



Targets for biodiversity beyond 2010: research supporting policy



Report of an electronic conference, September 2009



E-Conference organisation:

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The publication should be cited as follows:

Grant, F., Young, J., Bridgewater, P., and Watt, A.D. (Eds.). 2009. Targets for biodiversity beyond 2010: research supporting policy. Report of an e-conference.



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Preface

Research on biodiversity is essential to help the European Union and EU Member States to implement the Convention on Biological Diversity as well as reach the target of halting the loss of biodiversity in Europe by 2010.

The need for co-ordination between researchers, the policy-makers that need research results and the organisations that fund research is reflected in the aims of the “European Platform for Biodiversity Research Strategy” (EPBRS), a forum of scientists and policy makers representing the EU countries, whose aims are to promote discussion of EU biodiversity research strategies and priorities, to exchange information on national biodiversity activities and to disseminate current best practices and information regarding the scientific understanding of biodiversity conservation.

This is a report of the E-Conference entitled “Targets for biodiversity beyond 2010: research supporting policy” preceding the EPBRS meeting to be held under the Swedish EU presidency in Visby, Sweden, from the 28th September to the 1st October 2009.



Introduction

Peter Bridgewater, E-Conference Chair

Background

A commitment to protect and restore habitats and natural systems and halt the loss of biodiversity by 2010 was made by European leaders at the 2001 EU Summit in Gothenburg.

In April 2002, the Parties to the Convention on Biological Diversity (CBD) committed themselves (Decision VI.26) to a new mission which was “a more effective and coherent implementation of the three objectives of the Convention, 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”.

While the word target was not used in the CBD decision (rather it became the new mission), the World Summit on Sustainable Development (Johannesburg, 2002) included that CBD decision as a target to achieve, by 2010, a significant reduction of the current rate of biodiversity loss at global, regional and national levels as a contribution to poverty alleviation and to the benefit of all life on earth in its Plan of Implementation.

Following this history, in 2006 the UN General Assembly amended Millennium Development Goal 7 (Ensure environmental sustainability), by adding an additional Target 2: ‘Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss.’

From its 2007 meeting the G8 group of nations have added biodiversity issues to the agenda. In the ‘Carta di Siracusa’ on Biodiversity, issued by the G8 ministers of the Environment, the Carta talks about a post-2010 common framework on biodiversity, but does not actually talk about a target.

Suffice it to say that none of these targets have been met, and the global biodiversity community is now addressing the post-2010 period. Final decisions on the way forward will be taken at CBD CoP10 in Nagoya, October 2010.

In 2004, at CoP VII the CBD decided to establish Focal areas and within them Goals and sub-targets (which were labelled as targets, thus confusing with the global Target). Full detail here is to be found at <http://www.cbd.int/decision/cop/?id=7767>

E-conference

The challenge for the e-conference was three-fold, namely:

- To assess the appropriateness of a global target to halt or reduce biodiversity loss;
- To review the existing set of goals and sub-targets and to propose new targets;
- To comment on the natural and social science research needed to verify such targets and the indicators necessary for monitoring them.

The e-conference focussed on three key questions, one per week of the conference – although of course there was overlap between these questions (and their answers!).

1. How can we use the experience of the existing 2010 biodiversity target and its goals, sub-targets and indicators to set updated (or new) relevant, rigorous, balanced and legitimate target(s) and indicator(s) post 2010?

- Is existing social and natural science knowledge enough?
- Do we need better science-policy interfaces to manage target creation and measurement?

- What new knowledge do we need?
 - Are there examples from other environmental targets that have been successful?
 - Should the targets all be for the same time period i.e. a decade, or should there be flexible timelines for them?
2. What research do we need to set and monitor biodiversity targets for the future, and the subsequent management of biodiversity? (Note: the research needs here are more about those which are needed to develop and implement policy, not to advance pure science)
- For development of policy (to determine the future conservation/use/management of biodiversity)
 - For science which is policy relevant
 - To link with climate change (and other global changes)
3. Are there specific conflicts between existing or potential goals, sub-targets and targets or their associated indicators for biodiversity change?
- Marine – terrestrial; should there be different indicators?
 - Socio-economic goals and their impact on biodiversity
 - Ecosystem services – is this the same as biodiversity, a surrogate for it or something different again?
 - Climate change and biodiversity indicators
 - How do we manage these conflicts?

In addressing all 3 questions we need to bear in mind – what are the communication needs to ensure messages get across to decision makers, and the wider public?

Underlying all of this are real questions concerning how well we have established research that addresses the integrative questions of biological diversity – which is a hierarchical concept that needs to be addressed as such. Research on species is not research on biodiversity; it is research on species, only one element of biodiversity. The DIVERSITAS programme was established with the aim of promoting such research, yet still there is little integrative research emerging.

As we approach 2010 we need to refocus our efforts on this theme of integration, for it is that, above all else, which may allow us to define more appropriate targets and ways of measuring our success at reaching them – or even allow us to question if we need such targets at all, to help manage the reality of biodiversity change in the decades to come. Our e-conference therefore had a wide reach, combining both natural and social sciences.



Summary of contributions

Fiona Grant and Juliette Young

Summary of contributions: Week 1

Stefan Leiner began discussions by highlighting the value of the 2010 target, as well as some of its key limitations including the lack of a baseline against which progress could be measured; the lack of a unifying currency for against which progress toward the 2010 biodiversity target could be measured; and the failing of the target in reflecting important emerging issues such as the dimension of ecosystem services. Allan Watt agreed with Stefan Leiner's call for incorporating ecosystem services in future biodiversity targets and referred to projects such as RUBICODE and the TEEB initiative. In particular he argued that there was an urgent need for research to develop measures of ecosystem services that could be used to monitor policy targets that incorporated the services provided by biodiversity. Following on from Stefan Leiner's contribution, the issue of baselines was also discussed in Myriam Dumortier's contribution, in which she argued that the European 2010 target should be scientifically and coherently translated into local baselines to support the political level in sharing the 'burden of biodiversity conservation' in an equitable way. She emphasized that it was essential for these baselines to be dynamic enough to allow for a changing climate.

Dave Pritchard outlined Ramsar's experience with biodiversity targets. He argued that a key gap in the 2010 target was the fact it was based on a quantitative measure of biodiversity loss and suggested that Ramsar's 'ecological character' concept could offer elements of a way forward on this. He also discussed the challenges in communicating and measuring the "success" of the 2010 target. He called for increased efforts in interpreting the meaning of indicator results and in designing more adapted indicators. He concluded his contribution by arguing that a biodiversity target and indicators regime should be rolled forward in an appropriate way that fosters long-term political continuity on the conservation goal; but with modifications to sharpen the policy-response relevance of the 'stories' told about the meaning of indicator results.

Renat Perelet encouraged discussion on the economic issues inherent in setting biodiversity targets beyond 2010 and highlighted the usefulness of implementing economic incentives in order to encourage people to lessen their impact on ecosystems. Zakir Hossain asked for discussions on targets to be broadened in order to include developing countries, highlighting the impact of EU policies on the rest of the world.

Summary of contributions: Week 2

Discussion continued this week on the issue of how the experience of the existing 2010 biodiversity target and its goals, sub-targets and indicators could be used to set updated (or new) relevant, rigorous, balanced and legitimate target(s) and indicator(s) post 2010.

A strong theme was the importance of engaging society in efforts to conserve biodiversity. Colin Galbraith examined the importance of a collaborative approach when

developing a new target post-2010. In particular he highlighted three key areas to consider: 1) how science is translated into policy; 2) if biodiversity should be assessed on its own or combined with an assessment of the health of ecosystems and the services that these provide to people; 3) the links between the social and natural sciences to ensure that messages are communicated effectively and that people are engaged in maintaining and enhancing biodiversity. Many other contributions highlighted the need for a paradigm shift in the way society viewed its role in conservation. Martin Sharman outlined the 'wicked problem of biodiversity' by arguing that biodiversity was inextricably linked to all other activities that we, humanity, have done and are doing to modify this planet and consequently it was not possible to set targets or manage biodiversity by considering it as a separate, somehow untouched, entity. He urged us to re-think our position on earth and to seriously reconsider how we could make our world a sustainable place to live. Equally Adrian Manning called for a change in the way we managed our ecosystems. He argued that biodiversity should be a by-product of how we managed our landscapes sustainably in the future, which would require people ceding some control over ecosystems. In contrast, Jiska van Dijk suggested that it was necessary to consider the problem of biodiversity loss in a more simple way, and that setting a target for biodiversity should focus on biodiversity rather than necessarily trying to integrate other aspects such as ecosystem functioning and ecosystem services.

A key step in achieving a shift in societal attitudes towards biodiversity was to not consider biodiversity conservation as a burden. As such, Jeffrey McNeely argued that maintaining life on earth should be cast in a much more positive light for society to fully engage and contribute in conservation. Similarly Jan Jansen argued that approaches like Natura 2000 should be considered as an opportunity for sustainable economic growth. He did, however, outline the importance of not restricting Natura 2000 with jurisdiction and book keeping, but to adopt a flexible approach in order for it to fulfil its potential as a powerful tool in biodiversity conservation. In addition, using the example of LIFE+ and forest regeneration, he argued that long-term projects needed urgently to be funded. The need for funding to be made more available for large scale and longer term projects was also highlighted by Adrian Manning.

Aðalheiður Jóhannsdóttir outlined the role of law in reaching and maintaining biodiversity targets. She argued that in order to stand any chance of success targets needed to be broken down into sub-targets; be clearly reflected in law; and have a clear legal operationalisation. The need to improve biodiversity governance was raised by many participants this week. Jeffrey McNeely suggested that governments seemed to favour over-exploitation of our natural resources above sustainable use. Similarly, Felix Rauschmayer argued that it was necessary to have a better understanding of the experience with the 2010 target in political circles in order improve upon a new target for the future. Ferdinando Boero argued that rather than focussing exclusively on applied research, decision-makers should support more theoretical research in order to better understand and therefore better conserve biodiversity. He later emphasized the importance of conserving key biodiversity-rich habitats in order to protect the greatest amount of species diversity. Pablo Goicoechea agreed with Ferdinando Boero stating that biodiversity resilience was achieved by conserving the genetic diversity in a given population.

Allan Watt opened discussion on what research was needed to set and monitor biodiversity targets for the future, and the subsequent management of biodiversity. He noted that too much emphasis of the 2010 target had been placed on indicators and that too little research had been carried out on whether or not targets were an effective approach to achieving policy goals. He argued that due to the focus on indicators the role of people in both driving biodiversity loss and in taking action to address it had been ignored. He called for research to be carried out on public attitudes and behaviour in response to communication and implementation of policy, including targets. Felix Rauschmayer outlined a three step approach to creating a new biodiversity target: firstly to define the goal of a new target; secondly to identify the actors the target aims to deal with; thirdly to classify the mechanisms by which to discuss and decide on the target. He argued that considering these three points was more important for the success of a new target than inputting biodiversity sciences into

indicators. Adrian Manning outlined the significance of increasing the amount of monitoring that is done in order to follow trends in biodiversity. He also stressed that it was imperative to understand the cause and effect behind these trends in order to be able to manage biodiversity adaptively. Tor-Bjorn Larsson and colleagues summarised the recent outcomes of another electronic conference held by the Swedish Species Information Centre which considered the work that had been carried out over the last decade to halt biodiversity loss. The main outcome of their conference was a proposal for a new political biodiversity target: 'Safeguarding healthy ecosystems: To ensure that (by 2030) economic and social development is carried out within the boundaries of healthy ecosystems, delivering long term benefits to humankind.'

Summary of contributions: Week 3

Dan Faith argued that it was not the 2010 target that should be abandoned, but our approach to it. He proposed that a 2010 type target can be achieved through implementing systematic conservation planning (SCP) and continued discussion on the need for an integrative approach to a new target, to balance all of society's needs. This was supported by a number of participants. Ben Delbaere argued that interdisciplinary research was essential in order to make a strong connection between science and policy. Equally, Klement Tockner and Hans-Peter Grossart emphasized the need for tight collaborations between scientists, the public, stakeholders and politicians in order to cope with competing interests and to develop innovative strategies for biodiversity conservation. Diana Hummel encouraged the use of a transdisciplinary approach to biodiversity research based on the social-ecological systems (SES) perspective. Paul Goriup argued that the threat to biodiversity was the result of actions of humanity as a whole and therefore the 2010 target was unrealistic and also impossible to achieve on an individual basis. He followed on from suggestions last week of adopting a more positive approach to halting biodiversity loss by working towards a target of achieving 'better' biodiversity and highlighted the need for public support and resources in order to attain this. Similarly Peter Bos called for researchers to take an active role with regard to policy processes in order to improve the relevance and outreach of research projects. Alessandro Gimona highlighted the importance of identifying the barriers to the implementation of policy for land managers and all levels of government.

The importance of engaging society in efforts to conserve biodiversity was further discussed this week. Bernard Kauffmann argued that it was necessary to first apportion responsibility of the target and to ensure that this was understood by the electorate to guarantee the successful implementation of measures. He stated that targets needed to engage and implicate the public at a level that was immediately relevant to them. Similarly, Leslie Adams reinforced the importance of engaging the electorate in order to make governments take notice. Zakir Hossain suggested that it was also necessary to free biodiversity from corporate greed and translate all relevant policies, laws and regulations to local dialects. Maria Fonte supported Zakir Hossain's arguments for engaging local people with the biodiversity target. In particular she raised the issue of conserving agricultural biodiversity due to the dominance of the agro-food industry. Betty Stickers argued that countries have an obligation not to diminish the Farm Animal Genetic Resource and that this requires a global approach in order to combine all existing networks regarding conservation of rare and traditional breeds of all categories of animals, plants and agricultural products.

Tristan Tyrrell summarised the outcomes of the CBD and UNEP-WCMC post 2010 indicators workshop listing the recommendations that their participants felt were the most important, namely to:

- Develop a small set of broad headline indicators
- Modify and simplify the current global indicators into four focal areas: threats to biodiversity; state of biodiversity; ecosystem services; policy responses
- Develop a more complete and flexible set of indicators and link actions and biodiversity outcomes to benefits for people

- Further develop national capacity
- Develop a communication strategy
- Maintain a flexible and inclusive approach

Keith Hiscock highlighted that the underlying ecological processes and actions needed to protect marine biodiversity were potentially very different from terrestrial biodiversity needs and that a new target should take this into consideration. Both Ferdinando Boero and Keith Hiscock emphasized the need for the Habitats Directive to be more inclusive of marine research and addressed the need for increased surveying and monitoring of marine habitats. They argued that complete lists of marine habitat types were desperately needed. Ferdinando Boero added that once lists had been made habitats needed to be ranked according to their vulnerability or unicity; the distribution of different habitats needed to be ascertained; and community types and species lists should be associated to each habitat type. He later suggested that in order to preserve a habitat it was necessary to remove its stressors. He also addressed the need to consider the functionality of a habitat in order to ensure that what we had was conducive to proper ecosystem functioning.

Christian Prip opened discussion on the specific conflicts between existing and potential goals, sub-targets and targets and their associated indicators on biodiversity change. He highlighted the need to get biodiversity higher up the political agenda and stated that biodiversity conservation would require different approaches in different parts of the world. Klement Tockner and Hans-Peter Grossart agreed with this approach, arguing that future biodiversity research needed to evaluate the loss of biodiversity at different scales in relation to ecosystem functioning and that criteria needed to be developed to evaluate how this was impacted on by anthropogenic actions. They also highlighted the fact that the 2010 target conflicted with many other targets and directives at national, EU and global scales. In particular they considered the conflict between improving and expanding navigation channels in Europe and reducing the spread of invasive species and biotic homogenisation. Stephan Helfer argued we were dealing with a 'biological uncertainty principle' making it impossible to assess both the position and momentum of biological change. Klaus Henle emphasized the need to research the effects that a post 2010 target may have on biodiversity and on the footprints that strategies to reach this target would have on biodiversity outside Europe. He also highlighted the need to research potential risks to biodiversity as a result of using alternative sources of renewable energy and to develop new strategies that allowed for changes in national and international networks of protected areas due to climate change.

Summary of contributions: Final week

A great deal of discussion ensued in the last week regarding biodiversity and ecosystem services. Renat Perelet suggested that biodiversity was being depleted due to its lack of market value and argued that we needed to highlight the high monetary value of ecosystem goods and services. He went on to suggest a biodiversity protocol based on the Kyoto protocol in order to help conserve and use ecosystem services in a sustainable way. Similarly, Riccardo Simoncini highlighted that the economic value of biodiversity has not been taken into account in land use and policy development so far and consequently that it was now imperative to look more closely at the governance factors and processes that could enhance or impair ecosystem services and biodiversity conservation. Martin Sharman suggested that ecosystem services may help to protect biodiversity from the effects of humanity. He also highlighted that ecosystem services were a powerful tool to persuade those in power of the importance of conserving biodiversity. Equally, Pedro Herrera highlighted the importance of conserving biodiversity in order to ensure the long-term sustainability of ecosystem services. Felix Rauschmayer did however point out that the links between ecosystem goods and services and human well-being were still poorly understood and needed further research. Ferdinando Boero highlighted the anthropocentric nature of ecosystem services and argued that as a society we had focussed too much on the exploitation of ecosystems rather than their conservation. Robert Scholes' contribution very much followed his opinion and served to

remind participants that the Millennium Assessment (MA) report used the concept of ecosystem services as a supplement, not a replacement, of the 'intrinsic value' concept of biodiversity conservation. This was to some extent echoed in Rasmus Ejrnaes' contribution, in which he argued that it was essential to focus research on biodiversity per se rather than restricting research to biodiversity providing human services.

On the topic of conflicts between targets, Francois Bonhomme highlighted the apparent conflict between incentives that drove political decisions, namely growth and wealth, and what should benefit biodiversity. He argued that this called for a major societal change in our way of life and demography and that economic/industrial growth should take account of ecological impacts and minimise negative trade-offs. Denis Ruyschaert also mentioned market oriented economy as one of the reasons contributing to biodiversity loss, together with governance-globalisation, local reality and NGOs' sub-optimal action. He emphasized the importance of influencing world politics in order to get biodiversity higher up the political agenda and the need to improve the link between local, global and multi-level governance. Sandra Luque also supported this idea and argued that an international code of ethics for international companies, such as logging, mining and plantation companies, was urgently needed. Nuria Selva highlighted the need for a post 2010 target to develop methods to overcome potential conflicts between preservation of biodiversity and sustainable development. She also outlined the need to conserve roadless areas in Europe and to research common species as sub-targets/indicators. Pablo Goicoechea supported these views and argued that we should also take the opportunity to learn from the experiences of dealing with climate change. Martin Sharman emphasized that targets should be set in context and that they should be holistic, incorporating the interplay between humans and the non-human components of life on earth. He also argued that future targets would need to recognise that while we need biodiversity, biodiversity does not need us. He suggested that any new targets set should aim to guide our behaviour at a conceptual and practical level.

Participants of the ALTER-Net summer school strongly advocated the need for interdisciplinary research in order to succeed in halting the loss of biodiversity. They highlighted the importance of communicating future targets both in general outreach and to provide practical guidelines for the public to act upon. Sandra Luque also emphasized the need to gain national and international support for monitoring and restoration activities. She argued that long term data collection was needed to be able to develop appropriate conservation and management options and to plan for changes within climate change scenarios. She also supported the need for increased capacity building that could encompass different levels, audiences and contexts, particularly in developing countries. Vladimir Vershinin argued that it was necessary to incorporate both traditional and modern methods in order to gain a better understanding of biodiversity dynamics and management. He highlighted the importance of incorporating all levels of biodiversity in order to help create a more balanced system of biodiversity conservation.

John Hutcheson stated that biodiversity provided the functional flexibility for ecosystems to buffer against environmental extremes. He therefore argued that future research, policy and management should focus on replenishing the current global depletion of buffering capacity. Pablo Goicoechea argued that conservation and restoration efforts need to take into consideration the evolutionary potential of populations and species. He highlighted that genetic diversity was essential in order to preserve the evolutionary potential of a population and to enable them to adapt to environmental changes. He therefore emphasized the need for different populations from the same species to be the subject of conservation efforts.

Sandra Bell outlined a wetlands project that was based on the synthesis of social and natural sciences research. She highlighted that although the final report was commended and the results disseminated through various channels it had very little direct impact. She stated that their research highlighted failures in environmental governance and the implementation of conservation regimes, but that none of the parties responsible for these problems were held to account.



Research priorities

Fiona Grant, Juliette Young, Peter Bridgewater & Allan Watt

1. Target setting

Status and trends

- Improve our knowledge of the diversity and distribution of habitats and species in European waters
- Evaluate and address ecosystem services in each of the relevant policy sectors
- Understand better the links between ecosystem goods and services and human well-being
- Better understand the combined functioning of the social-ecological system

Indicators, monitoring & baselines

- Develop a small set of broad headline indicators
- Develop measures of ecosystem services that can be used to monitor policy targets that incorporate the services provided by biodiversity
- Create a proxy currency to measure the status of EU biodiversity and/or ecosystem services
- Develop indicators incorporating a measure of quality/degradation of ecosystem functioning – not just focussing on quantity of biodiversity
- Develop indicators that consider how efficiently we can balance biodiversity conservation with other needs of society
- Modify and simplify the current global indicators into four focal areas: threats to biodiversity; state of biodiversity; ecosystem services; policy responses
- Better understand the links between biodiversity and their indicators
- Further develop models of overall biodiversity to ensure that they are robust enough to be used in indicators
- Better understand the links between biodiversity indicators and ecosystem goods and services
- Develop better methods for interpreting the meaning of indicator results
- Develop a baseline against which progress can be measured
- Develop local baselines that are dynamic and include functional species groups– what and how much biodiversity is needed at a local level to achieve the European commitment
- Develop a networked monitoring system that allows early detection of negative trends and a sound evaluation of success and failure of any adjustments made to protected sites

Drivers of biodiversity change

- Better understand biodiversity loss at specific, local sites or sectors to improve knowledge on what is happening horizontally (from the ground locally to the international level) and vertically (in time)
- Develop methods to evaluate the loss of biodiversity at different spatial scales in relation to ecosystem functioning

- Define relevant criteria to evaluate the impact of anthropogenic actions on biodiversity and ecosystem functioning
- Better understand how changes in biodiversity affect the health of ecosystems
- Improve our knowledge of the stressors acting on European waters

Scenario building, modelling & mapping

- Develop sustainable land-use scenarios in which biodiversity objectives and the socio-economic conditions can enforce each other
- Further develop methods to monitor, at the regional and global scale, biodiversity loss and achievements
- Develop approaches that can use remote sensing to supply time series on change in condition of land and interpret this information using robust global biodiversity models
- Map marine habitats at a European level
- Develop strategies to account for the evolutionary potential of populations and species in conservation and restoration efforts

Policy-relevant priorities

- Update the Habitats Directive to make it more adapted to the marine environment
- Determine the particular planning and conservation instruments that are the most useful for achieving efficiencies in different contexts
- Better understand public attitudes and behaviour in response to the communication and implementation of policy, including targets
- Better understand our role on earth and develop methods to enable society to live sustainably
- Examine how science is translated (or not) into policy

2. Conflicts between targets

- Better understand the impact targets beyond 2010 would have on biodiversity
- Better understand the conflicts between the preservation of biodiversity and sustainable development
- Better understand the conflicts between strategies to protect human health and the preservation of biodiversity and ecosystem function
- Better understand how the strategies to reduce our impact on European diversity affect biodiversity in other regions of the world
- Better understand the benefits and risks of alternative sources of renewable energy for biodiversity
- Further develop strategies to adjust networks of protected areas to climate change ensuring that the reserve systems are flexible
- Better understand if the implementation of policy instruments are coherent with the private/public character of goods to be delivered and understand if they effectively and efficiently contribute to the achievement of the policy goal
- Better understand what the barriers to implementation of policy are for land managers and for all levels of government

3. Governance levels and accountability

Communication and participation

- Develop targets that can be easily understood by the public
- Develop a 'biodiversity budget' that is officially presented to the public at regular dates
- Develop methods to better communicate knowledge from research to those who implement policy on the ground
- Better understand and accept how policy processes and decision making work, in different fields, on different scales and in different types of organisation

Ethics and law

- Develop an international code of ethics for logging, mining and plantation companies, among others
- Further understand how international, national and regional biodiversity law actually functions and whether it is actually working for biodiversity
- Better understand if policy decisions and the management of natural resources are oriented towards the delivery of private or public goods

Factors that need to be considered in order to carry out the research priorities:

Knowledge building and transfer

- Promote collaborative and integrative research
- Provide training for interdisciplinary research
- Build on projects such as RUBICODE and TEEB to shape targets incorporating ecosystem services
- Develop better communication strategies
- Further our theoretical knowledge
- Further research into biodiversity per se as well as biodiversity for human benefits
- Collate information from all hierarchical levels of biodiversity from molecular to the biosphere to create a more balanced system for biodiversity conservation

Political, legal and economic support

- Maintain long-term political continuity on the conservation goal
- Instigate economic incentives to achieve biodiversity goals
- Provide national and international support for monitoring and restoration activities
- Develop new financial mechanisms in order to guarantee continuation of long-term, large scale projects
- Further develop national capacity
- Promote the development of political decisions that are in accordance with biodiversity conservation
- Implement capacity building opportunities that encompass different levels, audiences and contexts, particularly within developing countries
- Develop strategies to help share the 'burden of biodiversity conservation' at the political level in an equitable way, but taking care to avoid habitat homogenisation

Public involvement and support

- Apportion responsibility for targets and ensure that the electorate fully understand
- Engage the global electorate in biodiversity conservation and improve public awareness
- Translate all relevant policies, laws and regulations into understandable local dialects

Changing cultures

- Change our culture and our outlook and spend time to reflect
- Focus should shift from exploitation to conservation

Suggestions for new targets

- Targets need to incorporate a clear legal operationalism
- Incorporate explicitly all other needs of society in any new target
- Determine and acknowledge the impact any EU biodiversity target will have on developing countries
- Develop holistic targets
- Develop a protocol for biodiversity similar to the Kyoto protocol
- Focus on research into biodiversity per se, and less on biodiversity for human services



List of contributions

Title of contribution	Author(s)
Session I: What have we learnt from the 2010 biodiversity target?	
Lessons learned from the 2010 target	Stefan Leiner
RE: Lessons learned from the 2010 target	Allan Watt
RE: Lessons learned from the 2010 target	Ferdinando Boero
Ramar's experience with biodiversity targets	Dave Pritchard
Economic issues	Renat Perelet
RE: Economic issues	Jeffrey McNeely
RE: Economic issues	Bernard Kaufmann
RE: Economic issues	Leslie Adams
Link EU biodiversity policy with developing countries	Zakir Hossain
RE: Link EU biodiversity policy with developing countries	John Ceasar
The baseline dilemma	Myriam Dumortier
Are LIFE+ actions without research successful in native forest regeneration projects?	Jan Jansen
What can we learn from the 2010 target?	Colin Galbraith
The role of law in reaching and maintaining biodiversity targets	Aðalheiður Jóhannsdóttir
Some thoughts from the first week	Peter Bridgewater
RE: Some thoughts from the first week	Ferdinando Boero
RE: Some thoughts from the first week	Jeffrey McNeely
RE: Some thoughts from the first week	Pablo Goicoechea
RE: Some thoughts from the first week	Klaus Henle
Session II: Research needed to set and monitor future targets	
Do we know if targets make a difference to attitudes and behaviour that affect biodiversity?	Allan Watt
The wicked problem of biodiversity	Martin Sharman
RE: The wicked problem of biodiversity	Jiska van Dijk
RE: The wicked problem of biodiversity	Dave Stanley
RE: The wicked problem of biodiversity	Dave Stanley
Researching what we preach	Adrian Manning
Goals, actors and mechanisms for biodiversity targets	Felix Rauschmayer
Natura 2000 not a burden but an opportunity for sustainable economic growth	Jan Jansen
Towards a 2020 biodiversity target: how can the loss of biodiversity successfully be halted?	Johan Bodegard et al.
What research do we need to set and monitor biodiversity targets for 2020?	Dan Faith
RE: What research do we need to set and monitor biodiversity	Alessandro Gimona

Title of contribution	Author(s)
targets for 2020?	
RE: What research do we need to set and monitor biodiversity targets for 2020?	Dan Faith
Biodiversity: moving from loss to gain	Paul Goriup
The (post 2010) target and interdisciplinary research	Ben Delbaere
Biodiversity targets: local people and researchers	Zakir Hossain
RE: Biodiversity targets: local people and researchers	Maria Fonte
RE: Biodiversity targets: local people and researchers	Betty Stickers
CBD/UNEP-WCMC post 2010 indicators workshop	Tristan Tyrrell
The role of the Habitat Directive in halting biodiversity loss	Ferdinando Boero
RE: The role of the Habitat Directive in halting biodiversity loss	Keith Hiscock
RE: The role of the Habitat Directive in halting biodiversity loss	Keith Hiscock
Social-ecological systems for transdisciplinary biodiversity research	Diana Hummel
RE: Social-ecological systems for transdisciplinary biodiversity research	Vladimir Vershinin
Session III: Conflicts between existing and potential targets	
What are the communication needs to ensure messages get across to decision makers and the wider public?	Peter Bos
Is biodiversity the basis for ecosystem services?	Christian Prip
RE: Is biodiversity the basis for ecosystem services?	Renat Perelet
RE: Is biodiversity the basis for ecosystem services?	Ferdinando Boero
RE: Is biodiversity the basis for ecosystem services?	Pedro Herrera
RE: Is biodiversity the basis for ecosystem services?	Rasmus Ejrnaes
RE: Is biodiversity the basis for ecosystem services?	Felix Rauschmayer
RE: Is biodiversity the basis for ecosystem services?	Riccardo Simoncini
RE: Is biodiversity the basis for ecosystem services?	Martin Sharman
RE: Is biodiversity the basis for ecosystem services?	Robert Scholes
RE: Is biodiversity the basis for ecosystem services?	Felix Rauschmayer
New strategies are needed	Klement Tockner and Hans-Peter Grossart
RE: New strategies are needed	Francois Bonhomme
RE: New strategies are needed	Denis Ruysschaert
A global approach to reach biodiversity targets	Sandra Luque
Contribution of the policy committee of the society for conservation biology- Europe section (SCB-ES)	Nuria Selva
Some thoughts on current discussions	Peter Bridgewater
RE: Some thoughts on current discussions	Stephen Helfer
RE: Some thoughts on current discussions	Martin Sharman
RE: Some thoughts on current discussions	Peter Bridgewater
RE: Some thoughts on current discussions	Sandra Bell
RE: Some thoughts on current discussions	John Ceasar
Numbers are not dangerous	Pablo Goicoechea
Functional ecology and appropriate tools give simple guidance	John Hutcheson
Targeting Interdisciplinarity	ALTER-Net summer school
Enough science, now for the politics	Pablo Goicoechea
RE: Enough science, now for the politics	John Ceasar
Some final thoughts	Peter Bridgewater