



2010 is almost here – now what?

Consultation: Options for a new vision for Biodiversity



© Josephine M. Langley

Please email comments to Josephine.Langley@iunc.org

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IUCN's work on biodiversity includes comprehensive research on the status of biodiversity and thousands of individual animal and plant species; action to protect specific species; managing and restoring natural areas, national parks and other protected areas; and promoting the sustainable use of natural resources.

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This paper discusses possible options for a post-2010 framework to be incorporated into a new strategic plan for the Convention on Biological Diversity. This paper was developed following a preliminary consultation process that was initiated in July 2009. IUCN has revised the paper based on the many comments received regarding the options for the Convention on Biological Diversity strategy after COP 10 in October 2010.

The second round of comments will contribute to the development of IUCN's policy position paper on the post-2010 framework to be determined by the Parties at COP 10 and the finalization of this paper.

You are invited to comment further on the options presented. Please send your comments by **Tuesday 15 September 2009** to IUCN via the IUCN Conserving Biodiversity Network Coordinator, **josephine.langley@iucn.org**.

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Options for a new vision for Biodiversity

Summary

The Convention on Biological Diversity's 2010 biodiversity target has been successful in mobilizing some action towards stemming the loss of biodiversity globally. However, it has also become apparent that this biodiversity target has a number of weaknesses that Parties to the Convention on Biological Diversity will need to address in the next iteration of a biodiversity conservation target at their 10th Conference of the Parties (COP) meeting to be held in Nagoya, Japan in October 2009. Any new biodiversity target together with its framework should also benefit from lessons learned from the current biodiversity target framework and other relevant initiatives.

Since the 2010 biodiversity target was set in 2002, the world and its awareness of the importance of biodiversity has changed dramatically. Our understanding of the impacts of our actions has also substantially improved including an increased understanding of the link between biodiversity, ecosystem health, human well-being and sustainable development. In addition, there is now considerable understanding and practical experience of how to "mainstream" biodiversity in economic policy, production and consumption.

However, at the same time, other pressing issues are vying for the attention of the public and decision-makers not least of which are global economics and climate change. Rather than see these other pressing issues as a distraction, the conservation community should seize this opportunity to highlight the critical role of biodiversity in human well-being and the benefits to be realised by integrating biodiversity considerations into the full scope of society's debates. Biodiversity supports us all and we need everyone working in support of biodiversity.

To catalyse this global action, conservation of biodiversity needs an inspirational but tangible post-2010 biodiversity target to focus our common efforts, as well as a supportive policy and institutional framework for implementation. This paper provides an overview of lessons learned from implementation of the 2010 biodiversity target framework and discusses options for the formulation of a future post-2010 biodiversity target framework, with strengths and weaknesses of each option that could be considered by Parties to the Convention on Biological Diversity in preparation for and during the COP10 deliberations. The paper identifies a series of issues that will need discussion and agreement by Parties as they adopt a post-2010 plan of action. The issues and options are not mutually exclusive and a mix of medium and short-term results and targets, guided by a longer-term goal could also be considered as a means to overcome some of the weaknesses identified while promoting the strengths.

IUCN intends to circulate this paper widely to support and stimulate discussion about a post-2010 biodiversity conservation target framework. Based upon feedback received, IUCN will then consolidate and communicate its policy position on an optimal post-2010 biodiversity target framework. This will help enable the 10th COP of the Convention on Biological Diversity to make an informed decision on this issue in support of biodiversity conservation, sustainable use of biological resources and equitable distribution of benefits arising from biological resources.

1. The 2010 biodiversity target and important lessons learned

The biodiversity that underpins human well-being is under threat. In recognition of the urgency of this crisis and the imperative for conservation action, the Parties to the Convention on Biological Diversity (CBD) adopted in 2002 the 2010 biodiversity target as part of the CBD Strategic Plan. Other fora, including the World Summit on Sustainable Development in 2002, the 154 Heads of State who gathered at the 2005 World Summit, and the Millennium Development Goals framework, also adopted the 2010 biodiversity target from 2002 to 2007. However, some of these other fora adopted variations on the specific formulation of the biodiversity target adopted by the CBD (Annex I). Despite these variations, the 2010 biodiversity target constitutes one of the most important international policy objectives to draw attention to the urgent situation for biodiversity globally and to catalyse action to conserve biodiversity and the ecosystem services that underpin human well-being. In agreeing this biodiversity target, Parties wanted to highlight biodiversity's fundamental role in ensuring sustainable development.

Box 1. The 2010 biodiversity target

"..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"

In October 2010, the CBD will hold its tenth Conference of the Parties (COP) in Nagoya, Japan at which it is anticipated the Parties will adopt a new Strategic Plan containing a post-2010 biodiversity target and associated framework¹. The post 2010- biodiversity target framework should take into consideration the successes achieved under the existing biodiversity target framework - and the lessons learned from that process. It should also integrate work from existing programmes of work previously agreed by Parties, including, for example the Programme of Work on Protected Areas and the Global Strategy for Plant conservation.

This paper provides an overview of lessons learned from implementation of the 2010 biodiversity target framework. The paper also discusses options for the formulation of a future post-2010 biodiversity target framework, including the strengths and weaknesses of each option that the Parties to the CBD could consider.

The 2010 biodiversity target was phrased using a variety of terms (Annex I) resulting in a range of formulations. Regardless of the specific target formulation and how the target has been adopted, the goals were always ambitious and difficult to achieve.

The 2010 biodiversity target has contributed to the following successes:

- 1) Increased awareness in a broad constituency including governments, business and civil society of what biodiversity is and the serious situation facing the environment;

¹In this paper the term 2010 biodiversity target framework refers to the 2010 target of the Convention on Biological Diversity and its associated framework of indicators.

- 2) Establishment of a broader (although still limited) body of knowledge on current status of biodiversity, and longer term monitoring systems to understand trends and impacts of human actions;
- 3) Mobilization of new audiences, especially the private sector and local and regional authorities, in support of biodiversity conservation;
- 4) Adoption of policy frameworks that support biodiversity conservation, including the insertion of the 2010 target in the Johannesburg Plan of Action and the Millennium Development Goals biodiversity target framework;
- 5) Development of a broad array of indicators which has increased our understanding of what is happening to biodiversity, and the ecosystem services that derive from ecologically healthy and diverse ecosystems;
- 6) Demonstration of innovative policy approaches and management tools to “mainstream” biodiversity in economic production and consumption, including payment for ecosystem services, certification and labelling, biodiversity liability and compensation requirements, corporate biodiversity risk assessment, strategy and reporting systems; and
- 7) Improved, though still limited, understanding of the value of biodiversity and ecosystem services to human well-being.

Notwithstanding these successes, it is clear that the global community will not meet the 2010 biodiversity target despite a few bright spots of good news. The Millennium Ecosystem Assessment demonstrated that the many drivers of biodiversity loss have compounded the negative impact on biodiversity and are increasing in intensity; halting biodiversity loss is therefore an increasingly challenging task. In addition, since the Millennium Ecosystem Assessment’s publication, new twists on old reoccurring problems have also emerged such as the financial crisis of 2008-2009 and emerging challenges from attempts to solve environmental challenges like the promotion of biofuels being proposed as a solution to climate change.

Reducing, mitigating, and even reversing the impact of the drivers of biodiversity loss will require improved environmental governance, adequate investment in environmental management, full engagement of all stakeholders, including government, business and civil society, and better long-term monitoring of biodiversity at all scales. Many recognise that reinforcing the role of biodiversity conservation as a poverty reduction and sustainable development tool will be a prerequisite to support improved environmental governance. In addition to improving our understanding of the status of our environment, longer term monitoring of biodiversity will strengthen our ability to monitor impacts of threats such as climate change that already impact well-being, particularly of vulnerable communities.

In retrospect, both the 2010 biodiversity target and indicator framework for assessing progress towards its achievement have had strengths and weaknesses, including:

1) The 2010 biodiversity target:

Strengths

- Provided a focus for action for the conservation community and a basis for engaging new audiences including the private sector, local governments and authorities, and other relevant sectors;
- Highlighted, to some extent, the importance of biodiversity to sustainable development and poverty reduction through the concept of ecosystem services as popularised in the Millennium Ecosystem Assessment; and
- Increased awareness about the status of biodiversity in general terms into new audiences.

Weaknesses

- Lacked a clear framework into which the biodiversity target and indicators fit. In fact, the current 2010 biodiversity target represents a broad aspirational goal, while the indicator focal areas represent themes around which more specific biodiversity sub-targets could have been framed;
- Lacked a clear baseline from which to measure progress towards the target. While the IUCN Red List of Threatened Species, and the associated IUCN Red List Index, has provided some information on the status of biodiversity, there is no representative foundation of knowledge about all components of biodiversity to establish indicators and measure change;
- Had limited synergy with other processes/ biodiversity targets or other sectors; and had limited success integrating biodiversity issues into other global agendas. Integrating the 2010 biodiversity target into the Millennium Development Goals did not happen until 2007, halfway through that process which will conclude in 2015;
- Was generally phrased in a way (at least for the part of the target that refers to reducing the rate of biodiversity loss) in which success can actually be considered a failure. For example, populations of some species of fish have plummeted so severely that insufficient individuals remain to maintain the previous rate of loss, so the rate of loss has declined and the biodiversity target could be considered to have been achieved. A similar situation exists with other groups of species, including amphibians. At the same time, we should however recognise that adoption of the wording around reducing 'rate of loss' was a pragmatic and political decision that has, despite the drawback noted above, contributed more generally to supporting biodiversity conservation action;
- Was focused on the negative – biodiversity loss – rather than on a positive goal;
- Could not realistically be achieved in the 8 years from adoption of the goal in 2002 to measurement in 2010;
- Was focused on a concept, biodiversity, which means many different things to different audiences. Within the CBD, it is strictly defined by its components namely genes, species and ecosystems, but to a non-biodiversity audience it can mean many things including only some of these components. Coming to a common understanding on what is meant by biodiversity, and how ecosystem

services fit into that picture, will support both development of metrics and communications in support of biodiversity conservation; and

- Was part of a global agreement that is, in effect, 'soft law' and for which countries are not legally bound to implement actions. In addition, the 2010 biodiversity target was not specific about responsibility for actions and for measuring responses leaving it up to the global community as a whole to address this immense challenge.
- Lacked adequate support in the form of institutional arrangements, policies, finance and incentives needed to ensure effective implementation

2) The indicators of the 2010 biodiversity target:

Strengths

- Provided a framework that has been used by many countries to establish biodiversity monitoring programmes, and to develop a broader suite of indicators. Many of these countries will be reporting on progress towards the 2010 biodiversity target using this framework and, in some cases, expanding upon it depending on particular national circumstances;
- Supported adaptability to regional/national level contexts. Although application of some indicators was more challenging at sub-global levels, several regions, countries and cities (e.g. Europe, China, Singapore) have already reported using indicators that will be useful in longer term monitoring of the status of biodiversity. While not all indicators may be necessary at all levels, indicators to support regional and national level engagement need to be reportable at that level;
- Included some indicators for sustainable use, ecosystem services, human well-being as well as on the status of biodiversity;

Weaknesses

- Suffered from a lack of available information:
 - i. Did not provide a comprehensive overview of the status of biodiversity. There was no indicator at all on wild genetic diversity, and the indicator on ecosystem extent has not worked well for many ecosystems. The species indicators proved more useful but are still based on a non-representative sample of biodiversity, despite significant and ongoing improvements since 2002. In particular, plants and invertebrates are poorly covered, and there is insufficient representation of taxonomic groups covering marine, freshwater and dryland ecosystems;
 - ii. Included many indicators that were to be developed or for which limited data were available. Of the 22 indicators chosen by the Parties for the current 2010 biodiversity target, at least nine need further development, including most of those relating to the provision of ecosystem services (ref. <http://www.cbd.int/2010-target/framework/indicators.shtml>);
 - iii. The framework does not explicitly include development/social indicators to measure directly the impact of biodiversity loss on development and poverty reduction. As the full wording of the target includes specific reference to the link between biodiversity and development/poverty

reduction, inclusion of relevant indicators is essential to highlight these links between impact of biodiversity loss or conservation successes and development.

- iv. Did not include indicators for implementation in other economic sectors that are relevant to biodiversity conservation, for example there was no indicator to link industrial activities related to climate change as a driver of biodiversity loss;

The 2010 Target indicators were generally not scalable for example, to the level of individual organizations and thus were not useful for guiding or reporting on business action in favour of biodiversity.

- Was constrained by time frames for measurement - measuring loss of biodiversity should be undertaken in consideration of the time required for biodiversity to recover, typically far longer than time that will have passed since the 2010 biodiversity target was set or since monitoring efforts have been in place. In addition, the lag time between conservation action, impact on the ground and the ability to measure the resulting change shortened the period over which any change in biodiversity impact could be measured and observed;
- Did not link explicitly to biodiversity targets and indicators contained within existing CBD programmes of work and initiatives (eg. The Global Strategy for Plant Conservation and the Programme of Work on Protected Areas) and thereby missed an opportunity for coherence and synergy across the Convention's work.
- The current package of indicators in the 2010 framework may have created a burden on some countries in terms of monitoring at the expense of taking action to achieve the 2010 biodiversity target

2. What should guide a future post-2010 biodiversity target framework?

Building a vision for biodiversity beyond 2010 should draw on the lessons and recommendations highlighted above to develop a future post-2010 biodiversity target and associated framework of indicators. This should fulfil several basic requirements including clarity on the basic organisation of the post 2010 biodiversity target framework would be helpful.

Those involved in implementing and measuring progress towards the 2010 target recommend a hierarchy of goals, biodiversity targets and sub- targets (or whatever other appropriate taxonomy) is needed. In reality, the 2010 biodiversity target was an aspirational long-term goal that motivated and inspired some action. Underneath that goal, a more specific, time bound set of results (or changes that would be expected) that would help to achieve that goal along with actions to achieve those results could be established.

A post-2010 biodiversity target² would benefit from having a clear progression of goals, results and indicators (referred to as a 'post-2010 biodiversity target framework') within which Parties

² For the purposes of this document, the terms 'biodiversity target framework' and 'goals/results/targets' are used to express the levels of a hierarchy.

could act. A goal or goals would provide an opportunity for the Parties to the CBD to affirm a long-term vision and reinforce their recognition of the fundamental importance of biodiversity. Parties to the Convention should also adopt a post-2010 framework with an understanding of the need for efficiency and effective use of resources. However, the Parties may choose to use a different taxonomy as appropriate.

Any future, post-2010 biodiversity target framework should thus have the following characteristics:

- Be inspirational and ambitious yet realistic and achievable. While the 2010 biodiversity target may be deemed by some to have been unrealistic, it did inspire significant action for biodiversity conservation;
- Express the urgency of the situation and the need to act immediately in a collaborative and coordinated manner;
- Recognise the intrinsic, existence and non-use value and importance of biodiversity, as well as to maintain ecosystem functions and processes - as well the links between biodiversity, ecosystem services and human well-being;
- Have results and a biodiversity target that can be expressed in terms that are measurable at various scales, from global to organizational;
- Provide a focus with a positive outcome; for example, improved status of species or ecosystems or ecosystem services may be a better approach as it will focus on success instead of failure;
- Promote synergies with other constituencies to broaden the engagement in conservation and ensure that targets and objectives set in other related fora are complementary to targets established for the environment/ conservation sector;
- Be flexible in spatial and temporal scales, allowing adaptation for geographic and sectoral perspectives and needs. Making the post-2010 biodiversity target framework relevant at many levels from global to local will help build support for it. The difference in circumstances across the developed and developing world should be considered when mandating action;
- Be “user friendly,” to be easily understood and communicated - raising awareness of the importance of nature and the urgency of the need for action is a fundamental objective of such a post-2010 biodiversity target framework;
- Use appropriate language for any post-2010 biodiversity target framework so as to be easily translated and communicated; and
- Highlight the strong links with other global issues, especially climate change and key sectors of the global economy such as agriculture.

Measuring progress and results against a future post-2010 biodiversity target will require a complementary monitoring programme, including a selection of indicators that improve on the existing package (see Annex II). The selection of a post-2010 framework should not be primarily driven by existing indicators, but should be chosen in consideration of what existing indicators are or could easily be made available to measure progress. Some stakeholders who have used the 2010 biodiversity framework recommend the streamlining of any post-2010 biodiversity

framework around an explicit Driver - Pressure-State-Impact-Response model that could be adapted for implementation at various scales including at the national level.

Dobson (2005), Mace and Baillie (2007), Soberon and Peterson (2009) and others have highlighted issues relating to indicators from the existing indicators for the 2010 biodiversity target. They call for making the indicators relevant to the chosen biodiversity target and supporting effective communication with relevant audiences. In addition to providing information on progress, a package of indicators can also serve as an early warning system of change and a tool for evaluating the cost-effectiveness of any particular action. Responsibility for both taking conservation action in relation to the biodiversity target as well as monitoring and reporting on the impacts of that action should be shared across governments, civil society and the private sector as relevant. The biodiversity target framework should facilitate reporting on changes in those indicators in a way that will enable action by policy makers and others.

3. What options do we have and what should they take into consideration?

Building on the elements and characteristics above, Parties to the CBD could establish a new post-2010 biodiversity target framework around the following parameters (to be embedded in a broader set of biodiversity governance arrangements, finance and incentive mechanisms, and monitoring and reporting systems):

- Scope of the post-2010 framework and the goals/results therein
- Metrics for the post-2010 biodiversity target
 - Type of change sought
 - Time frame for the framework elements
 - Baselines for measurement

The scope of the post-2010 biodiversity target framework should identify the component elements including goals, results, and specify the metrics noted above. Each of the above parameters is interdependent and the choice of component elements will emerge through the decision-making process; decisions taken at one point will lead to different options at another. For example, if decisions are taken to continue with the existing 2010 biodiversity target framework approach, the time frame for results and post-2010 biodiversity target in that framework should be suitable for a change to be seen in a time frame that is relevant in policy terms. An aspirational goal for biodiversity in the coming few decades could be accompanied by targets focused on changes in drivers or ecosystem service delivery framed within relevant time frames for individual targets, thereby providing a series of milestones to follow progress in the coming years.

Biodiversity, including the health and resilience of ecosystems and their components, fundamentally influences the economy, health, livelihoods and the survival of human societies. Leaving the topic only in the hands of Ministries of Environment misses the relevance for agriculture, climate change, energy, forestry, fisheries, human health, disaster prevention, the military, commerce, financial sectors and many other sectors. The post-2010 biodiversity target framework should be established in a way that facilitates each of these sectors to implement action towards the targets relevant to their sectors.

The options for the Scope of the Post-2010 Biodiversity target framework presented below are not intended to be mutually exclusive and combinations may provide an optimal solution for Parties to consider.

Option 1 – A commitment to conservation action with no specific biodiversity target (limited for example, to a ‘Nagoya Declaration’)

Politically this would be the easiest to achieve, as it implies no concrete commitment on the part of any government. At the CBD 10th Conference of the Parties (COP 10), governments could limit themselves to affirming the objectives of the Convention and the importance of biodiversity through a statement such as a “Nagoya Declaration.” This is potentially the most unsatisfactory option in terms of obtaining real change for biodiversity on the ground. A commitment without a target would not be likely to help to leverage increased finance and multi-sectoral action to conserve biodiversity.

Strengths

- Politically easy to formulate and receive endorsement;

Weaknesses

- Minimal incentive to act after the declaration is adopted - will result in little commitment or motivation for action for biodiversity conservation;

Option 2 – Similar to the *status quo*, a continuation of the existing 2010 biodiversity target framework expressed in terms of biodiversity (for example, *Halting biodiversity loss by 2020*)

The current 2010 biodiversity target³ on biodiversity loss is equivalent to ‘State’ as in a Driver-Pressure-State-Impact- Response indicator framework, and has been the focus of some action that could continue and enhance in a second post-2010 phase. The global community is already familiar with the 2010 biodiversity target formulation and the scientific community has been putting considerable effort into providing the data and analysis needed for the existing indicators. The 2010 biodiversity target has been widely adopted and a continuation of this approach would avoid having to re-configure or re-focus these efforts. Should this option be

³ While the 2010 target is a ‘state’ target, it is understood that aspects of the 2010 framework such as the Programmes of Works go beyond ‘State.’

chosen, it would be important to clarify the term 'biodiversity,' and, in addition, increase effort to highlight the fact (often not appreciated) that the 2010 biodiversity target framework encompasses human benefits of biodiversity (through ecosystem services) as well as status and trends in biodiversity. Awareness of the human-benefit element of the existing 2010 biodiversity target framework has not been fully appreciated by the global community.

Strengths

- Provides a clear and strong focus on biodiversity ;
- Highlights the urgency of the issue;
- Would build on existing framework and allow continued development of associated indicators;
- Would build on the awareness and action already catalysed through the 2010 biodiversity target;
- Would use information already gathered for 2010 as part of the ongoing monitoring information;
- Would require limited additional communication and awareness-raising to begin to implement quickly; and
- Staying with the current approach gives familiarity.

Weaknesses

- The current biodiversity target tends to be perceived as only relating to biodiversity status and trends;
- Not all indicators are yet available and some will still not be ready for several years to come;
- Current information is available on only small proportion of biodiversity globally;
- Would maintain the weaknesses identified in the current biodiversity target as described above including the challenges of 'false successes';
- The current indicator framework is confusing and could be more logical;
- Could endanger the credibility of the conservation community. We missed the biodiversity target the first time around so we just "move the goal posts"?

Option 3–Post-2010 biodiversity target framework expressed in terms of pressures and impacts that are relevant to biodiversity

This approach to a biodiversity target framework, equivalent to a 'Pressure-State- Impact' option as in a Driver- Pressure-State-Impact- Response indicator framework, would focus attention and monitoring on the main threats to biodiversity (climate change, habitat loss/degradation, overexploitation, invasive species and pollution) as well as on the status of biodiversity itself. This would be an easily understandable approach from a communications and policy perspective, and raises awareness of the drivers of biodiversity loss, and what can be done to reduce them. It is important to note that the current 2010 biodiversity target framework does include consideration of drivers (although climate change is not explicitly included).

Information and targets for at least one key driver, climate change, is currently under discussion under the United Nations Framework Convention for Climate Change (UNFCCC) and important biodiversity-relevant developments may take place as part of UNFCCC COP 15 in December 2009 in Copenhagen. Any post-2010 framework for biodiversity should build on and synergise the results of these deliberations. Several indicators regarding the drivers of climate change relate to mitigation and adaptation of climate impacts on nature. In terms of use/exploitation, international management of some biodiversity-based commodities e.g. timber, fisheries, agriculture, or number of hectares under protection, could provide the foundation for one aspect of a new post-2010 biodiversity target framework. These existing measurements could provide regular information that might highlight ecosystem changes before reaching critical thresholds for survival of species indirectly affected. Drivers such as pollution may be less well reported but are already receiving greater attention.

Strengths

- Strengthens the focus on the reasons for biodiversity loss and the means to take action against them;
- The indicators of a post 2010 framework would be best based on Pressure, State, Impact, and Response measures;
- Easily communicated as the drivers are well known issues;
- Could provide the basis for synergy with other sectors and issues e.g. targets set by UNFCCC for climate change may be supported in a post-2010 biodiversity target framework;
- Would be particularly suited to shorter time frames for measurement;
- Baselines and data already available for some aspects of habitat degradation, pollution, use (for some species/commodities) and climate change;
- Some general awareness of impacts of drivers individually already exists;
- It would be possible to address drivers at national level as many governments already have budgets for climate action, pollution control, sustainable management of natural resources, etc.
- Drivers are the point of policy intervention and so resonate well with policy makers.

Weaknesses

- Could weaken biodiversity as the focus of the Post-2010 framework
- Places emphasis on individual drivers and not necessarily their interaction, nor of other issues that might also play a compounding role in biodiversity loss, for example lack of funding, civil conflict;
- Would mean establishing an updated indicator set with need for new data and potentially starting development of new indicators;

Option 4 – Post-2010 Biodiversity target framework expressed in terms of the links between biodiversity, ecosystem services and human well-being

Finally, a post-2010 biodiversity target framework based on the full Driver- Pressure-State-Impact- Response indicator framework, could assist the promotion of the three objectives of the CBD namely ...” *the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources...*”

Conservation both for biodiversity’s own sake as well as for human well-being should be included and, with respect to the latter, the current 2010 framework already includes specific reference to poverty alleviation and the benefit of all life on earth. One means by which to conceptualise the link between biodiversity and human well-being is ecosystem services, as popularised by Gretchen Daily (1997). The Millennium Ecosystem Assessment (2003) provided a framework for ecosystem services. As part of the MA effort, indicators and data were collected that could be useful for any proposed post-2010 framework, although considerable efforts are required to develop a comprehensive and representative set of ecosystem service indicators.

A global framework including targets for human well-being already exists - the Millennium Development Goals (MDGs). The targets of the Millennium Development Goals are to be achieved by 2015 and may or may not be updated. The Millennium Development Goal framework includes targets and indicators already monitored by many organizations, governments and agencies, and could provide cost effective input to a more broadly based indicator package for biodiversity. In addition, other indicators such as the Human Development Index of UNDP and the Adjusted Net Savings of the World Bank are being regularly updated and could provide complementary information to knowledge about biodiversity and ecosystem services. However, while the link between biodiversity, ecosystem services and human well-being is intrinsically understood, the explicit representation of the nature of that link is not yet clear.

One step in that direction is through valuation. Using valuation as a tool could provide an important input to a new biodiversity target framework by supporting outreach to the economic and financial communities. The project on The Economics of Ecosystems and Biodiversity (TEEB) may provide a strong foundation for this option. However, many conservationists warn that focusing primarily on economic perspectives to make the link between biodiversity and human well-being ignores the full spectrum of values that nature brings to people, and could provide misleading results to guide actions.

Strengths

- Some aspects of ecosystem services, from the human well-being perspective, for example “halving the number of people without access to safe drinking water, are already included in MDGs and including this option would enhance synergy with the development community;
- The services biodiversity provides could also be more easily communicated and therefore appreciated;

- This could help to build support and catalyse action from non-biodiversity audiences as it provides a language that most people will identify with;
- Many well established indicators and baselines for human well-being are already available such as the Human Development Index;
- Could bring biodiversity into global development and economic agendas more easily;

Weaknesses

- Could weaken biodiversity as the focus of the post-2010 framework and there is an imperative for biodiversity to be conserved for its intrinsic non-use values as well as consumptive values and ecological services;
- Reinforces a very utilitarian view of biodiversity and does not affirm the importance of biodiversity for biodiversity's sake;
- Numerous gaps in terms of measuring both links between biodiversity and human well-being and the relationship between biodiversity and ecosystem services delivery exist;
- Need much more valuation work to influence economic/political agendas; and
 - Requires a stronger link with new audiences, for example the private sector, both to implement conservation action and to participate in monitoring and reporting.

4. Defining the specifics of a post-2010 biodiversity target framework

Once the scope of the post-2010 biodiversity target framework has been agreed, other issues arise including the type of change being sought, the time frame for measurement, the baseline from which the post-2010 biodiversity target will be measured and which indicators will be used.

i. What change will be sought?

The 2010 biodiversity target framework within the CBD sought change as “a reduction in the rate of loss” while other fora adopted a more straightforward target of “reduction of loss” or “halt”. As noted above, whatever framework is chosen, it should be measurable and therefore expressed in terms that provide a basis for monitoring. The targets of the MDGs have been expressed in these terms as they seek to, for example, *‘Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day’*.

Depending on the scope of the post-2010 framework chosen above, options to consider could include changes relating *“restoration of X% of ecosystems or species or genetic diversity”* or *“improved management of X commodity or service”* or *“improving status or zero loss of X habitat or species”*.

The post-2010 framework might also seek to incorporate existing targets from other frameworks that could be relevant. For example, the outcomes of the UNFCCC discussions on climate change in December 2009 may provide a target with respect to emissions reductions that could be included in a post-2010 biodiversity target framework.

ii. Timeframe for the post-2010 biodiversity target framework (By when?)

The 2010 biodiversity target set a goal 8 years into the future. As noted earlier, the 2010 biodiversity target will not be reached although a number of successes have been achieved. Timing was one factor – there was little time to act, and changes to biodiversity happen in time frames that might not be recognized within 8 years. The biodiversity target itself was set as an aspirational long-term vision that was unlikely to be achieved in such a short time. Another complication was the lack of a baseline from which to measure – and 8 years turned out to be not enough time to even establish some of those baselines.

If a single post-2010 biodiversity target is established then the time frame should be relevant to the target chosen but also needs to be within a time frame that would maintain policy-makers focus on the issues and need to respond urgently.

If a hierarchy of goal/results/targets is chosen for the post-2010 framework, the goal could be established with a longer-term view in mind. The UNFCCC is discussing targets for 2050 and the CBD could opt for a vision that coincides with that date. However, many have noted that such a distant goal alone is unlikely to spark and motivate action with policy makers who have more immediate pressures to manage. One of the objectives of a post-2010 framework is certainly to catalyse action by decision-makers, and therefore choosing time frames for results/targets within the hierarchy could provide milestones that provide a temporal roadmap for action that is relevant to the issues being measured while also being policy relevant.

With respect to time frames, the CBD, reporting on a consultation on the update of the Strategic Plan, reports that,

“Most submissions suggest that 2020 and 2050 are appropriate dates for such targets. They would also coincide with likely dates for reducing greenhouse gas emissions under the UNFCCC.⁴ The year 2020 is also the timeline promoted at the ninth meeting of the Convention on Biological Diversity to halt net deforestation and which was supported by Ministers from 67 countries. A long-term inspiring vision to 2050 would provide strategic long-term focus and planning guidance beyond 2020. Some also suggest a 2015 interim target to coincide with the 2015 targets of the Millennium Development Goals. Additional milestones could be established to guide progress towards the 2020 target, drawing upon the experience in the Protected Areas Programme of Work. The Plan should recognize that, without an absolute limit on environmental pressures, halting the loss of biodiversity will not be possible.” (UNEP/CBD/SP/PREP/1)

iii. Spatial scale for the post-2010 biodiversity target framework

The 2010 biodiversity target framework was expressed at a global, regional and national scale. A future post-2010 framework could continue along this line in presenting options for customisation at regional, national or other scales – either as the primary focus or as sub-

⁴ This timeline has also been proposed by the UK's House of Commons Environmental Audit Committee in their report on the 2010 Biodiversity Target (10 November 2008).

elements within a global framework. If a hierarchy is selected, the long-term goal could be expressed at a global scale while targets/results might be phrased at different spatial scales as relevant.

As the Convention is implemented at national level, the ability to set a framework relevant at country level would be important to support establishment of national mandates to implement the biodiversity target framework and other associated work of the Convention. Providing the means to implement the biodiversity target framework at sub-global levels will also enhance broader participation of stakeholders in the work of the Convention as they would be involved in implementing, monitoring and reporting on action towards achieving the framework set within that particular context.

iv. What baselines will be used?

Measuring progress will be entirely dependent on choosing baselines from which to measure. Options from which to choose include the status of the goal/result/target as of 2010 or some time in the recent past and will be dependent on the availability of relevant data. If a mix of options about the scope of a biodiversity target framework is chosen, baselines will be needed for each element of the framework.

At whatever point in time the baselines are set, it would be necessary to take into account not only the availability of the data to that point in time but also the possible perception that the focus of the target will be on restoring to an old context as opposed to conservation within today's rapidly evolving situation. One overarching characteristic of biodiversity is its ability to change and adapt and the ultimate goal/target/result may not be to return to a previous situation but rather to a status that is ideally suited to cope with future threats such as restoring ecosystem resilience.

5. What other issues should be considered for a post-2010 biodiversity option?

- Ensure clear and consistent use of terminology: such as indicators and frameworks and technical terms.
Improved cross-reference between the targets (and associated programmes of work, strategies, initiatives, guidelines and principles) could contribute to greater coherence in the implementation of Convention by Parties. See Annex x and Annex x
- Indicator package – The specific package of indicators used will depend on which goal and target(s) are chosen. A framework that includes results and targets linking with drivers and human well-being could also benefit from indicator frameworks from other sectors such as agriculture, fisheries or forestry and demographic changes. Unfortunately, at present there is limited direct correlation between such well known aggregate indicators such as the Human Development Index or the Ecological Footprint and the status of biodiversity.

Any indicator package to accompany any new biodiversity target should also take into consideration the costs of monitoring and reporting. An extensive set of indicators might not provide that much more value for money in terms of signalling progress or problems, and trying to monitor a long list of parameters could potentially take capacity away from conservation action itself. The need for a comprehensive or representative indicator framework must be balanced against cost and utility of results.

It will be important to incorporate robust and clear indicators to measure the objectives of the CBD concerned with sustainable use and Access and Benefit sharing. Emerging awareness of the strong links between cultural and biological diversity suggest that an indicator to measure such links would also be useful.

Finally, efficiencies of scale should be encouraged by promoting collaboration among those developing indicators and monitoring programmes. Increased efficiency could also be achieved through harmonisation of the many disparate biodiversity data collection systems.

- An effective “framework” needs to include not only indicators but also needs to be embedded in a broader set of biodiversity good governance arrangements, finance and effective incentive mechanisms, and credible monitoring and adequate reporting systems.
- Clarity of responsibility and accountability – One of the challenges facing the 2010 biodiversity target was its global reach without clear identification of who (more specifically than the global commons) or who was responsible to deliver it by 2010. A specific issue is the need to build capacity by named actors in support of monitoring and reporting on the framework.
- Consider focusing on “Responses”, e.g. % of commodity trade certified as biodiversity-friendly; % of land/sea legally protected and effectively managed; % of agricultural subsidies that are “green”; % of development projects that are offset; etc.
- Finance – Another key issue for success is identifying and securing the resources needed to implement the strategic plan along with the monitoring of and reporting on the associated biodiversity target framework. Explicit mandates to existing funding bodies such as the GEF in support of the CBD Strategic Plan and biodiversity target framework should be clarified and confirmed.
- Process and consultation – For economic sectors, such as agriculture and industry, to implement action towards their own post-2010 biodiversity target framework for biodiversity conservation, the post-2010 biodiversity target framework should be established in a way that facilitates their involvement. It is necessary to determine the role of these various economic sector stakeholders.
- Further elaboration of the framework options could benefit from a modular matrix that lays out a range of options e.g. options for a time frame, thematic scope, anticipated change, geographic scale, etc
- Communications – Building on the awareness and commitment generated by the 2010 biodiversity target and integrating lessons learned with respect to the need to engage a broader range of stakeholders will mean a continued concerted effort on communications. In particular, communications to better align the post-2010 biodiversity target framework and biodiversity’s role in other fora (for example Rio +20 or the MDGs) and sectors is needed. The framework should be supported by

communication packages in multiple languages and a distribution strategy that makes use of current communication tools such as the internet and visual media.

Communications will also be vital to reach out to non-conservation actors and to enlist their commitment to contributing to conservation and achievement of the objectives of the CBD.

6. Consultation process and next steps

Following input into this options paper from a great many stakeholders, IUCN is circulating this paper widely to support and stimulate discussion about a post-2010 biodiversity target framework.

Based upon feedback received, by 15 September 2009, IUCN will then consolidate and communicate its policy position on an optimal post-2010 biodiversity target framework. It is IUCN's intention that the options set out above will also be refined in line with feedback received and will be publicly available. The IUCN Policy Position Paper and the options information paper will help enable the 10th Conference of the Parties of the Convention on Biological Diversity to make informed decisions in support of the urgent need for conservation of the world's biodiversity, sustainable use of biological resources and equitable distribution of benefits arising from biological resources – for the sake of all humankind.

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Annex I – the 2010 Biodiversity target
















The 2010 biodiversity target has been adopted in several forms as part of many international policy instruments:

- ✓ June 2001 - The EU Summit in Gothenburg in June 2001 where EU Heads of State first adopted the target of "biodiversity decline should be halted [in the EU] with the aim of reaching this objective by 2010".
- ✓ May 2002 - The [Convention on Biological Diversity](#)'s (CBD) sixth Conference of the Parties (COP), included a 2010 target (this time "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") in the Strategic Plan that they adopted.
- ✓ September 2002 - The World Summit on Sustainable Development held in Johannesburg confirmed the 2010 biodiversity target and called for "the achievement by 2010 of a significant reduction in the current rate of loss of biological diversity".
- ✓ May 2003 - Environment Ministers and Heads of delegation from 51 countries adopted the Kiev Resolution on Biodiversity at the fifth Ministerial Conference "Environment for Europe" and decided to "reinforce our objective to halt the loss of biological diversity at all levels by the year 2010".
- ✓ September 2007 - The UN decided to adopt the 2010 target (in terms of rate of loss) as a sub-target of Millennium Development Goal (MDG) 7 – Environmental Sustainability.

Annex II– 2010 Indicator framework

Source: after Global Biodiversity Outlook 2 UNEP/CBD/COP/8/12 p.4 2006

Retrieved <http://www.cbd.int/doc/meetings/cop/cop-08/official/cop-08-12-en.pdf>

TABLE 1 Status and trends of biodiversity-related parameters according to the 2010 indicators		
Based on the assessment in chapter 2 of <i>Global Biodiversity Outlook 2</i> . Arrows indicate the direction of trends (broad arrows indicate a high level of confidence about the trend; narrow arrows indicate low confidence; red arrows indicate a trend that is negative for biodiversity; green arrows indicate a trend that is positive for biodiversity). The quality of the data and indicators are shown by the stars at the right hand side.		
★★★ good indicator methodology with globally consistent time course data; ★★ good indicator, but no time course data; ★ indicator requires further development and/or limited data.		
FOCAL AREA: Status and trends of the components of biological diversity		
	Trends in extent of selected biomes, ecosystems, and habitats	★★★ ¹
	Trends in abundance and distribution of selected species	★★★
	Change in status of threatened species	★★★
	Trends in genetic diversity of domesticated animals, cultivated plants, and fish species of major socio-economic importance	★
	Coverage of protected areas	★★★
FOCAL AREA: Ecosystem integrity and ecosystem goods and services		
	Marine Trophic Index	★★★
	Connectivity – fragmentation of ecosystems	★★
 	Water quality of aquatic ecosystems	★★★
FOCAL AREA: Threats to biodiversity		
	Nitrogen deposition	★★★
	Trends in invasive alien species	★
FOCAL AREA: Sustainable use		
	Area of forest, agricultural and aquaculture ecosystems under sustainable management	★
	Ecological footprint and related concepts	★★★
FOCAL AREA: Status of traditional knowledge, innovations and practices		
	Status and trends of linguistic diversity and numbers of speakers of indigenous languages	★
FOCAL AREA: Status of access and benefit sharing		
?	Indicator of access and benefit-sharing to be developed	
FOCAL AREA: Status of resources transfers		
	Official development assistance (ODA) provided in support of the Convention	★

¹ for forests; data not available globally for all biomes, ecosystems and habitats

Annex III – Focal areas, goals and targets of the Convention on Biological Diversity

The following information presented in Annex III has been retrieved from the website of the Convention on Biological Diversity on 25 August from:

<http://www.cbd.int/2010-target/goals-targets.shtml>

To clarify the 2010 Biodiversity target there are 7 focal areas, 11 goals and 21 targets (essentially sub-targets of the 2010 biodiversity target).

“In decision VII/30, the Conference of the Parties (COP) decided to establish goals and sub-targets (listed below) for each of the identified focal areas to clarify the 2010 Biodiversity Target and promote coherence among the programmes of work of the Convention by providing a flexible framework within which national and/or regional targets may be developed.

The COP requested the Subsidiary Body on Scientific, Technical and Technological Advice to review and further refine the goals and sub-targets, ensuring that they are linked to relevant Millennium Development Goals, initiatives of the World Summit on Sustainable Development, and the goals articulated by other relevant international processes and to identify indicators for the sub-targets, ideally associated with the indicators adopted to assess progress towards the 2010 Biodiversity Target.”

Focal Area: Protect the components of biodiversity

Goal 1. Promote the conservation of the biological diversity of ecosystems, habitats and biomes

Target 1.1: At least 10% of each of the world's ecological regions effectively conserved.

Target 1.2: Areas of particular importance to biodiversity protected no measures

Goal 2. Promote the conservation of species diversity

Target 2.1: Restore, maintain, or reduce the decline of populations of species of selected taxonomic groups

Target 2.2: Status of threatened species improved.

Goal 3. Promote the conservation of genetic diversity

Target 3.1: Genetic diversity of crops, livestock, and of harvested species of trees, fish and wildlife and other valuable species conserved, and associated indigenous and local knowledge maintained.

Focal Area: Promote sustainable use

Goal 4. Promote sustainable use and consumption.

Target 4.1: Biodiversity-based products derived from sources that are sustainably managed, and Production areas managed consistent with the conservation of biodiversity.

Target 4.2: Unsustainable consumption, of biological resources, or that impacts upon biodiversity, reduced.

Target 4.3: No species of wild flora or fauna endangered by international trade.

Focal Area: Address threats to biodiversity

Goal 5. Pressures from habitat loss, land use change and degradation, and unsustainable water use, reduced.

Target 5.1: Rate of loss and degradation of natural habitats decreased.

Goal 6. Control threats from invasive alien species.

Target 6.1: Pathways for major potential alien invasive species controlled.

Target 6.2: Management plans in place for major alien species that threaten ecosystems, habitats or species.

Goal 7. Address challenges to biodiversity from climate change, and pollution.

Target 7.1: Maintain and enhance resilience of the components of biodiversity to adapt to climate change

Target 7.2: Reduce pollution and its impacts on biodiversity

Focal Area: Maintain goods and services from biodiversity to support human well-being

Goal 8. Maintain capacity of ecosystems to deliver goods and services and support livelihoods

Target 8.1: Capacity of ecosystems to deliver goods and services maintained.

Target 8.2: biological resources that support sustainable livelihoods, local food security and health care, especially of poor people maintained.

Focal Area: Protect traditional knowledge, innovations and practices

Goal 9 Maintain socio-cultural diversity of indigenous and local communities

Target 9.1 Protect traditional knowledge, innovations and practices

Target 9.2: Protect the rights of indigenous and local communities over their traditional knowledge, innovations and practices, including their rights to benefit sharing

Focal Area: Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources

Goal 10. Ensure the fair and equitable sharing of benefits arising out of the use of genetic resources

Target 10.1: All transfers of genetic resources are in line with the Convention on Biological Diversity, the International Treaty on Plant Genetic Resources for Food and Agriculture and other applicable agreements.

Target 10.2: Benefits arising from the commercial and other utilization of genetic resources shared with the countries providing such resources.

Focal Area: Ensure provision of adequate resources

Goal 11: Parties have improved financial, human, scientific, technical and technological capacity to implement the Convention

Target 11.1: New and additional financial resources are transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention, in accordance with Article 20.

Target 11.2: Technology is transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention, in accordance with its Article 20, paragraph 4.

Annex IV - Programmes of Work (& Strategies, Initiatives and Guidelines)

The following information presented in Annex IV has been retrieved from the website of the Convention on Biological Diversity on 25 August from: <http://www.cbd.int/programmes/>

Thematic Programmes

“The Conference of the Parties (COP) has established seven thematic programmes of work (listed below) which correspond to some of the major biomes on the planet. Each programme establishes a vision for, and basic principles to guide future work. They also set out key issues for consideration, identify potential outputs, and suggest a timetable and means for achieving these. Implementation of the work programmes depends on contributions from Parties, the Secretariat, relevant intergovernmental and other organizations.”

1. Agricultural Biodiversity
2. Dry and Sub-humid Lands Biodiversity
3. Forest Biodiversity
4. Inland Waters Biodiversity
5. Island Biodiversity
6. Marine and Coastal Biodiversity
7. Mountain Biodiversity

Cross-cutting Issues

“The COP has also initiated work on key matters of relevance to all thematic areas. These cross-cutting issues correspond to the issues addressed in the Convention's substantive provisions in Articles 6-20, and provide bridges and links between the thematic programmes. ... The work done for these cross-cutting issues has led to a number of principles, guidelines, and other tools to facilitate the implementation of the Convention and the achievement of the 2010 biodiversity target.”

1. 2010 Biodiversity Target
2. Access to Genetic Resources and Benefit-sharing (Bonn Guidelines)
3. Biodiversity for Development Initiative (2006)
4. Climate Change and Biodiversity
5. Communication, Education and Public Awareness (Programme of Work on)
6. Economics, Trade and Incentive Measures (Proposals)
7. Ecosystem Approach
8. Global Strategy for Plant Conservation
9. Global Taxonomy Initiative
10. Impact Assessment (Guidelines including the Akwé: Kon Voluntary Guidelines)
11. Identification, Monitoring, Indicators and Assessments
12. Invasive Alien Species (Guiding Principles)
13. Liability and Redress - Art. 14(2)
14. Protected Areas (Programme of Work on)
15. Sustainable Use of Biodiversity (Addis Ababa Principles and Guidelines)
16. Tourism and Biodiversity (Guidelines)
17. Traditional Knowledge, Innovations and Practices - Art. 8(j) (Programme of Work)
18. Technology Transfer and Cooperation (Programme of Work on)