improving the achievements, it has also the power to strengthen the legitimation of the governance. In particular, enhancing the legitimacy is likely if it is combined with an attractive storyline built on the benefits of nature and making use of the engaged society. This might help raise the long term support for a governance of biodiversity by demonstrating that money is well spent and that the work actually makes sense for both wildlife and economy. A lack of such powers and abilities makes people one-sided dependent of others and unable to speak out in a forceful way. This challenge is at the same time inevitably intertwined with a democratic problem, as it is often locals, indigenous and/or poor people that is suffering the most from a lack of access to economy and politics, and thus require institutional craftsmanship. But also others, public or private, need to acquire such abilities and powers.

The aim of this research is to offer new insights into how to protect biodiversity, and in particular how improvement can be achieved through multi-level governance. The lessons formulated above are constructed on observation that most of the building blocks for improvement are already present, but that they need further support and development. People and organizations at many levels are needed to make this work more according to the CBD aims.

Acknowledgement

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