STAKEHOLDER VISIONS FOR BIODIVERSITY CONSERVATION IN DEVELOPING COUNTRIES

An analysis of interview responses from COP 11

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Earth System Governance

OCTOBER 2014

CITATION

This paper can be cited as: Adenle, Ademola A., Casey Stevens, and Peter Bridgewater. 2014. *Stakeholder visions for biodiversity conservation in developing countries: An analysis of interview responses from COP 11*. Earth System Governance Working Paper No. 32. Lund and Amsterdam: Earth System Governance Project.

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This anticipatory report explores what policy-decisions can be made in the Convention on Biological Diversity (CBD) in the near term which will spur long-term action in developing countries. This is a question of concern for the twelfth Conference of the Parties of the Convention on Biological Diversity (CBD), Republic of Korea from 6-17 October 2014.

ABSTRACT

The 2014 Conference of the Parties (COP 12) for the Convention on Biological Diversity (CBD) will be a crucial meeting for measuring progress towards achievement of the 2011-2020 Strategic Plan and its component 20 targets – termed the Aichi Targets - as well as making significant progress towards the vision of a more balanced relationship between people and the rest of biodiversity by 2050. Many key issues have been left for this COP by negotiators at earlier meetings who were unable to settle financial issues, articulate clearly the Aichi Targets for national implementation by 2020, or to provide clear guidance on capacity-building for developing states. This paper utilizes 22 stakeholder interviews taken at the 2012 Hyderabad COP to develop discussion of ongoing issues in the CBD negotiations. These interviews yielded a number of tractable policy opportunities available for the 2014 Conference to create significant space for developing countries to contribute effectively to global achievement of the Aichi Targets. Breakthroughs and developments at the COP, despite the inevitability of some difficult discussions, will be provided by developing country perspectives. As we enter the second half of the 2011-2020 decade, developing countries must be placed at the centre of efforts to improve sustainable use, conservation and benefit sharing of biodiversity around the world.

Keywords: Aichi Targets, Biodiversity conservation, Financial mechanism, Developing countries

KEY MESSAGES

The Twelfth Conference of the Parties of the Convention on Biological Diversity, to be held in the Republic of Korea from 6-14 October 2014, offers a unique opportunity to focus efforts for significant progress in the next five years.

A primary focus of the Conference should be on mobilizing action in developing countries, many of which contain significant amount of global biodiversity.

Issues related to the National Biodiversity Strategies and Action Plans, clear financing for biodiversity, and expanded coalitions of biodiversity are of utmost importance for prioritizing at the Twelfth Conference of the Parties.

SERIES FOREWORD

This working paper was written as part of the Earth System Governance Global Research Alliance – www.earthsystemgovernance.org.

Earth system governance is defined in this Project as the system of formal and informal rules, rule-making mechanisms and actor-networks at all levels of human society (from local to global) that are set up to prevent, mitigate and adapt to environmental change and earth system transformation. The science plan of the Project focusses on five analytical problems: the problems of the overall *architecture* of earth system governance, of *agency* of and beyond the state, of the *adaptiveness* of governance mechanisms and processes, of their *accountability* and legitimacy, and of modes of *allocation and access* in earth system governance. In addition, the Project emphasizes four crosscutting research themes that are crucial for the study of each analytical problem: the role of power, of knowledge, of norms, and of scale. Finally, the Earth System Governance Project advances the integrated analysis of case study domains in which researchers combine analysis of the analytical problems and crosscutting themes. The main case study domains are at present the global water system, global food systems, the global climate system, and the global economic system.

The Earth System Governance Project is designed as the nodal point within the global change research programmes to guide, organize and evaluate research on these questions. The Project is implemented through a Global Alliance of Earth System Governance Research Centres, a network of lead faculty members and research fellows, a global conference series, and various research projects undertaken at multiple levels (see www.earthsystemgovernance.org).

Earth System Governance Working Papers are peer-reviewed online publications that broadly address questions raised by the Project's Science and Implementation Plan. The series is open to all colleagues who seek to contribute to this research agenda, and submissions are welcome at any time at workingpapers@earthsystemgovernance.org. While most members of our network publish their research in the English language, we accept also submissions in other major languages. The Earth System Governance Project does not assume the copyright for working papers, and we expect that most working papers will eventually find their way into scientific journals or become chapters in edited volumes compiled by the Project and its members.

Comments on this working paper, as well as on the other activities of the Earth System Governance Project, are highly welcome. We believe that understanding earth system governance is only feasible through joint effort of colleagues from various backgrounds and from all regions of the world. We look forward to your response.

Frank Biermann

Chair, Earth System Governance Project

Ruben Zondervan

Executive Director, Earth System Governance Project

1. INTRODUCTION

Negative changes to Biodiversity, especially species loss, continues at disturbing pace around the world, but biodiversity loss in developing countries is a primary and unique environmental challenge (FLORES, 2010; GARI, 1999). Governance decisions made at the global level in the near future will prove crucial for reducing biodiversity loss and helping to harmonize human interactions with the ecosystems in developing countries. Most of the discussions have focused on how to increase funding for biodiversity projects around the world and on targeting existing aid toward ecosystems in the most need. This paper approaches the issue in a different way with the central question: what decisions can be made in the near term which will spur long-term action in developing countries?

This is a question of pressing concern for the upcoming twelfth Conference of the Parties of the Convention on Biological Diversity (CBD) to be held in the Republic of Korea from 6-17 October 2014. In 2010, parties to the CBD agreed to establish a set of global targets (the Aichi Targets) to help stem biodiversity loss as the cornerstone to the Strategic Plan for the decade. Some of these targets set 2015 as their endpoint while others were set at 2020. Regardless, key issues regarding funding, technology transfer, assessment systems, and other issues can be dealt will need to have some framework of action by the Korea meeting in order for them to have a clear impact in the later half of the decade.

This report serves to provide the responses from high-level practitioners to develop some focal points for focus in response to the question. The first part will provide some background for the Aichi Targets and the 2011-2020 Strategic Plan for the CBD. The second part will discuss how the respondents for this report were selected and the methodology of collecting their responses. The final part will collect the responses and organize them around key policy-relevant issues. While the responses are not exhaustive of opinions, they provide an excellent window for exploring and engaging with key issues of biodiversity governance in the next few years.

2. THE AICHI FRAMEWORK

The Aichi Targets are a set of 20 different objectives under five broad goals for biodiversity conservation, management and benefit sharing, to achieve in the 2011-2020 period. The goals are ambitious, many have robust possible measurement devices, and they can serve as important focal points for national, local, and nongovernmental organization (NGO) efforts.

The Aichi Targets follow from the earlier 2010 targets of the CBD which were developed in 2002 at the WSSD and later at COP6. In 2006 these targets were integrated into Goal 7 of the Millennium Development Goals (MDGs). This ambitious goal sought “to achieve by 2010 a significant reduction of the current rate of

biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth" (Adenle, 2012; UNEP/CBD/COP6, 2002). In fact, the 2010 targets did not spur state action or result in significant improvement in the state of biodiversity (BUTCHART ET AL., 2010; UNITED NATIONS, 2012) but the political space that the targets provided created new networks of action and a focus on advancing global biodiversity indicator systems: notable amongst these are the IUCN Countdown 2010 Initiative and the Biodiversity Indicators Partnership (BIP) of UNEP's World Conservation Monitoring Centre (FISHER, 2009). Since 2004, additional efforts have led to the creation of the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) in 2012, which has potential to provide additional technical underpinning needed to achieve the targets. The impact of these various partnerships has yet to be clearly seen in transforming biodiversity policy.

When it became clear to the parties that the 2010 targets were not going to be achieved, efforts began to develop a new set of goals with attached targets and indicators. Two key interventions have created a more robust system of governance for the 2011-2020 Strategic Plan periods which the previous decade did not have. One of these was The Economics of Ecosystems and Biodiversity (TEEB) initiative which was developed by the European Commission and UNEP. The TEEB initiative aimed to develop a framework for integrating economic and ecosystem analysis to find effective ways to value biodiversity (TEEB, 2008). The TEEB initiative presented reports at COP9 and COP10 which were used by a variety of different actors in the negotiations (Earth Negotiations Bulletin, 2010). A second, more important, development was the final achievement of an Access and Benefit Sharing (ABS) protocol, also called the Nagoya Protocol, as part of the CBD. Although a goal from the outset, progress was slow and ineffectual until final agreement at COP10. This breakthrough added an important tool for evaluating and enabling benefit sharing of biodiversity and is thus crucial in biodiversity governance at all, especially local, scales.

While 2020 is set as the date for most target outcomes, Target 16 (the entry into force for the Nagoya Protocol on Access and Benefit Sharing) and Target 17 (the development of updated National Biodiversity Strategies and Action Plans-NBSAPs) were set for completion by 2015. Both of these targets were considered "mission-critical" for progress in the later years. While progress on ratification of the Nagoya Protocol continues and could see implementation by 2015, only 10% of countries have so far revised their NBSAPs

The financing issue was similarly emphasized in the COP10 negotiations and formed a key issue in the subsequent COP11 discussions in Hyderabad. However, the financing issue continues largely unresolved. Citing the post-2008 financial crisis donor countries have been unwilling to agree to increases in aid. The varied funding needs for different developing countries have not been effectively identified either. In one assessment by McCarthy et. al., (2012), it was estimated that current biodiversity funding would need to be expanded by about 800% for effective progress on the Aichi Targets to be achieved. While prioritizing and targeting of aid may help in preventing loss in some of the most threatened ecosystems (MILLER ET AL., 2013), significant new funding is necessary. Full progress on the Aichi Targets requires efforts on Target 20 which aims for "the mobilization of financial resources for effectively implementing

the Strategic Plan for Biodiversity…should increase substantially from the current levels." At the COP11 in 2012 parties agreed to make assessment and creation of key targets for biodiversity financing a key topic at the COP12 (Decision XI/4). 2014 offers a unique opportunity thus to make progress on the financing progress. The GEF Replenishment negotiations will conclude in March and CBD negotiations on the issues have appeared to move forward significantly.

In addition, COP12 discussions take place in an important period for global environmental and development governance. Negotiations on Sustainable Development Goals, the main intergovernmental outcome of the Rio+20 Conference, will be finalized in the latter half of 2014 and climate change negotiations will occur at a make or break conference in Paris in 2015 While a positive outcome at the CBD can make negotiations in these other areas easier, it is also possible that the heightened atmosphere will reduce the focus on biodiversity issues and prevent progress on issues at COP12. This is most clearly evident in the relationship between biodiversity and climate change; negotiations on the links between them will likely be avoided at COP12. Rather than seeing this as constraining efforts at COP12, stakeholders in the CBD have an opportunity to develop creative solutions to their own problems. This paper uses stakeholder interviews with some of these individuals to develop a set of policy relevant avenues for attention which can offer improved prospects for achieving Aichi Targets by developing countries.

2.1 BIODIVERSITY LOSS

Biodiversity loss is driven most significantly by land-use decisions by people around the world (NIJMAN, 2010; WOOD ET AL., 2000). Freshwater and coastal ecosystems especially are becoming increasingly exposed to threats of climate change and land conversion (e.g. agriculture and bioenergy crops), pollution, migration and infrastructure development (MILLENNIUM ECOSYSTEM ASSESSMENT, 2005). According to the Millennium Ecosystem Assessment, climate change is a threat to ecosystem services including water, wild plants and forestry in Southern and Eastern Africa. Also, agriculture is responsible for much of the biodiversity loss in Sub-Saharan Africa, South-East Asia and Latin America, Moreover, the fast growing population in developing countries is also worsening the situation as pressure continues to mount on biodiversity due to rise in demand for food, energy and habitat construction.

Also different pressures from corporate globalization have been linked to commercial activities in countries with biodiversity hotspots. It has been argued that majority of the biodiversity–implicated products that come from developing countries end up in industrialized countries. Five selected developing countries such as Honduras, Sri Lanka, Malaysia and Papua New Guinea, combined represent 60% of all domestically recorded biodiversity threats due to export activities (LENZEN ET AL., 2012). According to Lenzen et al. (2012), the main final destination of biodiversity-implicated products is the USA, EU and Japan. Furthermore, Lenzen et al. (2013) show that biodiversity loss is directly linked to a number of water-related trade activities (e.g., fishing) and demand from developed countries. This tends to amplify driving forces of change and increasing pressures on ecosystem services globally. Although growing concern related

to commercial biodiversity –implicated products can only be resolved at the international meetings when all hands are on deck. While the access and benefit sharing of Nagoya protocol introduced by the CBD regarding sovereign right over the use of biological resources is yet to be fully implemented, debates over access and ownership of biodiversity will continue to generate heated discussion.

2.2 BIODIVERSITY GOVERNANCE

The central challenge for global biodiversity governance remains in how to create multi-level action on local land-use decisions around the world. However, policy institutions and funding remain limited to spur and connect action around the world. Hence the very policy relevant question of this report is how can we make decisions in the near term which will spur such long term action around the world? As developing countries hold the greatest quantity of biodiversity at all levels and as policy innovation is likely to be greatest in those countries in the short-term, the main focus of our discussion is on developing countries.

The CBD operates as an umbrella organization on biodiversity issues conducting its own governance activities but also connected with the other biodiversity conventions. It was opened for signature at the Rio de Janeiro Summit in Brazil 1992 and saw quick ratification by many countries. In 2002 the World Summit on Sustainable Development (Johannesburg, South Africa), major stakeholders including political leaders agreed to "to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level" (COP 6 Decision VI/26, http://www.cbd.int/decision/cop).

There were several barriers to achieving this goal in various countries and the issues were particularly acute in many developing countries. While the goal was agreed at the international level, it did not include engagement of relevant stakeholders in its design or agreement at the national level. While many countries were constructing their first or second NBSAPs, these were handled primarily by the national focal points without always including multiple actors from throughout society (PRIP ET AL., 2010). Some authors (AGRAWAL AND REDFORD, 2006; SWIDERSKA, 2002) have argued that failure to integrate and communicate development needs inevitably place limits on biodiversity conservation in many developing countries. According to Swiderska (2002), development policy and planning does not reflect win-win options that support both biodiversity and development objectives that affect poor rural communities, thereby limiting the efforts of national governments. In fact, capacity development provided by the UN agencies made a minimal impact as national government policy failed to emphasise development needs (PRIP ET AL., 2010). While attempts have been made to link biodiversity conservation with human development and poverty alleviation (ADAMS ET AL., 2004), the lack of understanding between poverty and conservation linkages undermine support for biodiversity conservation at the national levels (AGRAWAL AND REDFORD, 2006; PRIP ET AL., 2010).

The issues of win-win policy options and trade-offs raises key questions about the resilience of biodiversity policies that do not solve development challenges and the

ethics of excluding the poorest from the benefits of biodiversity conservation. Ostrom's challenge on "fortress conservation theory" argued that the efforts of local people in managing common pool resources should be recognized as key to robust and adaptive institutional frameworks (OSTROM, 1990). A recent study also follows this line of argument by applying a framework that emphasised the need to "change the existing approach to biodiversity as a linked social-ecological issue" which requires effective governance arrangement that prioritizes local communities to strengthen biodiversity policy (HILL ET AL., 2013). A growing body of literature (KRISHNA ET AL., 2013; SCHOMERS AND MATZDORF, 2013) has reported policy fragmentations around regulation, market-based incentives mechanism and expansion of protected areas with a view to halting biodiversity loss as part of conservation paradigm. But barriers including poor alignment of local knowledge, value and weak market-based instruments continue to undermine current efforts. There is need to understand factors determining the success or failure of institution and how they interact between actors and their interdependence in order to govern biodiversity sustainably (PADMANABHAN AND JUNGCURT, 2012). These authors proposed traditional farmer use-perspective approach that incorporates motivation and interest of actors in biodiversity which are fundamental elements of transaction that can offer adequate governance solution. While use-perspective approach is at initial stage, further work is required before it can be operational for research. Similarly (FARMAR-BOWERS AND LANE, 2009) recommended decision-system theory based on practical biodiversity conservation program initiated by farmer groups can enhance conservation decision particularly in farm trading business and land ownership decision-system. Given smallholder farming practices in many developing countries, this approach may be difficult unless a simplified model is produced to suit their systems.

At the same time the timeframe for the 2010 goal did not allow full assessment, monitoring, or development of clear national strategies for biodiversity protection (DOBSON, 2005; SANTAMARIA AND MENDEZ, 2012). According to Santamaria and Mendez (2012), it was important to "incorporate an independent, transparent, credible and robust scientific assessment of the potential success of such policies," but the lack of sufficient time was part of the reasons why this policy process was unsuccessful.

The Aichi Targets aim to deal with this problem by increasing monitoring capacity and by focusing on focused goals which allow clear progress to proceed. Two outstanding and acknowledged challenges for the 2011-2020 Strategic Plan and the Aichi Targets are to expand financing for biodiversity and expand the stakeholders involved in the governance of the problem. Estimates put the cost for biodiversity between US$20 billion and US$ 25 billion per year to achieve global conservation effectively (HALPERN ET AL., 2006). But how developing countries are prioritized in getting access to these funds so as to implement biodiversity policy effectively and achieve biodiversity targets are yet to be clarified. Moreover, lack of empirical data in this regard makes it difficult to know how funding can be channeled to help developing countries that require most assistance. A recent analysis by (WALDRON ET AL., 2013) suggests that most highly underfunded countries are from developing countries with biodiversity hotspot but require a coordinated effort to reduce biodiversity loss particularly in conflict prone countries. Although, the governance quality will determine whether to allocate mixed conservation and development aid by

the donors as less politically stable countries might not be able to attract this kind of aid (MILLER, 2014). Domestic environmental budgets may respond to local political concerns and not be targeted towards areas with significant importance in preventing biodiversity loss (NELSON 2009, this may also be the case with global biodiversity aid which may prioritize countries with severe biodiversity need, but not necessarily areas within those countries with severe need, see: HOLMES, SCHOLFIELD, AND BROCKINGTON 2012). In addition, expanded stakeholders and creating new points of engagement for scientists and practitioners in developing countries could be a key area for development and transformation (BARBER ET AL., 2014). These challenges will be particularly pressing in the period after the 2014 Conference of the Parties as funding will need to materialize soon to have significant impacts and actors will have to be engaged in order to start policy implementation. The rest of this paper then focuses on the conditions which might make the 2014 Conference of the Parties the most effective.

3. METHODOLOGY

3.1 EXPERT VIEWPOINT ELICITATION

This study is based on the qualitative analysis of expert elicitations for the management and conservation of biodiversity in developing countries. What we refer to as experts where elicitation was applied in this study are based on their specialized knowledge and wealth of experience on biodiversity issues either through research or participation at the various levels of national government and international meeting such as Conference of the Parties, particularly among policymakers. The open-ended questions can be used in the face-to-face interviews to elicit expert viewpoints on a wide range of issues through qualitative approach (YIN, 2003, p111). Experts' elicitation can use a semi-structured or unstructured interview to assess their subjective judgment on tasks which require to be assessed (CLARK ET AL., 2008). The key aspect of an expert elicitation particularly with regard to decision-making and generating ideas for future needs does not allow consensus as it is often done within a group (DALAL ET AL., 2011). But rather it provides insight into the current diversity of agreement and disagreement that may exist within an expert community but communication to the public fora.

These attributes implicated expert elicitation as appropriate methodology for this study because of our interest in seeking the views of experts that can provide relevant information on biodiversity conservation in developing countries. As a result, our methodology relied on a semi-structured interview (using open-ended questions) with attention to topical relevant issues that could benefit from viewpoints of the experts. The interviewees were allowed to discuss freely and clarified answers to questions asked (e.g., "Can you please provide an example?" or "why is it relevant?" or "tell me what you know about it through your experience"). This specific probe used during the interviews did not only reduce the impact of personal biases but helped focus on actual real life examples of biodiversity.

3.2 STAKEHOLDER SELECTION

We used the opportunity of COP11 meeting to interact with as many relevant stakeholders as possible through face-to-face interview as guided by interviews questions described in Appendix I. The criteria used to select the participants are based on demonstrated expertise and research in biodiversity and involvement in national or global conservation policy development which was confirmed prior to the interview. Therefore, individuals selected were the ones who met requirements as mentioned above before the interview. Interview participants were selected by the lead author. Participants led their delegates or represented their organizations and in some cases they were involved working groups during the event. Essentially, these are policymakers whose key roles and contributions are very significant to decision-making at the COP meeting. Therefore, there is need to gain insight into perspective of individual policymaker in decision-making as premature consensus about the knowledge and skills for efficiency and strategic decision is often avoided when experts are interviewed differently (CLARK ET AL., 2008).

First the individual was approached and appropriate time was scheduled for the interview during COP 11 meeting. We conducted twenty-two detailed individual interviews with the national delegates, including ministers, directors and representatives of non-governmental organisations (NGOs) on the management and conservation of biodiversity in developing countries as described in Table1. 1 to 3 individuals were interviewed from 9 different countries, European Commission and NGOs. 2 to 3 individuals had to be interviewed from the same country or organization as recommendations were often made by first interviewee to interview other experts from their country who could provide additional information in response to questions they were unable to answer. The lead author conducted all the interviews on site at the eleventh meeting, COP 11, October 2012, Hyderabad, India. Interviews lasted between 30 and 60 minutes.

Several organizations and individuals representing their countries were approached for the interviews but not all including the head of UN agencies were available due to other commitments at the COP 11 meeting. As many as 50 individuals were approached but only 22 granted the interviews (Table 1). However, the paper benefited from the content of many side events, including speeches delivered by the Prime Minister of India, Vice-President of World Bank, the Executive Secretary of CBD, the Executive Secretary of United Nations Environment Programme (UNEP) and the CEO of the Global Environment Facility at the conference. Stakeholders' views were reported anonymously except in a few cases permission where their permission allowed us to reveal their participant organization.

3.3 DATA ORGANIZATION AND ANALYSIS

Interviews were tape- recorded and contemporaneous notes were taken. Following the interviews, audio recordings were transcribed immediately and coded systematically (using qualitative data analysis software, Hyper Research 2007), whilst considering verbatim quotes, key points and phrases used. Every key information and important

quote from more than 20,000 words transcribed was used for the analysis below. The biodiversity topics that we focus on in this study are those that received a lot of attention in response to our questions during the interviews. For example, "beyond target 11", chosen as a sub-topic is an example where participants felt that a lot of activities are going on in many developing countries. Therefore omission of other targets in the discussion is not a deliberate attempt in this paper but rather we put together what attracts most attention in an effort to achieve goals set for the year 2020.

3.4 LIMITATION

While not a fully representative set of participants nor inclusive of all stakeholders, the individuals interviewed allowed for the development of key insights into progress on implementation of the Aichi Targets, as well as wider progress on CBD implementation. The absence of other stakeholder groups including representatives from some of the biodiversity-rich countries may be a limitation. But non-inclusion is due to one of the reasons mentioned in section 2.2 as efforts made to speak to them proved futile. Moreover, some of the participants interviewed have worked across many developing countries, therefore, their views may not necessarily be different from those that were not interviewed. For example, one of the participants mentioned that he has visited 150 countries and worked in 20 countries, mostly mega-diverse countries.

Table 1- List of countries and participating organizations that contributed to this paper (N=22)

Countries/Organisations	**Position**	**Affiliations/Department**
China	Director National Focal Point	Ministry of Environmental Protection
Brazil	Minister and Head of the delegation National Secretary of Biodiversity Senior Advisor and Director	Ministry of Environment
Kenya	Director General Deputy Director	Ministry of Environment, Water and Natural Resources
Bolivia	Senior Advisor and Head of Delegation National Focal Point	Ministry of Foreign Affair and Ministry of Environment and Water
Ghana	Professor (National Biodiversity Committee) Director	Ministry of Environment, Science and Technology
Canada	Director	Environment
Japan	Director	Ministry of Environment
South Africa	Deputy Minister Director	Minister of Water and Environmental Affairs

India	Director Chairman	Ministry of Environment and Forest
European Commission (EC)	Biodiversity Policy Officer	Environment
International Union for Conservation of Nature (IUCN)	Director	Global Policy
Nature Conservancy	President and CEO	Management and Environmental Strategy
Conservation International	President Director	Biodiversity and Ecosystem Services Policy

4. FINDINGS

4.1 BEYOND TARGET 11

One of the significant arguments made by multiple respondents was the need to strive towards significantly expanded protected area systems, particularly focused on crucial areas for biodiversity protection. Respondents argued that efforts could be significantly increased on Aichi Target 11 (protected areas covering at least 17% of land and 10% of coastal and marine areas), Target 12 (zero extinction), and Target 14 (safeguarding essential ecosystems and accounting for women, indigenous, and rural livelihoods). This point is emphasized by one respondent: "Look at Madagascar I've been there 90 times in the last 28 years, 100% of the primates are endemic, 80% of the plants are endemic, 99% of the frogs are endemic…amazing endemism I mean, not just at the species level but at the genus level, family level, so you have whole evolutionary lineages there…90% is gone, the worst erosion you'll see anywhere…If you don't protect that last 10%, you could lose a major chunk of global biodiversity."

Similar to Madagascar, Tunisia, Libya, Liberia, Ivory Coast, Cape Verde, Ghana, Gabon and Guinea are countries with significant hotspots in Africa with very high endemism that could result to an enormous loss of biodiversity if action is not taken. Parallel to these hotspots, major tropical underdeveloped areas also have high biodiversity, particularly in Amazon, the Congo Forest Block, New Guinea and the woodlands of Southern Africa were also mentioned among respondents as key areas. However, one respondent noted that although tropical forests have lower levels of fragmentation than do some of ecosystems, they are seeing significant level of loss. Respondents emphasized a strong focus on hotspots and high biodiversity wilderness areas with the highest level of endemism if extinction is to be prevented and meeting Target 12 which should be clearly developed in NBSAPs.

Respondents also emphasized that efforts should try and exceed the targets set in the Aichi Targets. One respondent stated: "In order to succeed, there is urgent need to push for 25% as opposed to 17% set in Nagoya despite some progress made with Aichi Target 11" and having already 15% terrestrial in protected areas in many developing

countries (IUCN AND UNEP, 2009). This goal may fit in the overall project of the 2011-2020 Strategic Plan as building towards a better biodiversity world by 2050. Although, the majority of African countries currently have between 9% and 10% of terrestrial in protected areas under IUCN red list.[1] African countries such as South Africa, Kenya, Rwanda and Tanzania have relatively good legislative framework and have a large number of protected areas, particularly in Tanzania. Respondents argue that it will be difficult to achieve Aichi Targets in some African countries due to complex political situation, limited institutional capacity and weak legislative framework.

Those countries which have reached and exceeded the global Aichi Target land percentage may offer instructive lessons. In Bolivia, the government recognized the need to put in place political and institutional mechanism to ensure more protected areas are covered, thereby achieving the global targets by the year 2020. For example, in Bolivia, one of their top priorities is to evaluate the level of involvements of indigenous and local communities in view of concept of Mother Earth and incorporating appropriately important elements into the framework under the third pillar of national conservation project. However, the Bolivia representative disagreed with the concept of green economy as part of implementation processes for Aichi biodiversity targets.

Some advanced developing countries such as China, Brazil and India have already reached or surpassed the land target. According to one of China's representatives "more than 35 priority project areas have been identified for conservation which occupy 24% of the whole Chinese territory and we are already at target 17% and looking beyond the global target to achieve 18%". However, he acknowledged that China is 2-3% short of global target 10% for the marine protected area. Brazil has a strong national biodiversity council, as one of the few countries that lived up to the goals of 2010 biodiversity targets, is making efforts to achieve the Aichi targets by the year 2020 and beyond.

Other countries face similar problems. Brazil has already approved 18 out of 20 Aichi targets. Brazil has 5 major biomes (Caatinga, Cerrado, Pantanal, Amazon and Atlantic Forest) with almost 17% of its terrestrial (Aichi target 11) under protected areas as explained by the national focal point. Although a very high proportion of the protected areas is in the Amazon. The rest of major biomes only have an average of 3% in terms of protected areas. The Brazilian representatives felt that there is need for Brazil to double its effort in promoting and implementing legislative framework in the less protected areas, particularly where the important landscapes are absent in the areas under protection (the Pantanal and the southern part of Brazil). The India representatives also shed some light regarding government efforts in conserving key biodiversity areas. According to the representative, India has one of the strongest biodiversity programmes in Asia. For example, the Indian National Green Corps has a strong network throughout the country that promotes and educates students to the issues related to the importance of biodiversity conservation. India is also one of the

[1] See: http://www.cbd.int/protected/tools/ (Explanatory Guide on Target 11 of the Strategic Plan for Biodiversity)

few countries that lived up to the goals of 2010 biodiversity target with almost 20% of terrestrial under protected areas, above the global target of 17%. However, according to the interview, coastal wetlands are one of the least protected areas which require government attention by the Indian government.

While progress has been steady on Target 11 and the world has gone forward significantly in creating a "well connected systems of protected areas and other effective area-based conservation measures," challenges remain (UNITED NATIONS ENVIRONMENT PROGRAMME, 2012). To turn protected areas into effective tools against biodiversity loss will require increased funding, mainstreaming the protected areas into larger landscapes (including cities, agricultural landscapes, etc.), and improving marine protected systems. Unfortunately, effectively connected systems of protected areas are very rare (WOODLEY ET AL., 2012) and many hotspots and ecoregions have received insufficient attention (WALDRON ET AL., 2013). Marine protected areas present a specific challenge in terms of need for technology for monitoring, integration into near-coastal economic activity, and funding to identify and define the area (UNEP-WCMC, 2008). The issue of identifying ecological important marine protected areas yielded significant debate at COP 11, but progress has been stalled with many negotiators stating that the need for better science in identifying and managing these marine areas is necessary for action.

4.2 IMPROVED BIODIVERSITY ACTION

One problem with biodiversity action around the world is that it often done in politically expedient ways rather than focusing on potential biodiversity impact. For example, (JOPPA ET AL., 2013) explain that "Present conservation efforts bias toward lands that are high, cold, dry, or otherwise far from people" which limits the impact of these conservation policies on improving all forms of biodiversity. Respondents were well aware of these problems and diagnosed the problem in a variety of different ways: Low priority for biodiversity in many governments, a problem making the importance of biodiversity clear, and developing frameworks for protecting ecosystem services. Policy solutions promoted including a host of different education efforts (making clear the connections between biodiversity, ecosystem services, and the wellbeing of people in poverty).

Mainstreaming was set as one of the primary goals to develop from the Strategic Plan and the focus on the Aichi Targets (most explicitly in Aichi Target 2). The CBD Secretariat module on mainstreaming specifies that this aims for "the integration of the conservation and sustainable use of biodiversity in both cross-sectorial plans…and in sector-specific plans such as agriculture, fisheries, forestry, mining, energy, tourism, transport and others. It implies changes in development models, strategies and paradigms. Mainstreaming is not about creating parallel and artificial processes and systems, but about integrating biodiversity into existing and/or new sectorial and cross-sectorial structures, processes and systems" (SECRETARIAT OF THE CONVENTION ON BIOLOGICAL DIVERSITY, 2011). While positive cases of mainstreaming are highlighted in discussions (for example in CBD Decision XI/3) there is not a clear template for applying this in diverse policy contexts. Progress on

mainstreaming is limited in developed countries, but in contexts with more limited resources and less technology for implementing integration introduces more significant limitations.

Respondents were concerned that biodiversity was not receiving the priority it deserved in poverty reduction discussions. Some claimed that this was a problem of communicating the benefits of biodiversity to the public (see: CHASEK, 2010). One participant from Africa, for instance, describes her observation about awareness: "Government still have a lot of work…I don't think we have convinced the public as there is still a very poor understanding of what biodiversity is…why it is relevant across the board from rural to urban." Although, some respondents from emerging economies mentioned that the public is becoming increasingly aware of the importance of biodiversity through the media, respondents felt that the lack of basic understanding of the role of biodiversity in sustaining agricultural systems and its values in terms of the food, water, air, climate stability, and physical protection that it provides, remain a big challenge in developing countries.[2] Respondents added that the relationship between ecosystem services and biodiversity conservation has yet to gain awareness and attention among local communities and national policymakers. One of the respondents and a leading expert on conservation remarked that "the world at large still sees biodiversity as a side issue…we don't even have a whole lot of ministers here as far as I know, and I don't think we have any heads of state...that is indicative of the importance that they give to the issue."

This low priority may partially be a result of the way that biodiversity concern is communicated. Some respondents argued that the value of biodiversity is often decreased because of the focus on biodiversity loss rather than ecosystem services. One participant commented "If I tell you that there is an opportunity to unlock potential for development, for jobs through beneficiating biodiversity, whether it's through protected areas, water security, agro-biodiversity...then there is hope of gain and interest…unless we as a sector switch our language and our mind-sets to something more positive, we may as well go home because we have not succeeded as a sector with the language of loss." This group of respondents emphasized that phrasing biodiversity in development friendly manner can be important in persuading all stakeholders, particularly at the local community levels to participate meaningfully in conservation approach. According to this respondent "if they say you over-harvest fish, that's not development…how about saying, if we protect fish, that's development." Therefore, the change of two words in that sentence can spur hope and future that comes with opportunity rather than threat. Respondents also said that the leadership of the CBD (Braulio Ferreira de Souza Dias), UNEP (Achim Steiner), and other MEAs are doing an excellent job of articulating this biodiversity-development language.

Beyond changing the focus, there was no clear policy direction provided on how to improve protection of ecosystem services in rural communities. Poverty is partly responsible for biodiversity loss in developing countries. Since there is linkage between

[2] In the Biodiversity Barometer, China and Brazil citizens could correctly define biodiversity at higher percentages than any other countries including Western Europe and the U.S. In contrast, India and Peru had the lowest levels in the survey for correctly defining biodiversity Union for Ethical BioTrade, 2013. Biodiversity Barometer 2013. UEBT, Amsterdam..

biodiversity conservation and poverty reduction (Adams et al., 2004), assessing socio-economic indicators relating to ecosystem service and biodiversity conservation is fundamental to poverty reduction (Palmer and Di Falco, 2012). One important question raised among respondents is: how do you encourage someone not to cut down forests when there is no other livelihood option? One respondent demonstrated this with an example: "Most of the time, they know. Fishermen realize, when they catch less fish than usual, that they are exploiting the supply...but they don't have another option and you can't just blame them, you have to find out the rationale behind the behavior of people and come up with solutions…the solution has to come from internal policies, it has to adjust to social and cultural levels so they can take ownership of it."

Other respondents identified the lack of an appropriate policy dialogues to facilitate incentives for protection of biodiversity at local levels. Developing a biodiversity system which maximizes the protection of ecosystem services is a particular challenge for developing countries (GATZWEILER, 2006; KRISHNA ET AL., 2013). The development of niche product markets, such as payment for ecosystem services (PES), can provide incentive to farmers to conserve and manage ecosystem services sustainably are beginning to emerge (KRISHNA ET AL., 2013; SCHOMERS AND MATZDORF, 2013). However, capacity development to implement this type of conservation approach varies from country to country and limited market opportunities must be overcome before rural poor can benefit from the approach. Respondents felt the need to integrate key socio-economic indicators (including access to health and education) and define the criteria by broader stakeholder deliberation in measuring the success of conservation. TEEB advice and projects adhering to its framework have expanded in a variety of different countries. Similarly, the ABS system established by the Nagoya Protocol may help developing countries in these efforts.

A crucial step in the process is updated and strengthened NBSAPs by developing countries. Some respondents argued that, apart from advanced developing countries such as China, Brazil, and India which are developing unique NBSAPs, most developing countries lack the capacity to develop well-structured plans. When explaining the failure for implementation of earlier NBSAPs to help achieve the 2010 biodiversity target, respondents raised the issue of very non-participatory processes of planning. NBSAPs are usually coordinated by the Ministry of the Environment as the focal point in the CBD and because of limited capacity, they rarely involved large number of stakeholders. One respondent explained that "in most cases, typically what happens is that you have an environment ministry that has the CBD focal point who goes back home, gets a little bit of GEF money, or UNDP money and writes a national biodiversity action plan probably in consultation with a few other government agencies and environmental NGOs, and then you get a nice plan and it sits on the shelf, because the plan itself is owned by the environment ministry." NBSAPs often do not involve other ministries (such as planning, finance, agriculture, water, fisheries, energy/power, etc.) and this limited the degree of support for the implementation of the NBSAPs. In addition, this may prevent biodiversity as an issue from making inroads into social and economic policy. One respondent said that "When we talk about the three pillars of sustainable development: economic, social, and environment…you always hear, 'balance among the three', which is usually a way of

saying the environment is going to lose out, because when we then talk to the trade or finance ministry, we don't hear about a balance among the three, because there are no environment people there…so it always gets less political attention."

This NBSAP problem may be part of a larger problem of institutional capacity and political will. Legislation which could aid mainstreaming of biodiversity in other economic areas is lacking in most developing countries. For example, in Brazil, one respondent felt that lack of clear legislation on research and development of genetic resources within the ministries was responsible for the failure to engage research institutes and multinational company on the international regime of access and benefit sharing for potential bio-products. In addition, in any cross-sectorial or cross-ministerial engagements, environmental ministries may be disadvantaged. One respondent explained that the experts, trained PhD and Master's degree holders, find it very difficult to pursue policies and are disempowered in NBSAP discussions as a result.

These experiences, mainly from the first generation of NBSAPs, made clear how the capacity can constrain designing appropriate plans. The key policy question is how to help the next generation of NBSAPs to encourage wider planning process without making the process needlessly cumbersome? While there was no direct answer, respondents agreed on the broad terms that the NBSAPs for the Aichi targets need to be comprehensive and have a participatory framework that defines clear rules, indicators and works towards mainstream biodiversity in multiple sectors.

4.3 MOBILIZING FINANCIAL RESOURCES FOR BIODIVERSITY

A key issue in expanding protected areas and in improving biodiversity policies generally is mobilizing financial resources. Mobilizing financial support to build partnerships and to strengthen institutions for biodiversity conservation in developing countries received a well thought out viewpoints and arguments among respondents. All respondents agreed that much effort is needed by various stakeholder groups to deploy and coordinate financial resources effectively so as to achieve the expected biodiversity targets.

Each country faces separate funding challenges. The majority of current biodiversity spending is focused on biodiversity in the U.S., Europe, and China. Latin America, Africa, and the remainder of Asia receive significantly less funding, from both domestic and international sources, than these other countries (PARKER ET AL., 2012). Developed countries face significant political limitations on increasing their biodiversity aid from the very low levels. However, integration of biodiversity with other issues offers opportunities for improved funding flows. For example, biodiversity aid from developed to developing countries increased in the first years of the Aichi Targets era but was largely the result of a doubling of aid on these nexus projects rather than increasing funding for biodiversity projects (OECD, 2013). However, the funding challenges in the developing world are also different depending on the country. Latin America, for example, has built the most expansive protected area system in the world, but in order to transform that system into an effective tool for

reversing biodiversity loss it is estimated that there will have to be a doubling of funding (THE WORLD BANK, 2012). In contrast, many other developing countries need financial assistance to develop second generation NBSAPs that translate the Aichi Targets into national policy (CHANDRA AND IDRISOVA, 2011). This is reflected in the distribution of countries which have quickly created revised NBSAPs since the Nagoya meeting (as required in Aichi Target 17). By January 2014, 20 countries had submitted revised NBSAP: ten OECD countries, four are in Latin America, and six are from non-OECD countries in Europe and Asia. None of the early revisions come from Africa or the Middle East.

However, some respondents felt that generating income for biodiversity conservation should start from the local communities. This group of respondents argue that focusing on value of biodiversity at the local levels can lead to investments that generate income to conserve biodiversity and ecosystem services. Moreover, recognizing the value of renewable natural capital or biodiversity like tropical forest in terms of the benefits it provides to humankind or people in the local communities can help transform financing biodiversity conservation. For example, the payment of fees for access to ecosystem services such as hunting, ecotourism, bioprospecting and protected areas with high ecological value can create local ecosystem service economies. They felt that it could be a useful source of income to manage and maintain protected areas if supporting policies and procedures outline clearly the practicalities of the benefits. They argue that supporting policies should target financial rewards while at the same time generating income from biodiversity conservation. Moreover, the European Union representative mentioned that as part of TEEB projects, it would be interesting to gain more understanding on the income generated through the payment of fees and therefore it is worth investigating as additional funds for conservation in developing countries. By doing so, it could help toward understanding the scope of monetary valuation that is associated with the biodiversity at the local levels.

The sources of finance for biodiversity conservation vary significantly from country to country. Respondents mentioned that governments that appreciate the value of biodiversity and the role ecosystem services play in underpinning economic growth and poverty reduction tend to invest more money than government with less priority in biodiversity conservation. One respondent gave an example: "Some of these big countries like the BRICS countries are powerful, advanced economic forces in the world…for example, China, Brazil and some of other South America countries are putting far more money than they are getting from outside assistance, hundreds of millions of dollars into conservation activities within their borders…some of the poorer countries, like Madagascar, they are almost totally dependent on foreign aid." Respondents mentioned that lack of clear framework to implement biodiversity projects undermine the ability of governments to attract funding from donors in developing countries particularly in African countries. For example, in Madagascar, a total of 54 million dollar was provided by the World Bank and the Global Environment Facility (GEF) in 2011 to extend their environment programme including biodiversity projects, yet government has not figured out how to spend the money. One respondent argued that the GEF-5 process from 2010-2014 did not have clear focus with its disbursement of funds and many important countries were left out and that

GEF-6 was a key opportunity for making disbursement clearer and simpler for developing countries.

However, in addition to national funding, respondents saw the lack of funding from OECD countries as a major hurdle in efforts to achieve the Aichi Targets. A further problem is that the aid provided by developed countries does not appear to have clear avenues for increasing it in the future. So although Japan had provided some aid to help countries revise their NBSAPs, two respondents argued that the lack of baseline indicators for some projects may further restrain increases from Japan. Similarly, the EU and the US appear to be limited by the economic downturn to increase funding. One respondent mentioned that while the EU had recently committed about $US 25 million to Critical Ecosystem Partnership Fund (CEPF) that supports 1700 civil society organizations and 23 hotspots covering part of 60 countries around the world, this would not be sufficient. Most concerning to multiple respondents was that the financing mechanism keeps getting pushed to future meetings. The Nagoya meeting in 2010 passed the funding issue to Hyderabad in 2012, which further pushed the issue to COP12 in 2014. Weak leadership on the part of developed states for sustained increases in funding may seriously threaten progress on Aichi Targets in developing countries.

5. DISCUSSION AND POLICY IMPLICATION

Four unique governance opportunities developed through the interviews which can augment current efforts to improve developing country efforts towards the Aichi Targets. These can involve repackaging the biodiversity problem, developing guidance for national NBSAPs, clearer assistance on mainstreaming and governing nexus issues in biodiversity governance, and finally strengthening the financial system.

“Biodiversity loss” figures prominent in the language of the targets and assessments in the CBD. The 2010 Target and the Strategic Goal A of the Aichi target both aim to half the rate of biodiversity loss (UNEP/CBD/ COP 10, 2010). As highlighted above, some respondents considered that the language of “biodiversity loss” rather than tying biodiversity into ecosystem services and development could limit attention to the problem in developing countries, particularly in non-environmental ministries and local communities. This may offer unique negotiation breakthroughs which can generate creative solutions to impasses. Changing the language from biodiversity loss to other terms of communication can offer opportunities to change perceptions and attitudes of the public toward biodiversity conservation. While there are some early indicators of public perception of biodiversity, expanded work in understanding how public awareness of biodiversity is shaped can be undertaken as an effort on Aichi Target 1 (increase public awareness about the values of biodiversity). While discussion about Aichi Target 1 was limited at the Hyderabad COP, the COP12 offers an option to focus attention on this issue.

Similarly, more attention needs to be spent on getting the most out of the NBSAPs in developing countries. The first generation of NBSAPs was held back by not having the

involvement of relevant ministries and stakeholders, by technical problems, and problems of political will and funding (PRIP ET AL., 2010). These problems may be more serious in the second generation development where NBSAPs had to account for the specifics of the 2011-2020 Strategic Plan. Of 20 countries, only 13 countries submitted NBSAP revised version that connects with the Strategic Plan. So far, there has not been significant effort in improving the NBSAP process in the post-Nagoya period. The role of relevant stakeholders in the development of NBSAP cannot be overemphasized if developing countries were to achieve Aichi target by 2020. The final outcome of COP 11 only mentions the participation of experts from finance without clarification on types of the ministries that can participate in the exercise. In particular, there is need to spell out how relevant ministries (led by the Ministry of the Environment) could participate meaningfully in the planning and developmental process of the NBSAP with clear understanding and specific role across different sectors to facilitate an inclusive biodiversity policy. For example, in China, the Ministry of Environmental Protection (MEP) is working jointly with more than 20 ministries and departments in updating their NBSAP to implement their strategic plan for 2011-2030. How effective NBSAP is as a tool in the implementation of strategic plan is yet to be known in view of lack of comprehensive assessments in developing countries. Therefore, a concerted effort and coordinated approach is required to speed up the assessments, harmonization and development processes in developing countries.

While biodiversity governance cannot solve policy fragmentation that holds back efforts in many developing countries, the NBSAPs need to be aware of this fragmentation and deal with it. The Aichi Targets themselves may actually foster policy fragmentation rather than reducing it or providing ways to deal with it. Many respondents worried that governments would pursue a few Aichi Targets while ignoring the holistic picture. While the final decision at the Hyderabad COP emphasized the importance of indicators in the implementing the Aichi biodiversity targets in developing countries (UNEP/CBD/ COP 11, 2012), there is still no clear guideline to facilitate national action.

The result is that it is unclear how to interpret the global targets in national and local levels. This creates a painstakingly slow process of deciding which target to pursue, articulating the target for the national level, and then integrating it into the policy context. If national targets are not specifically clarified and established within the framework of the CBD-how these targets can be linked to the implementation of the Aichi biodiversity targets remain unclear. While the direction toward the implementation of action by the parties should be guided under a specific purpose of defined targets (PISUPATI AND RUBIAN, 2008), Aichi biodiversity targets could suffer the same fate, as 2010 biodiversity target where lack of a desired "end point" and confusion to clarity undermined the implementation of the latter (HARROP AND PRITCHARD, 2011; JOHANNSDOTTIR ET AL., 2010; MACE AND BAILLIE, 2007).

This challenge of interpreting the global goals into national contexts may be demonstrated in the different levels of achievement in terrestrial conservation areas and marine or coastal conservation areas. While there has been a significant progress in the implementation of programmes in the terrestrial protected areas (where some

countries have achieved global target 17%), the majority of developing countries are still lagging behind in protecting oceans or marine. Marine Protected Areas are a relatively new tool and clear implementation and policy advice are limited when compared to terrestrial reserves. There are three reasons that can be pointed out as to why former has been relatively successful; 1) Effective management and implementation of action plans targeting terrestrial protected areas; 2) terrestrial ecosystems have more separate boundaries whereas marine ecosystems are relatively open; 3) regulatory frameworks are different. Apart from physical attributes such as high variability and prediction problem that is associated with marine environment, the limited scientific knowledge, poor integrated assessment (for example, socio-economic and environmental dimension) and lack of clear regulatory framework represent a significant challenge to the management and conservation of marine in developing countries (DE SANTO, 2013; LASCELLES ET AL., 2012). The application of Marine Protected Areas (MPA) has emerged as one of the most important tools for marine conservation. However, it has been widely criticized because of failure to consider important indicators, a lack of clarity and inconsistency, leading to wrong interpretation of its application among stakeholders (DE SANTO, 2013; WOOD ET AL., 2008). An attempt to increase the global target for marine by 15% failed in Nagoya, 2010 which perhaps may have opened the window of opportunity to review the current rate of MPA designation. Although how realistic this could have been is not clear if it had been increased. Wood et al., (2008) argue that the international community will find it extremely difficult to achieve the 10% target in the next 30-50 years in view of shortcomings of MPA designation rate, assuming the constant rate of designation is based on that of past 40 years. One respondent explained that strong resistance by the representative of China in view of lack of clarity in the interpretation of current MPA may have encouraged other parties to stop initial proposal to increase the global target for marine. The emergence of Marine Spatial Planning (MSP) could be a useful tool in addressing some of the shortcomings of MPA but the involvement of relevant stakeholders at the international level is fundamental to the implementation of MSP networks (DE SANTO, 2013).

Finally, funding is an anchor on all of the process above. Without a financial system in place, respondents were skeptical of the possibility of achieving the other Aichi Targets. Despite Target 20 focused on financing, the issue has been continually pushed to future agreements. While this problem is often recognized by the parties (UNEP/CBD/ COP 11, 2012), little has been accomplished to help developing countries meet the Aichi Targets. Respondents though created a more complex picture of this situation. One respondent emphasized that there is a difference in the funding relationship between donors and different developing countries. For example, the interest of advanced economies such as China, India, Brazil and their relationships with donors are different when compared to Zambia, Mozambique, Philippine and other poorer countries.

The problem is then that aid may not be spent in the most effective manner. In 2008, Brazilian and Mexican governments are the principal sources of funds for biodiversity conservation in Latin America (Flores, 2010). For example, 60% of the total funds were donated by the governments, and 15% was received from the donors. As another

example, Brazil and India[3] were the largest recipients of biodiversity related aid in 2011, receiving 12% and 12.5%, respectively. South East Asian and African countries and some Latin American states represent a significant portion of most severely underfunded countries for biodiversity conservation (WALDRON ET AL., 2013), reinforcing the arguments of the respondents and part of the speech of the Indian Prime Minister that policymakers should prioritize and provide all the necessary supports (financial, technical and human) to these regions in order to meet the CBD targets. The whole argument is boiled down to the fact that a realignment of the negotiation blocks that takes into account the individual country capacity and interests within the G77 and donor countries should be encouraged for the mobilization of resources as universal agreement may not satisfy all countries due to different needs and aspirations. It is hoped that a new long-term GEF 2020 strategy that was announced by the GEF CEO, Naoko Ishii at the COP11 Conference, and other bilateral donors can consider these important elements in their financial mechanism to facilitate the implementation of the CBD targets in developing countries.

For the Conference of Parties 12 in South Korea, there are some excellent policy avenues that can be taken which can help pursue progress on the Aichi Targets in developing countries. These are:

- Attention on the 2015 targets which may be lagging. The coming into effect of the Nagoya Protocol and a robust system of NBSAPs are necessary to enable progress after COP12. In addition, focus on other foundational targets could be pivotal in establishing the conditions for success. Target 1 (increasing awareness) and Target 20 (financial mechanism) would be important goals for significant new emphasis. As noted by respondents above, increasing awareness may mean approaching biodiversity in a different way and while not forgetting about "loss" emphasizing the role of ecosystem services in development.

- A comprehensive financial arrangement needs to be prioritized. While the 2011-2020 period was able to see an increase in aid, as noted above, this was largely a result of combining biodiversity funding with other projects. This is neither a good not a bad thing for biodiversity, it is an issue which requires a more comprehensive approach. Developing a funding approach that creates local markets for ecosystem services (building on an in force Nagoya Protocol), increases international funding, and clarifies best practices for funding biodiversity and other processes (such as climate change, development, water, etc.) is key. This includes developing funding not simply for protected areas but for protected area systems that include land and marine areas.

[3] http://www.bipindicators.net/oda

- Capacity buildings for NBSAPs are crucial. First generation NBSAPs did not create the guidelines that they could have because the processes were often developed too narrowly and because political will to implement its initiatives were lacking. COP12 can help developing countries significantly by providing guidance and incentives for CBD focal points to engage with other stakeholders and help build political will. In addition, science community (including IPBES) need to provide clearer ways for states to translate the global levels to national conditions in the most effective way possible.

- Create a more rigorous clearinghouse mechanism for examining trials. As one respondent commented "Right now what we need is to mobilise resources so that the developing countries can scope out their programs that work to meet the Aichi Targets, and they need money for that." While there are some clearinghouse mechanisms and some limited best case promotion at the CBD, a more rigorous process for collecting information and judging the information based upon scientific standards could be very helpful as developing countries create their NBSAPs and implement biodiversity policies. Funding south-south cooperation could facilitate this effort or it could involve supporting efforts in IPBES. Although the approach IPBES will take towards facilitating science is still being determined, there may be some important opportunities on issues such as indigenous knowledge. Regardless, this should fit into the funding conditions discussed above.

- Developing a plan for technology transfer. While UNEP has made technology transfer a key contribution of its efforts since the development of the Bali Strategic Plan (UNEP, 2005, 2010), but there is not yet any clear efforts in the CBD. Respondents were clear that appropriate technology for such transfers should be decided on a case-by-case basis depending on the issue. Unfortunately, this once again is a problem of infrastructure which is often lacking in developing countries. Developing a plan and strategy for assessing technology, implementing it in effective and equitable ways, and finally fostering the transfer could be a significant breakthrough for discussions at COP12.

ACKNOWLEDGMENT

All interview participants at COP 11, October 2012, Hyderabad, India, are gratefully acknowledged for their valuable time and contributions. We are also grateful to Ashna Mukhi in coding and assisting with the paper. Special thanks to Sam Johnston for his comments and helpful guidance on earlier version of the manuscript. Casey Stevens thanks the Japanese Society for Promotion of Science for assistance while working on this project.

APPENDIX I- SET OF INTERVIEW QUESTIONS

Interviews involved a set of open-ended questions for respondents, with the ability for the interviewer to deviate from that set or follow-up with additional questions as necessary. While this basic set of questions changed based upon the individual and their position, this appendix provides some common questions which were posed to multiple participants.

1. What is the national framework for biodiversity conservation in [**Country]**?
2. How is biodiversity financed in [**Country]?**
3. In terms of financial resources, how do you generate funds to support the project of biodiversity conservation?
4. Are you getting resources from outside, from external donors towards developing the biodiversity framework and achieving the Aichi targets? How do you secure these resources?
5. Do you think [**Country]** would be able to achieve the Aichi targets by 2020?
6. What are the hindrances that may affect the conservation of biodiversity and achieving the Aichi targets by 2020?
7. Are there any problems in [**Country**] in planning for the Aichi targets?
8. So in terms of new technology, what sort of technology would be appropriate to assist biodiversity efforts?
9. How can various stakeholders [**business, other ministries, etc.**] be included in biodiversity efforts?

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