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FOR BIODIVERSITY 2011-2020
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REVIEW OF NATIONAL APPROACHES TO ASSESSING PROGRESS TOWARDS THE AICHI BIODIVERSITY TARGETS

Note by the Executive Secretary

1. The Executive Secretary is circulating herewith, for the information of participants in the meeting of the Ad Hoc Technical Expert Group on Indicators for the Strategic Plan for Biodiversity 2011-2020, a technical background document reviewing national approaches to assessing progress towards the Aichi Biodiversity Targets.

2. The report was prepared by the United Nations Environment Programme World Conservation Monitoring Centre in consultation with the Secretariat of the Convention on Biological Diversity, and with financial support from the Federal Office for Environment, Government of Switzerland, to support the work of the Ad Hoc Technical Expert Group (AHTEG) on Indicators for the Strategic Plan for Biodiversity 2011-2020.

3. The report is presented in the form and language in which it was received by the Secretariat.

Review of national approaches to assessing progress towards the Aichi Biodiversity Targets

June 2015

Prepared by Anna Chenery, Sarah Ivory and Katherine Despot Belmonte, UNEP-WCMC

The United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) is the specialist biodiversity assessment centre of the United Nations Environment Programme (UNEP), the world's foremost intergovernmental environmental organisation. The Centre has been in operation for over 30 years, combining scientific research with practical policy advice.

1. Key Messages

- Assessing national progress towards the Aichi Biodiversity Targets is key to monitoring the implementation of the Strategic Plan for Biodiversity 2011-2020.

- It is evident that a variety of approaches are used by countries to assess national progress towards the global Aichi Biodiversity Targets, often as combinations of different approaches, including expert opinion, author opinion, stakeholder input, quantitative indicators, specific case studies and public and community consultations.

- Each approach has inherent strengths and limitations, which should be acknowledged and taken into account during the assessment of progress and preparation of National Reports. These strengths and limitations will also be dependent on the national context and priorities, and the most appropriate approach or combination of approaches may vary between countries.

- **Expert opinion** can be a valuable means of incorporating local, contextual knowledge, including from different sectors, and can also help clarify the often complex relationships between actions taken and biodiversity. However, it allows a degree of subjectivity.

- **Author opinion** can be useful to bring together and synthesise complex information from various sources. Again, this approach allows a level of subjectivity and also relies on the author possessing extensive knowledge on all issues covered in the National Report.

- Using **stakeholder input** allows an inclusive and holistic approach to assess progress, which can contextualise and refine the conclusions. It can also serve as an awareness raising activity, enhancing ownership of the Aichi Biodiversity Targets among different groups and sectors. However, this can be a time-consuming and complex approach, both to obtain the input and to compile and interpret the information.

- **Quantitative indicators** provide a scientifically-robust and objective evidence base. However, indicators developed at the national or sub-national level in response to key issues or priorities may not provide comprehensive coverage of the multifaceted Aichi Biodiversity Targets, adding a degree of complexity to their interpretation for this purpose, and often requiring additional information or input. Indicators may also be costly and technically complex to produce.

- **Public and community consultations** ensure a wholly inclusive process and may reveal localised trends of interest; however, engaging appropriately through such consultations is time-consuming and often challenging due to local languages or customs.

- Where obtaining detailed data and analyses for an entire country is not feasible, **case studies** can provide an option to explore trends in biodiversity and ecosystem services, impacts of policies, plans or actions, and overall progress towards the Aichi Biodiversity Targets in more detail. However, case studies provide localised examples and are not necessarily representative of the country as a whole, which should be recognised.

- Using **multiple lines of evidence** to assess progress towards the Aichi Biodiversity Targets may be the most realistic solution for Parties to help to address gaps in the coverage of a single approach and provide a more comprehensive assessment.

- However, using multiple approaches could potentially be resource and time-intensive, and lead to obtaining a large amount of information, meaning that careful planning at the outset is essential to ensure efficiency and the effective use of information gathered.

- Countries will need to consider available information and data, and the time and resources required for different approaches in their national context in order to determine the most appropriate approach or combination of approaches to use.

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This report was produced by UNEP-WCMC in consultation with the Secretariat of the Convention on Biological Diversity (CBD) and with financial support from the Federal Office for Environment (FOEN), Government of Switzerland to support the Ad Hoc Technical Expert Group (AHTEG) on Indicators for the Strategic Plan for Biodiversity 2011-2020.

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3. Introduction

a. Monitoring Implementation and Reporting Mechanisms for the Convention on Biological Diversity

Decision X/2[1], taken at the 10th Conference of the Parties (COP) to the Convention on Biological Diversity (CBD), held in Nagoya, Japan in 2010, adopted the Strategic Plan for Biodiversity 2011-2020, and with it a shared vision, a mission and 20 Aichi Biodiversity Targets organised under 5 Strategic Goals.

The need for monitoring the implementation of the CBD and its Strategic Plan at the national level has been recognised both in the core text of the Convention, as well as in many decisions taken by the COP. Article 26[2] states that each Party to the Convention will produce National Reports at intervals determined by the Conference of the Parties (COP). These National Reports should detail measures taken to implement the provisions of the Convention and their effectiveness in meeting the Convention's objectives.

b. National Reporting for the Strategic Plan for Biodiversity 2011-2020

The fifth National Reports to the CBD were due in March 2014, and were the first submitted since the adoption of the Strategic Plan in 2010. A number of relevant decisions taken prior to this date to guide their formulation and preparation. At CBD COPs 10 and 11, decisions focused on use of indicators but in particular at COP 12 a decision highlighted the use of multiple evidence bases for assessing progress in implementation of the CBD.

At COP 10, decision X/9[3] decided that the fifth national report should, among other things,

"*Focus on the implementation of the Strategic Plan for Biodiversity 2011-2020, and progress toward the Aichi Biodiversity Targets,* ***using indicators where possible and feasible****, including application, as appropriate, of global headline indicators contained in decision VIII/15 and additional indicators that may be adopted at its eleventh meeting for measuring progress towards the Aichi Biodiversity Targets"*

Despite a focus on indicators in the above Decision, at COP 12, in decision XII/12[4] the Conference of the Parties encouraged Parties and indigenous and local communities to consider broader approaches and multiple lines of evidence, and in particular to:

"consider how indigenous and local communities might effectively participate in the development, collection and analysis of data, including through ***Community-Based Monitoring****, and further explore how indigenous and local communities'* ***Community-Based Monitoring and Information Systems can contribute to monitoring of Aichi Target indicators****, and how a M****ultiple Evidence Base approach be applied for validation of such data generated from diverse knowledge systems on equal terms.***

[1] https://www.cbd.int/decision/cop/?id=12268
[2] https://www.cbd.int/convention/articles/default.shtml?a=cbd-26
[3] https://www.cbd.int/decision/cop/?id=12276
[4] https://www.cbd.int/decision/cop/default.shtml?id=13375

*These efforts might contribute to **future national reports** and the revie**w of the implementation of the Strategic Plan for Biodiversity 2011-2020** and the achievement of the Aichi Biodiversity Targets, in particular Target 18;*"
At COP VIII, in decision VIII/14[5], it was decided to establish a voluntary online facility to support national reporting as a planning tool. Part of the CHM, the tool aims to complement the national reporting system by facilitating the sharing of information on indicators and policy support tools. It also aims to allow Parties to update on progress towards both national targets and the Aichi Biodiversity Targets on an ongoing basis.

c. Purpose of this document

CBD Guidelines for the Fifth National Report[6] proposed a structure comprised of three main parts:
Part I - An update on biodiversity status, trends, and threats and implications for human well-being.
Part II - The national biodiversity strategy and action plan (NBSAP), its implementation, and the mainstreaming of biodiversity.
Part III - Progress towards the 2015 and 2020 Aichi Biodiversity Targets and contributions to the relevant 2015 Targets of the Millennium Development Goals.

It is evident that a variety of approaches are used by countries in order to assess their progress towards the Aichi Biodiversity Targets in Part III of their National Reports. This document aims to identify and summarise these approaches, and the strengths, limitations and considerations for use of each of these.

This document has been produced in support of the Ad-Hoc Technical Expert Group (AHTEG) on Indicators for the Strategic Plan for Biodiversity 2011-2020 in meeting the request from Parties at COP 12 in decision XII/I[7], namely to:

"*Prepare guidance on the different types of indicators and approaches used to monitor progress in the implementation of the Strategic Plan for Biodiversity 2011-2020 at the regional, national and subnational levels, reflecting, as appropriate, different perspectives among Parties for achieving conservation and sustainable use of biodiversity, drawing on a review of national reports and other relevant submissions to the Convention as well as reports prepared in compliance with other relevant processes*".

d. Evidence Base

The content of this document is primarily based on the results of an online survey of CBD National Focal Points, which was carried out in April 2015. The online survey is included in Annex 1. Over 90 responses were received from a wide range of countries, including countries of South and Central America, South and South East Asia, Australasia, sub-Saharan Africa and the pan-European regions. These responses were collated and analysed, and additional approaches identified based on the detail given. The survey responses were used to identify the strengths, limitations and considerations for use for each of the approaches considered.

Following this survey, a number of follow-up interviews were conducted with participants, who were selected in order to ensure a wide variety of approaches and combinations of approaches were represented. These follow-up interviews were used to produce short case studies, which are available in Annex 2 to this document. While the majority of the case studies are at the national

[5] https://www.cbd.int/decision/cop/?id=11028
[6] https://www.cbd.int/doc/nr/nr-05/NR5-guidelines-en.pdf
[7] https://www.cbd.int/decision/cop/default.shtml?id=13364

level, one regional-level case study is included, and a number reference sub-national assessments as well. Extracts from the case studies have been included to complement the review of different approaches.

4. Approaches taken to assess national progress towards the Aichi Biodiversity Targets

A number of different approaches to assessing progress towards the Aichi Biodiversity Targets were identified through the online survey and follow-up interviews. This section provides detail on these different approaches, and on the strengths, limitations and considerations for use of each, as highlighted by respondents.

a. Expert opinion

I. Description

"Expert opinion" refers to convening relevant experts to offer their opinion and use their expert judgement to assess progress towards the Aichi Biodiversity Targets. For the purposes of this review, an "expert" is someone who is considered to have in-depth knowledge and experience of a specific subject area in a context relevant to the country. These may be experts in very precise subject areas, such as individual species or habitats, or more generally in the country and its context. They will be able to use their judgement to assess progress, based on their knowledge of the current status and trends in biodiversity and ecosystem services, current research, ongoing and planned activities, and policies.

II. Strengths

Using expert opinion allows the incorporation of local, contextual knowledge. It can help to gather relevant information from different sectors. This can be a relatively rapid approach to use if the expertise is readily available in relevant subjects.

Expert opinion can allow the consideration of progress in terms of the implementation of actions, policies or plans, where these may not have yet had an impact on specific issues. Experts can then help to clarify and interpret the sometimes complex relationships between actions taken and biodiversity impact. Experts can also help identify and highlight gaps in information or knowledge that should be addressed.

III. Limitations

Relying on expert opinion to assess progress towards the Aichi Biodiversity Targets allows a degree of subjectivity. Different experts have different levels of knowledge in different fields, and so this should be taken into account. Expertise may also be lacking in certain subject areas, and where this is the case alternative approaches could be used to fill the gaps.

IV. Considerations for use

It is important to have a diversity of experts who are fully competent to review the different Strategic Goals and/or Aichi Biodiversity Targets. Those selected should not just be experts in relevant academic theory, but ideally would have practical experience of management and an understanding of status and trends and progress in implementing specific actions in the context of the country.

It can be an extremely exercise useful to establish clear definitions of the elements of each Aichi Biodiversity Target in advance. This helps ensure that experts are clear on the elements of the Aichi

Biodiversity Targets that they are discussing, alleviates a degree of subjectivity or ambiguity, and ensures transparency and repeatability of the process.

Expert opinion can be particularly useful to complement other approaches, for example where data limitations result in gaps in the quantitative indicator suite.

Should gaps in expert knowledge or discrepancies between the opinions of different experts exist, it can be useful to supplement this approach with stakeholder or public consultations at all levels, from local to national. Inherent subjectivity in using this approach should be recognised and acknowledged.

The **EU** drew largely on quantitative indicators, but found that good indicators were not available for all subjects, and expert opinion therefore helped to fill the gaps. In addition, the relationship between certain measures and the impact on biodiversity is not always simple to capture using just indicators, and expert judgement can help with this.

Mexico found that the use of expert opinion provided an honest measure of progress towards each Aichi Biodiversity Target. They evaluated 1) existence of information to evaluate the trend of the goal, 2) existence of a legal framework or policy for the elements of each goal and 3) existence of programs to implement national or subnational policies. This highlighted targets that are on track to be achieved, those that need improvement, those that are not doing well, and also those for which information was insufficient.

Peru found that it was particularly useful to engage local, sub-national-level experts, as well as those at the national level. This complemented the national-level views, and helped to take account of high levels of variation in biodiversity and ecosystem services across the country.

Peru noted that gathering opinions from experts was a time-consuming process, and required more time than was available. Consequently not all information could be interpreted and used. Also, it is important to present the results for debate in multidisciplinary meetings.

In **Peru**, the process of gathering expert opinion also allowed a move towards a consolidation of baselines for the development of national biodiversity indicators.

b. Author opinion

I. Description

Where ‘author opinion’ is used to assess progress towards the Aichi Biodiversity Targets, the author(s) may gather primary evidence on the status and trends of biodiversity available, synthesise knowledge and information, and draw overall conclusions on progress. For the purposes of this review, the “author” is the person or people responsible for compiling the National Report.

II. Strengths

The designated authors of the National Report are likely to possess extensive knowledge about the status and trends of biodiversity and ecosystem services, policies and strategies in place in their country, and progress in implementation of these. Therefore they may be well placed to make an overall and comprehensive assessment of progress towards Strategic Goals and the Aichi

Biodiversity Targets, often drawing on and synthesising information and knowledge made available through other approaches.

III. Limitations

Where the author's opinion is relied on as a primary or sole approach, a degree of subjectivity is inevitable. Also, given the broad nature of the subjects covered by the 5th National Reports, the author(s) may not possess expertise in all subject areas and it may require a large amount of research to ensure that they are fully cognisant of the situation in-country and can provide a full review. This therefore may be time consuming.

IV. Considerations for use

Inherent subjectivity in using this approach should be recognised and acknowledged. The process by which the authors come to their conclusions should be documented where possible, to allow for transparency and repeatability of the same process in the next National Report.

If relying on author opinion, it might be preferable to compile a team of authors that are representative of different multidisciplinary fields, interests or sectors in order to ensure a balanced and comprehensive review.

Author opinion may be most useful as a means of consolidating other approaches used, such as a combination of quantitative indicators and stakeholder or expert consultation, to bring a large amount of complex information together and to provide an overall assessment.

Japan found that the author was able to bring together and synthesise the extensive information gathered from expert and stakeholder consultations.

In **Palau**, the authors of the report wanted to better understand the actions and progress made by different sectors, as well as what drives the different actors in each sector. Therefore the authors engaged stakeholders and experts to enhance and complement their judgement of progress towards targets.

Palau also found that group engagements with expert and stakeholders allowed for "ground truthing" of the authors' perceptions of progress.

Germany found that while for some Aichi Biodiversity Targets it was easy to assess progress based on the indicators in the fifth National Report, for others a more personal and subjective assessment was required based on the author's work and discussions with colleagues.

The **UK's** indicators are focussed more on outcomes than on inputs or actions, yet there may be a number of actions under way which are not evident in the indicator, perhaps due to the time it takes to have an effect, or due to multiple factors contributing to one issue. Using author opinion allowed these actions to be taken into consideration in the assessment.

c. Stakeholder input

I. Description

For the purposes of this review, "stakeholders" are considered to be a group of people with an interest in the 5th National Report and its contents, selected to be representative of different societal groups, sectors, interests etc. Stakeholder contributions and assessment of progress towards the Aichi Biodiversity Targets may be gathered through consultations, interviews, face-to-face or online workshops or stakeholder review of documents. Stakeholders may have been identified through the NBSAP revision process, and input into the fifth National Report may form a part of this. Wider public and local community consultation is considered as a further option below, due to the different interests that these specific stakeholders may have, and due to their different understanding of and relation to the issues of interest.

II. Strengths

Gathering stakeholders' input and opinion of progress towards the Aichi Biodiversity Targets ensures an inclusive process, which draws on a breadth of local and contextual knowledge and information. It also helps to ensure that the overall conclusions of the assessment towards each Aichi Biodiversity Target are largely understood and supported by stakeholders.

Certain subject areas, such as traditional knowledge (Target 18), lend themselves particularly to a stakeholder assessment of progress, as such Aichi Biodiversity Targets are inherently broad by nature, and extremely complex to assess through quantitative indicators.

Stakeholder input can also help to refine, complement and 'ground-truth' the opinions of experts or the authors.

Involving stakeholders in the assessment can help to mobilise different sectors and societal groups, including private enterprises and the economic sector, and increase general awareness, understanding and 'ownership' of the Targets and key issues at stake.

III. Limitations

Obtaining broad and inclusive stakeholder input is a time-consuming process. Ensuring all stakeholders have had the opportunity to provide input in an appropriate way, compiling, reworking and restructuring information provided in order that it suits the requirements of the report, and following up with individual stakeholders where necessary takes time and resources. It also requires experts, both in the subject areas who can interpret the information provided accurately, and in stakeholder engagement.

There is a degree of subjectivity inherent in stakeholder input, and balancing the opinions of stakeholders with different interests can be complex.

IV. Considerations for use

It is important to be clear with stakeholders what information is needed from them and how it is going to be used.

It is also important to ensure that each stakeholder group is engaged in an appropriate way, on all relevant issues, and using appropriate language. Technical language may be a barrier to the inclusion of non-technical stakeholders. It is also important to be sure that the individual(s) compiling and analysing the stakeholder contributions is appropriately experienced and qualified to interpret the information.

Eritrea conducted an assessment that allowed all relevant stakeholders, from decision makers to academia to local communities, to participate from the very beginning of the process, and found their inclusion from these early stages to be key to the success of this approach. Eritrea also found that setting up an effective work plan with exact time frames at the start of the process, and involving stakeholders in this, was particularly useful.

Palau found the stakeholder engagement approach time consuming, but noted that it was also a clear investment as the process enabled the authors to have a better understanding of the different sectors and what drives them. They found the approach particularly useful as organisations and agencies in Palau are not required to report on actions taken to meet targets, so this provided an opportunity to obtain feedback. The process was also useful for the purpose of updating the NBSAP as it secured buy-in from diverse sectors who then publicly endorsed the NBSAP document. Stakeholder input is particularly useful where organisations are not required to report on actions.

Palau also found that the process of stakeholder engagement allowed them to include key stakeholders, from the tourism sector for example, whose policies and decisions have an important impact in Palau's economy and biodiversity conservation, increasing awareness of key issues among these stakeholders.

Brazil suggested that stakeholder input should be complemented by quantitative methods (indicators) where possible, due to its qualitative and subjective nature. To ensure that this is possible for their next assessment, a Biodiversity Panel was established to evaluate progress towards the Aichi Biodiversity Biodiversity Targets, which is now developing a set of indicators for their national targets through training and workshops.

South Africa advise that a continuous monitoring system with stakeholders should be established in order to have information readily available.

d. Indicator Suite

I. Description

Quantitative indicators are measures or metrics based on verifiable data. Parties to the CBD are currently revising their NBSAPs, and developing targets, with indicators to track progress, is a key part of this. These NBSAP indicators, along with other indicators which may be used or developed by government agencies, NGOs, research institutions or academia, may be able to be used to assess progress towards the Aichi Biodiversity Targets.

II. Strengths

Indicators provide a scientifically-robust, quantifiable and objective means of assessing progress towards the Aichi Biodiversity Targets. They are generally interpreted in a way that is easy to understand, and can show clear trends and progress. Using indicators also allows for a fully repeatable approach, provided the same data is collected for subsequent reports.

III. Limitations

Indicators may be developed in response to national targets or national priorities, and may not therefore correspond fully to the Aichi Biodiversity Targets and only tell part of the story.

In addition, the Aichi Biodiversity Targets are very broad, meaning specific indicators may require further interpretation or evaluation, and the use of supplementary information or knowledge to assess progress towards the overall Target, and therefore there may be limitations as to how fully they can track progress towards each Aichi Biodiversity Target.

Data availability is often an issue, and monitoring may be very costly and time-consuming. Physical access to certain areas of some countries is a constraint on monitoring, making data collection more (and sometimes prohibitively) resource-intensive and complex. In addition, for newly developed indicators in response to national targets in the revised NBSAP, the collection or availability of baseline data may be a constraint. For well-established indicators with data on historical trends, it can be difficult to adapt or modify the indicators to better 'fit' the global indicators due to complex procedures and data availability.

IV. Considerations for use

Quantitative indicators can be the optimum approach to assess progress towards the Aichi Biodiversity Targets where indicators are broadly accepted, considered scientifically-robust, and have good underlying data.

In addition, where there is strong coherence between national targets and the Aichi Biodiversity Targets, this can facilitate the use of indicators. Where the relationship between the national and global targets is less strong or direct, it may be necessary to complement this approach with, for example, expert, stakeholder or author opinion to provide the additional context and interpretation.

While having a suite of indicators is important, it may be appropriate for countries to develop indicators that are adapted to national needs and local realities and context and therefore not directly relevant to the global targets. Some Aichi Biodiversity Targets may be clearly important and relevant at the global level, but if scaled down to the regional or national level, the issues may not be exactly the same and a proxy may be required as the situation may be different.

Indicators for NBSAPs may not yet be finalised or fully produced and therefore may not have been available for use, or may only just have been developed making it difficult to assess progress and trends for the 5th National Report. These indicators may, however, be available for use in subsequent National Reports.

Germany looked at the indicators in their fifth National Report, and for some Aichi Biodiversity Targets it was then easy to draw conclusions about general trends due to the direct relationship, but others were more or less a personal assessment based on work within the ministry and discussions with colleagues.

New Zealand noted that using quantitative data in the assessment of progress towards the Aichi Biodiversity Targets is important because data can be verified.

In **South Africa**, a limitation was that indicators were not yet wholly integrated at a national level, and if data is not available there is a risk of underreporting. Thus, the team found it was important to gather relevant information via different approaches (expert opinion, stakeholder input).

In **Japan**, as national indicators were developed for national targets, and as the Aichi Biodiversity Targets are broad in scope, these indicators do not necessarily map exactly to the Aichi Biodiversity Targets and do not necessarily fully cover them. Therefore the team asked the opinions of relevant agencies as to how they had implemented each policy and the actions for each target as well. They concluded that taking a mixture of approaches was extremely useful to obtain a comprehensive picture of progress made.

The **EU** recommends cross-linking national targets and indicators to Aichi Biodiversity Targets, even if there is rarely a one-to-one relationship between national and global targets. This allows the opportunity both to try to better align both targets and indicators, and also to facilitate 'cross-fertilisation' – the chance to learn from one another and to be inspired by the global level.

The **EU** also noted that priority global issues can be viewed differently at the regional or national level, and therefore different indicators may be required. For example, forests and deforestation are a global issue, but, in Europe, forest cover is increasing. However, this does not necessarily mean that it is good quality forest, so indicators of deadwood, the age of forests, or the wilderness of forests provide more useful and meaningful information at the European level.

As part of their NBSAP, **Mexico** are developing indicators which will be used in the next national report to assess progress towards the Aichi Biodiversity Targets.

The **UK** carried out its assessment of progress by Strategic Goal, rather than by individual Aichi Biodiversity Target. This enabled a larger number of indicators, of more general relevance to the goal, to be used to make an assessment; at the specific Aichi Biodiversity Target level the number of indicators would have been greatly reduced, and it would have been more difficult to draw conclusions based on a limited set of indicators. This method was also less time and resource intensive, and overcame some of the complexities of working with the four Devolved Administrations of the UK.

The **UK** advises that understanding the quality of data and analytical methods, and understanding how the indicators relate to external drivers, and policies is of paramount importance for the appropriate use of indicators.

e. Public and community Consultations

I. Description

The general public, and, in particular, local communities, could be considered as one type of stakeholder. Due to the different interests that the general public and, in particular, local communities may have, often as those who depend directly on and have very close relationships with biodiversity and ecosystem services, and due to their different understanding of the subject areas, for the purposes of this review public and community consultations will be treated separately to general 'stakeholders'. Such consultations may take place through individual interviews, questionnaires, online reviews, workshops or awareness-raising events. The general public may be consulted as a whole, or specific communities may be identified for targeted consultation. The most appropriate process will depend on national and local context, and in particular on the optimum channels of communication with different publics and societal groups.

II. Strengths

Public and community consultations ensure a wholly inclusive process. A different perspective may be gained through these consultations, which could reveal localised issues and trends that are of concern or interest to the authors of the report.

III. Limitations

A lack of scientific or technical understanding, or of overall awareness, may provide a challenge to the extent to which local communities can contribute to the process. It may require experienced individuals, and careful and considered methods to engage local communities.

Consulting with local communities can be a time-consuming and resource-intensive process. It can also be extremely complex where local languages must be used and customs followed.

IV. Considerations for use

The approach to carrying out public consultations, or specific local community consultations if deemed appropriate, will depend on the local and national context, and the best way to engage a representative and interested group. Where appropriate, take advice from community members on the best way to engage with the community and any important considerations during the consultation process, such as social norms or local languages.

It may be necessary to conduct capacity building or awareness raising activities before the consultations, taking into account local languages, in order to ensure a common understanding of any technical terms being used or subjects being discussed, the purpose of the consultation and how its results will be used.

Eritrea prepared an additional questionnaire on local communities' knowledge level and then organized a platform for the local communities. They conducted an awareness programme, intensive interviews, and surveys that were led by the communities. Then they integrated the traditional knowledge with the scientific knowledge on the assessment.

Eritrea noted that there were some gaps in the interviews done with local communities due to lack of scientific knowledge. **Eritrea** therefore recommend conducting capacity building activities with local communities to address the limitations inherent in such consultations.

Japan opened their fifth National Report for public comment, which provided a lot of valuable feedback for its development.

New Zealand found that the inclusion of input from Māori stakeholders is particularly important to provide holistic perspective. More comprehensive outreach and consultation with Māori is planned in the future.

f. Case studies

I. Description

For some specific complex subjects, obtaining a clear picture of the status and trends, reasons for any change or the impact of any measures taken is extremely difficult at the national level due to localised variations in confounding factors. Case studies can therefore be used to provide a detailed analysis and demonstration of progress at a local level towards a national or global target.

II. Strengths

Case studies are extremely valuable to show concrete cases where progress has (or has not) been made towards an Aichi Biodiversity Target, or where certain measures have (or have not) worked, and to understand exactly why this is happening. It is not always possible to collect detailed data, particularly on new issues of interest, for the country or region as a whole. Therefore, case studies may be a more practical and feasible option, and can take into account localised variations and confounding factors that may influence trends in biodiversity or the success of measures.

III. Limitations

Generalisations for an entire country or region on the basis of individual case studies cannot be made. In addition, when choosing case studies for use, it is often easy to try and highlight the areas where progress is evident, which may lead to selectivity and a level of bias.

IV. Considerations for use

As mentioned above, case studies are not representative of national or regional situations as a whole, and this should be recognised in the analysis. Examples should be used to provide offer clear evidence of certain measures being good or bad for biodiversity, and to help identify possible actions to be taken by different actors.

The **EU** used case studies to complement the quantitative indicator suite and to provide a more elaborated story. Experts then used their judgement to bring the information together. They found that case studies are also extremely valuable to show concrete examples where certain measures do or do not work, and to understand exactly why this is happening. Obtaining factual information on the positive or negative impact of certain measures taken on biodiversity across the region was not possible, so therefore case studies provided an extremely useful alternative.

The **UK** drew on case studies in its assessment. However, the team noted that it is easy to draw on case studies that highlight the areas where good progress has been made. It is also dependent on the availability of case studies, and so coverage may be inconsistent.

g. Multiple lines of evidence

I. Description

A number of approaches have been described above, but it often transpires that one approach alone is insufficient to comprehensively assess progress towards each Aichi Biodiversity Target. There may be gaps in certain elements of the individual Aichi Biodiversity Targets, or in whole subject areas. Therefore, it may be necessary to complement or supplement one approach with others in order to ensure a full assessment.

II. Strengths

Combining multiple approaches can provide a more accurate picture of the actual progress made towards meeting the Aichi Biodiversity Targets, by ensuring that all relevant quantitative and qualitative information or data can be included.

The limitations from one approach can be overcome by including other approaches. For example, if quantitative data does not exist for certain subjects or elements of the Aichi Biodiversity Targets, then expert opinion can be useful. In addition, where quantitative indicators are not fully aligned with the Aichi Biodiversity Targets, expert, author, or stakeholder input can help to evaluate progress for the Aichi Biodiversity Target as a whole.

Combining multiple lines of evidence also allows for a more holistic inclusive approach, incorporating evidence from different stakeholders (including different sectors), regardless of its form or basis. It can help take into account not just 'on the ground' impact or outcomes, but also the activities, measures and outputs that have been realised in support of this. This is particularly useful where it may take some time for actions to have an effect.

Using multiple lines of evidence can also, if planned carefully, help alleviate some of the subjectivity inherent in certain opinion-based approaches, by using other sources of information to ensure the conclusions are rooted in reality.

III. Limitations

Using multiple approaches is not necessarily a consistent or wholly scientific means of measuring progress, and can be difficult to replicate at a later date.

It can be very difficult to bring together the different approaches and to assess progress in a quantitative way. Some information may be difficult to analyse, as the information obtained from different approaches may take very different forms. The amount of information collected can also be overwhelming and inevitably some information will be excluded.

As some approaches are particularly time and resource-intensive, combining multiple approaches may be a relatively lengthy and costly process, if not planned carefully.

IV. Considerations for use

Combining two or more approaches will be most appropriate when one approach does not provide a comprehensive assessment – for example when national indicators do not map fully to the Aichi Biodiversity Targets, when there are gaps in knowledge or understanding or when experts are unable to assess progress for each Aichi Biodiversity Target.

An integrated system is useful to keep previous information and avoid the duplication of efforts, as well as to ensure repeatability of the approaches taken the next time.

Brazil found that combining multiple approaches also helped identify information gaps and highlighted the need to develop a data management system, as well as the need to develop robust indicators.

Japan found that, while using indicators is useful, it does not provide a full assessment of progress for each target – it is important to involve other agencies to understand progress in implementing policies and plans.

New Zealand felt that the combination of approaches they used provided a richer and more accurate picture than one approach alone would have, combining both verified data with stakeholder input and expert opinion, and had the added advantage of raising awareness of key issues.

Germany noted that the pragmatic combination of approaches taken to assess progress towards the Aichi Biodiversity Targets meant that the assessment was done only partially on a scientific basis.

Eritrea observed two limitations of combining multiple approaches: firstly that some information was difficult to analyse and interpret, and secondly that there were overlaps in the information obtained from different sectors.

South Africa noted that the amount of information collected can be overwhelming and inevitably some information will be excluded

In **Palau**, a combination of approaches was used (expert opinion, stakeholder input and author opinion) because the authors wanted to have a better understanding of the actions and progress made by different sectors, as well as an understanding of each sector and what drives them. The team found that the combination of approaches used, while extremely useful and inclusive, was time-consuming and costly. It was also difficult to follow a holistic approach in a fragmented, sector-based context.

5. Conclusions and Recommendations

a. Conclusions

Different approaches have strengths and limitations. The most appropriate approach or combination of approaches will be dependent on local and national context and circumstances. What works for one country will not necessarily be the best option for another.

The availability of data and information will influence the approaches to be used, as will the available time and resources – in-depth stakeholder and public consultations can be time consuming and costly, but help provide a holistic assessment, while consulting a number of relevant experts can be a more rapid means of assessing progress but with the risk of subjectivity and potentially limited knowledge and awareness of local-level progress and actions taken. Case studies can help to provide specific and contextualised analysis and evidence to support the conclusions of the assessment, and may be more realistic than in-depth analysis of key issues at the national level.

For many countries, indicators are currently under development or very recently developed, and therefore countries were not available to make use of them in their 5th National Reports. These indicators may therefore be available to use in subsequent assessments of progress towards the Aichi Biodiversity Targets. However, where indicators have been developed for national priorities and targets, they may not directly or comprehensively map to the Aichi Biodiversity Targets and consequently other approaches may be required to draw comprehensive conclusions of progress. Nonetheless, indicators can improve understanding and ensure that conclusions drawn are based to some extent on qualitative, robust information, and minimise the subjectivity inherent in other approaches.

Nearly all examples used multiple lines of evidence to come to their assessment – most countries interviewed felt that this helped provide a more comprehensive assessment of progress towards the Aichi Biodiversity Targets for various reasons. For example, in some case studies it was felt that the available indicators may not yet reflect the impact of recent actions taken; it was then necessary to consult national and local experts or stakeholders in order to understand not only progress in terms of biodiversity impact, but also progress in the implementation of actions 'on the ground' which will ultimately help to achieve the Aichi Biodiversity Targets. In other case studies, experts may only have been available on a limited range of subjects, so therefore using other approaches helped to fill in the gaps in the assessments.

Where multiple lines of evidence are used, author opinion can then provide a valuable synthesis and overview in order to draw the conclusions of the assessment, as using a number of approaches can potentially lead to obtaining a huge amount of information in different forms and from different sources, which can pose challenges to analyse and interpret.

b. Recommendations

The strengths and limitations of the approaches used should be taken into account when planning the assessment of progress, and limitations should be clearly acknowledged (e.g. subjectivity, knowledge gaps etc.).

Efforts should be made to ensure the approach or combination of approaches taken is clearly documented and repeatable for subsequent assessments of progress, while also aiming to improve the assessment of progress where possible (e.g. based on new data available).

Drawing on expert and author opinion, as well as stakeholders' contributions (including input from the general public) can help ensure a comprehensive assessment of all Aichi Biodiversity Targets and that information on actions taken is used to complement information on the status and trends.

Case studies are a useful means of providing an in-depth analysis of specific issues, where national data is not available, but should not be assumed to be representative of the country as a whole and care should be taken to ensure that selection of case studies is not biased towards those that show favourable results.

There is a degree of subjectivity inherent in the use of expert opinion, author opinion, stakeholder input and even in selecting case studies. This should be acknowledged and recognised. In addition, where possible, indicators could help minimise any subjectivity in the assessment and to ensure that the conclusions are rooted in scientific fact.

For many Parties, drawing on multiple lines of evidence is the most feasible means of comprehensively assessing progress towards the Aichi Biodiversity Targets, as the different approaches can complement one another and be used to fill gaps. However, careful planning is essential to ensure the most effective use of time and resources possible, and to ensure that information can be efficiently analysed and interpreted.

6. Annex 1: Online Survey Questions

1. As part of your fifth national report did you undertake an assessment of national progress towards the Aichi Biodiversity Targets?

2. If yes:

a) Which approach(es) were used to assess your country's progress towards each Aichi Biodiversity Target in your 5th National Reports?

- Expert opinion
- Author opinion
- Stakeholder input
- Quantitative indicator suite
- Other (please specify)

b) Please provide a detailed description of the approach(es) taken to assess your country's progress of towards each Aichi Biodiversity Target in your 5th National Reports (issues you many want to address in your response are the reasons for using a particular approach, its advantages and disadvantages, differences between approaches for the different Aichi Biodiversity Target, among other things)

3. If no: why not?

7. Annex 2: Case Studies

a. Brazil

Approach Used

As quantitative indicators were not available, a qualitative assessment was carried out based on expert opinion and stakeholder input.

Surveys were distributed to technical experts and representatives of different sectors. Those directly involved in the implementation of the CBD in the Ministry of Environment made the first assessment. This assessment was then discussed at various levels, including the Secretariat of Biodiversity and Forests, the National Biodiversity Commission (CONABIO) and the Office of the Minister of the Ministry of Environment.

The survey results, incorporated into the 5th National Report to the CBD, were sent to the National Biodiversity Commission who analysed the results. CONABIO is composed of experts and representatives of different sectors. A list of the different actions taken for each National Biodiversity Target (very similar to Aichi Biodiversity Targets) was prepared, and, through discussion and voting, progress toward each Target was consolidated. This evaluation was an initial assessment, and indicators are now being developed for future evaluations.

Strengths

The greatest strength was that the approach mobilised different sectors and generated greater familiarization in respect of the Aichi Biodiversity Targets. It also highlighted information gaps and the need to develop a database, as well as the need to develop robust indicators.

Stakeholder contributions help to introduce and communicate the objectives of Aichi. Expert opinion is useful to gather relevant information from different sectors.

Limitations

A purely qualitative assessment is not sufficient. It needs to be complemented with quantitative methods (indicators) as input from stakeholders can be subjective.

If more time had been available, more people could have been mobilised, including experts for each Aichi Biodiversity Target, in order to collect more quantitative information.

Approach to be taken for subsequent assessments of progress towards the Aichi Biodiversity Targets

For subsequent assessments, the approaches used will be complemented with the use of quantitative indicators. A Biodiversity Panel has now been established to evaluate the work towards the Aichi Biodiversity Targets. Moreover, national targets have already been defined and a set of indicators is currently being developed through training and workshops

b. Eritrea

Approach Used

To assess progress towards the Aichi Biodiversity Targets, Eritrea drew on multiple lines of evidence, including expert opinion, stakeholder input, a quantitative indicator suite and community consultations. This resulted in a nine-step approach:

- Step 1. Develop work plan
- Step 2. Conduct situational analysis of stakeholders
- Step 3. Set up steering and technical committee at national and zonal level
- Step 4. Prepare questionnaires
- Step 5. Conduct consultations
- Step 6. Establish three teams of experts on three domains (marine, terrestrial and agricultural)
- Step 7. Conduct formal and informal interviews with decision makers and local communities
- Step 8. Review various reports and other literatures
- Step 9. Compile data, analyse and interpret

This approach helped to avoid duplication of work and to use the available time and resources effectively.

While Parties might choose to recruit consultants to conduct the assessment, with little involvement from stakeholders, Eritrea conducted the assessment by involving all the relevant stakeholders from the very beginning when setting up the work plan, and then throughout the whole process. A consultant was hired to compile the assessment with the stakeholders.

To involve local communities, a questionnaire was prepared around the knowledge level of local communities, and a communication platform was established for communities. An awareness programme, intensive interviews and community-led surveys were conducted. The traditional knowledge was then integrated with scientific knowledge for the assessment.

Strengths

The various approaches used were effective, and in particular the field and office work done by the experts to assess progress towards the Aichi Biodiversity Targets. However, there were some gaps around the interviews conducted with local communities due to a lack of scientific knowledge.

Combining approaches allowed information to be gathered from all levels to help analyse and interpret the status and trends of the national action plan.

Limitations

Notable limitations of the approaches used included the different levels of knowledge of experts, and a lack of awareness in some local communities.

In addition, due to the combination of approaches used, some information was difficult to analyse and interpret, and some information from the different sectors appeared to be overlapping.

Considerations for using this approach

Countries should set up an effective work plan with exact time frames; they should make a good stakeholder analysis; they should establish a permanent steering and technical committees.

Countries should fully involve decision makers, local communities, academia and scientific communities, private sectors etc. from the begriming of the assessment. They should set clear indicators, targets, and action plans that are aligned with time frame to achieve the Aichi Biodiversity Targets. They should monitor their resources allocated effectively and prepare their reports on time.

The team found that capacity building is a very important component for assessing and filling the limitations occurred in the above mentioned approaches.

Approach to be taken for subsequent assessments of progress towards the Aichi Biodiversity Targets

Additional approaches may be used in the future to fill gaps and overcome data limitations.

c. European Union

Approach Used

The EU used a combination of quantitative indicators and expert opinion. Good indicators were not available for all subjects – "Streamlining European Biodiversity Indicators" is a process in which the indicators are upgraded where possible, whenever better information is available, but in the meantime expert advice helps to fill the gaps. This is particularly the case with regards to sectoral questions. In addition, the relationship between certain measures and the impact on biodiversity is not always simple to capture using just indicators, and expert judgement can help with this.

Case studies are also extremely valuable to show concrete cases where certain measures do or do not work, and to understand exactly why this is happening.

With regards to the selection of experts, the Environment Knowledge Community, who consist of representatives of DG Environment, DG Climate, DG Research, Eurostat, JRC and EEA, were the primary contributor to the monitoring framework. This group identified the best available indicators from their expertise. Since these indicators were not sufficient, wider consultations were conducted at the European level, including the different services such as agriculture, fisheries and so on. To fill gaps in the framework, it was also necessary to look to the international level for example working with OECD.

Strengths

A limited number of headline indicators is extremely valuable as a relatively simple and easy-to-communicate scoreboard, but more thorough assessments could complement this, as could other methods such as case studies to provide a more elaborated story.

While it is not recommended to generalise for an entire country or region on the basis of case studies, they provide concrete evidence of certain measures being good or bad for biodiversity, and to help develop practical measures or incentives, and therefore influence sectoral actions.

One example of combining approaches is agriculture: it is a key threat to biodiversity in the EU, and, given the importance of the CAP process, it's important to showcase what does and what does not work, in order to improve the CAP and enhance its 'greening'. It is not possible to have factual information on the positive or negative impact of certain measures taken on biodiversity across the region, so therefore case studies are used. By identifying certain places where, for example, indicators are showing positive trends in biodiversity, it is possible to try to understand why these trends are evident, using not only biodiversity data but also understanding the agricultural measures, the specific type of landscape, and other issues such as pollution. These case studies help to then understand why certain measures are good or bad for biodiversity.

Limitations

The indicators developed for the EU do not map exactly to the Aichi Biodiversity Targets, so there are some limitations as to how fully they can tell a story about each Aichi Biodiversity Target – hence using expert judgement.

Some Aichi Biodiversity Targets may be clearly important and relevant at the global level, but if scaled down to the regional or national level, the issues may not be exactly the same and a proxy may be required as the situation may be different. For example, forests and deforestation are a

global issue, but in Europe, forest cover is increasing. However, this does not necessarily mean good quality forest, so indicators of deadwood, of the age of forests, or the wilderness of forests provide more useful and meaningful information at the European level. The global issue of deforestation, when brought down to the European level, really relates to trade and is a very difficult relationship to assess through indicators alone.

Considerations for using this approach

Cross-linking national targets and indicators to the Aichi Biodiversity Targets is really valuable as it is rarely a one-to-one relationship between national and global targets. The EU asked Member States to map their national targets with EU targets and Aichi Biodiversity Targets, using a cross-linking tool as it is not one-to-one relationship, and to do the same with the indicators. This provides the opportunity to both try to better align both national targets and indicators, and also to facilitate 'cross-fertilisation' – the chance to learn from one another and to be inspired by the global level.

There needs to be a middle ground between convergence / alignment between NBSAPs and the Strategic Plan for Biodiversity, and flexibility to allow NBSAPs to include targets that are perhaps less relevant at the global level but more so at the European and/or national level. However, there should be a strong 'backbone', or 'common denominator' between the global, regional and national levels on certain issues, and this should be closely monitored by indicators.

The EU would strongly encourage parties to also apply the backcasting and forecasting methods from GBO-4 to their indicators. This will help to validate (or refute) the results shown in GBO-4 – particularly where a country feels that the results in GBO-4 are not reflective of the status and trends in their country. This will thus allow a better understanding of not only progress and where we currently standing, but also of where we are going and the answer to various 'what if' questions.

Approach to be taken for subsequent assessments of progress towards the Aichi Biodiversity Targets

The EU will use the same approaches next time, as the idea is really to assess progress on the implementation of the Strategic Plan at the EU level, and therefore case studies will complement the story and expert judgement can bring it together.

d. Germany

Approach Used

The team in Germany looked at the indicators in their fifth National Report. For some Aichi Biodiversity Targets it was then very easy to come to the conclusion as to the general trends, but others were more or less a personal assessment based on work within the Ministry and discussions with colleagues. The assessment also considered the main content of the report, which not only consists of indicators but also broad, sometimes qualitative, information on the status and trends – and the assessment of progress towards each Aichi Biodiversity Target references the relevant pages of the report that guided the author's assessment.

Strengths

The combination of approaches worked well overall, and, as the national targets are more or less coherent with the Aichi Biodiversity Targets, was relatively easy to do. It also helped that the indicators for the NBS are broadly accepted, are scientifically robust and have a very good basis of data.

Limitations

The pragmatic combination of approaches described above means that the assessment was done only partially on a scientific basis. Data was often difficult to get hold of and was not always available at the federal level. The data that are available at the federal level are also limited and it is very difficult to broaden the set of data that are flowing in. Limitations in available data therefore limit the accuracy of the assessment.

Considerations for using this approach

It is important to have indicators, but every country has to decide whether to use national indicators, which are more adapted to national needs but perhaps less well matched to the Aichi Biodiversity Targets, or global indicators, which are less well adapted to national needs.

Approach to be taken for subsequent assessments of progress towards the Aichi Biodiversity Targets

The team will use a similar approach next time, but will probably will try to improve its coherence and integration. It will not be possible to change the indicators significantly, as it is a political discussion and, even if they were changed, there would be no data with which to produce them.

e. Japan

Approach Used

To assess progress towards the Aichi Biodiversity Targets, Japan used a combination of approaches: expert opinion, author opinion, stakeholder input, a quantitative indicator suite, and community/public consultation.

After the adoption of Aichi Biodiversity Targets, Japan has developed its revised NBSAP based largely around the Aichi Biodiversity Targets. National targets have been developed in Part 2, through extensive internal consultation with relevant ministries, sectors and industries. A committee was established with experts in the field and separate meetings were held with them, which concluded that it was necessary to set fewer national targets than the Aichi Biodiversity Targets, and so some national targets map to multiple Aichi Biodiversity Targets. National indicators have been developed to assess progress towards national targets.

Before developing the 5th National Report, the progress of these indicators was verified, as well as the progress of implementing each policy. It became clear that, for most Aichi Biodiversity Targets, Japan has made very good progress, which is why the summary of the 5th National Report stated that the status of progress towards achievement is very good. This was just one year after the adoption of the NBSAP.

Opinion from experts, government agencies and the author brought this together in the National Report. The experts included a mixture of people from universities, academic agencies, some from NGOs and others. In addition a public comments session was also held where anyone could provide their opinion on the draft National Report. This was useful as many valuable comments were received for its development, and some parts have been modified based on these comments and clarifications.

Considerations for this approach

Assessments should be comprehensive, but indicators cannot give all the details about progress towards the Aichi Biodiversity Targets. As the Aichi Biodiversity Targets are very broad, and as national indicators were developed for national targets, these indicators do not necessarily map exactly to the Aichi Biodiversity Targets and do not necessarily fully cover them. Therefore the opinions of relevant agencies were sought as to how they had implemented each policy and the actions for each Aichi Biodiversity Targets as well, thus a combination of approaches was taken.

Strengths

The primary strength of these approaches is that they allowed a comprehensive assessment of progress.

Limitations

Indicators are useful, but it is not enough to assess the entire progress for each Aichi Biodiversity Target – therefore it was important to verify with other agencies how they are doing in implementing the policies.

It was just one year after the development of NBSAP, thus it was very early to assess mid-term progress.

A limitation of using multiple lines of evidence was that it was difficult to then assess progress towards the Aichi Biodiversity Targets in a quantitative way - most indicators are numerical but the actual results of the assessment had to be more comprehensive and therefore involve qualitative information.

Approach to be taken for subsequent assessments of progress towards the Aichi Biodiversity Targets

The same approach will be taken for the following assessment of progress.

f. Mexico

Approach taken

Mexico used expert opinion to assess progress towards the Aichi Biodiversity Targets in the country's fifth National Report. This was used as there was insufficient time or quantitative indicators. Using expert opinion and developing a traffic light system allowed for a qualitative assessment.

The traffic light system gathered relevant information on each Aichi Biodiversity Target in three ways:

1) Existence of information to evaluate the trend of the goal,

2) Existence of a legal framework or policy for the elements of each goal, and

3) Existence of programs to implement national or subnational policies.

The trend of progress towards the Target was also estimated qualitatively. The information collected was revised and sent back to different experts and organizations to review with comments.

Strengths

The greatest strength of this approach was having an honest measure of progress by Aichi Biodiversity Target. It was possible to identify those Aichi Biodiversity Targets that will be achieved, those that need some improvement in order to be achieved, and those for which progress is not being made (see page 19 of the National Report), as well as those Aichi Biodiversity Targets for which information is insufficient to evaluate progress.

Limitations

The approach is qualitative so there is a degree of subjectivity.

There was insufficient time available for the development of the National Report, which takes over a year to prepare.

Considerations for using this approach

Establish clear operational definitions of the elements to be evaluated and the categories by which they will be evaluated (e.g. percentages) to avoid discrepancies between experts. It is important to have a diversity of experts so that they can review the different goals.

Approach to be taken for subsequent assessments of progress towards the Aichi Biodiversity Targets

Expert opinion will be used again, but possibly complemented by quantitative indicators. The Biodiversity Strategy is to be published later this year, which will elaborate a monitoring framework and indicators.

g. New Zealand

Approach Used

New Zealand's Department of Conservation led the collation of the report, seeking expert and stakeholder input to gather as much relevant information as possible, as well as drawing on a suite of quantitative indicators.

Use of quantitative data was the core approach. References were provided so that data could be traced back to original sources. Expert opinion complemented evidence from scientific reviews (peer reviewed) and official public information from relevant government agencies.

Stakeholder input was gathered from relevant organisations that have responsibility for areas related to biodiversity, conservation and resource management such as central government, regional government, indigenous people (Māori), universities, scientific institutes, and NGOs.

- Agencies in New Zealand's resource management cluster had the opportunity to review draft sections of the report.
- In New Zealand, consultation with Māori is required. Māori provided input for different Aichi Biodiversity Targets, i.e. not only Target 18. The authors of the fifth National Report contacted some tribes, who were advised about the process and given the opportunity to provide input. It is recognised that there was insufficient time to follow an extensive consultation and more comprehensive outreach and engagement with Māori is anticipated for future reporting.
- Consultations with science providers were targeted to find specific information for specific Aichi Biodiversity Targets.
- Input from NGOs was sought through a call for input in a biodiversity forum. NGOs were advised that the fifth National Report was being drafted and that organisations could provide relevant information. Unfortunately, timelines were also narrow for this element of consultation.

A quantitative indicator suite was also used. New Zealand has its own indicators and monitoring systems. These relate to the Aichi Biodiversity Targets and contribute to reporting on progress toward achieving each Aichi Biodiversity Target.

Strengths

The combination of approaches was a strength in itself because it provided a richer and more accurate picture. Quantitative data are essential because they can be verified. Stakeholder input is not only useful to gather information but also to raise awareness of key issues. The inclusion of input from Māori stakeholders (albeit limited in this particular reporting phase) was particularly important to provide a holistic perspective.

Limitations

The main limitations were time and cost. Monitoring of trends is costly and time-consuming. Timing is also important for stakeholder input because they need to know what information will be required and how the information will be used.

Limitations from one approach can be mitigated by including other approaches. For example, if quantitative data do not exist (data limitation) then expert opinion input can be useful.

Considerations for using this approach

It is important for countries to know in advance what information is needed and how it is to be used so that appropriate data can be gathered, resources directed where they will be most effective, and a robust consultation and engagement plan put in place.

It is also important to note that information provided in previous reports may not be repeated in new reports, which makes it difficult to read individual reports as stand-alone documents. An integrated online system could be useful to store previous information and to avoid the duplication of efforts. This might also be useful where different MEAs cover similar issues. We note that some MEAs have a reporting format that uses pre-populated information fields and/or dropdown menus. This can ease some reporting, and may be useful if supplemented by the ability to input specific national-level data.

Approach to be taken for subsequent assessments of progress towards the Aichi Biodiversity Targets

A similar approach will be taken for the next assessment. However, New Zealand will build a longer lead-time into the reporting process to facilitate engagement with Maori and other stakeholders.

h. Palau

Approach Used

Palau used a combination of approaches – expert opinion, stakeholder input and author opinion. These were used because the authors of the fifth National Report (Palau Conservation Society) wanted to have a better understanding of the actions and progress made by different sectors, as well as an understanding of each sector and what drives them. The authors of the fifth National Report were contracted by Palau's Office of the Environment, Response and Coordination (OERC). The authors of the National Report were, at the time, also facilitating the process of updating the new NBSAP. Thus, they wanted to include all sectors that played a part in Palau's biodiversity conservation and meeting the Aichi Biodiversity Targets.

Firstly, a literature review was conducted, then interviews were organised with staff from key institutions, agencies and organizations involved in biodiversity conservation work. The interviews were held with high-level government staff, representatives from different sectors (tourism, forestry, marine, etc.), communities and local leaders. The information gathered from focused interviews was then discussed and the facts cross-checked at meetings by the Palau Conservation Consortium (PCC) – a group of technical experts from different fields who are also representatives from different sectors. The PCC analysed the information and assessed the progress towards meeting the Aichi Biodiversity Targets.

Quantitative indicators were not used as not many indicators are available yet.

Individual consultations through focussed interviews resulted in identification of level of progress, but the group engagements allowed for "ground truthing" the PCC's perceptions of our progress in the absence of quantitative indicators.

Strengths

The combination of approaches was useful to gather information from decision makers, experts, representatives from different sectors and local communities. This combination provided a more accurate picture of the actual progress made towards meeting the Aichi Biodiversity Targets. The process also allowed to include key stakeholders, for example from the tourism sector, whose policies and decisions have an important impact in Palau's economy and biodiversity conservation.

Limitations

The process of combining different approaches is time-consuming and costly. It was also difficult to follow a holistic approach in a fragmented context (sector based). Finally, perhaps not a limitation but a challenge in communication was the use of technical language by experts or technical staff.

In addition, Palau submitted the 5NR before updating the NBSAP. It would have been preferable to update the NBSAP before submitting the fifth National Report, as a lot of information was missed.

Considerations for using this approach

The approach followed by Palau was time-consuming but was also an investment, as the processed enabled the authors to have a better understanding of the different sectors and what drives them. The process was also useful for the purpose of updating the NBSAP as it secured buy-in from diverse sectors who then publicly endorsed the NBSAP document.

The stakeholder input approach might be useful for countries like Palau where organisations don't tend to report, in this case feedback from stakeholders is important to gather information related to actions being taken to meet specific Aichi Biodiversity Targets.

Approach to be taken for subsequent assessments of progress towards the Aichi Biodiversity Targets

The same approach will probably be used, but may include new or more innovative methods. Quantitative indicators have already been developed for protected areas but further work needs to be done to finalise a set of biodiversity indicators in Palau.

i. Peru

Approach Used

The fifth National Report in Peru was prepared by the General Directorate for Biodiversity in the Ministry of the Environment, and the consultant Bioaqual, based on author and expert opinion.

With just six months to prepare the fifth National Report, the team decided to draw primarily on expert opinion. Peru did not have established baselines, quantitative records, indicators, or a central information system. Therefore, a group of experts consisting of specialists in different sectors and areas was first formed. These experts nominated others in order to obtain the best information possible on specific themes. A platform was developed to exchange views horizontally – experts, technical staff, committee staff on biodiversity and high-level representatives from different sectors were included. A literature review of available official information was also conducted alongside this.

Drafts of different sections of the document were sent to the competent authorities of different sectors who approved the text.

Peru consists of multiple regions, so examples of regional actions which are generating either a change in behaviour or a positive effect in specific areas were sought. Criteria were developed to assess whether certain actions are likely to reach each Target, come close to achieving the Target or not achieve it. The methodology assesses the level of coincidence, contribution and compliance to the Aichi. The methodology analyses existing tools in different regions and assesses actions at the regional level that help meet specific goals. Matrices were developed to demonstrate the existing actions by goal and by region. The priority actions by region were then nominated, i.e. those actions that lead to real progress toward meeting specific goals. The national effort is then the total of the regional actions.

Strengths

Using expert opinion allowed the dissemination of concepts and ideas at both a regional and national level. Information was compiled that was not previously available, and several experts contributed to the material to be published. The expert group also found gaps and areas that need specific attention.

The process also allowed the team to move towards a consolidation of baselines to support the development of national biodiversity indicators.

Limitations

The major constraint was the time available, as six months was insufficient. The process was time and resource-intensive, and required great effort, and much information was left in the pipeline.

Considerations for using this approach

It is important to identify experts with experience in management – i.e. those that have an understanding of trends and progress in implementing actions to achieve specific national targets. Peru is a country with great regional variation, and many regional experts, and thus it is important to balance the national 'macro' view of biodiversity with the regional perspective.

It would be useful to extend the available time for preparing the report from six months to a year as the official processes take time. If more time was available to disseminate and validate methods at

the regional level, the assessment would be more comprehensive as there is a lot of regional information that is not available at the central/national level.

Approach to be taken for subsequent assessments of progress towards the Aichi Biodiversity Targets

In the future the same approach will be taken, possibly complemented with quantitative indicators.

j. South Africa

Approach Used

South Africa used a combination of stakeholder input, expert opinion, and quantitative indicators to assess progress towards the Aichi Biodiversity Targets:

- Stakeholder input: South Africa has a number of stakeholders that are involved and committed to specific Aichi Biodiversity Targets. The Department for Environmental Affairs convened a two-day workshop to introduce stakeholders to the 5NR format, unpack each Aichi Biodiversity Target and made a request for input on the key issues. Stakeholders included government departments, NGOs, research institutes.
- Expert opinion: Individual experts deal with specific issues and they provided details on progress on their specific areas of expertise.
- Quantitative indicators: National baselines have been developed and different organisations use their own indicators to assess progress.

Strengths

The primary strength of combining approaches was that different information was identified and complemented from different sources, which helps ensuring that relevant data is not overlooked.

Limitations

The limitation of using quantitative indicators was that they had not yet been integrated at a national level. This was a limitation because if data is not available there is a risk of underreporting. Consequently, it was important to gather relevant information and complement this through different approaches (expert opinion, stakeholder input).

Gathering stakeholder input was a time-consuming process. It took time to follow up and gather information, and there is the risk of missing relevant information when this is not submitted on time.

Where a combination of approaches is used to assess progress towards the Aichi Biodiversity Targets, the amount of information collected can be overwhelming and inevitably some information will be excluded.

Considerations for use

It would have been useful to establish a continuous monitoring system with stakeholders in order to ensure that information was easily available.

Approach to be taken for subsequent assessments of progress towards the Aichi Biodiversity Targets

The same approach will be used, but with improvements. South Africa is currently developing a standardized set of indicators to be used at the national level. It is planned to monitor progress continuously, in order that the information relevant to each Aichi Biodiversity Targets is easily available for the next report.

k. UK

Approach Used

Implementation of policies for biodiversity is devolved to the Devolved Administrations in Scotland, Wales and Northern Ireland. In England these polices are implemented by the UK Government. Each administration has developed its own strategy and action plan in response to the Strategic Plan for Biodiversity 2011-2020 and relevant EU legislation. A 'light touch' approach is used to compile information from the Devolved Administrations to report on progress in implementation of the Strategic Plan at the UK level.

The UK Biodiversity Indicators, published on behalf of the UK Government by the Department for Environment Food and Rural Affairs (Defra) and the Joint Nature Conservation Committee (JNCC) were used as the basis for the UK's 5th National Report. The indicators are aligned with the Strategic Goals and Aichi Biodiversity Targets of the Strategic Plan for Biodiversity 2011-2020, and reflect the priorities of the UK and the Devolved Administrations. The set of UK Biodiversity Indicators is updated and published on an annual basis; most recently in December 2014 when 24 indicators comprising 47 measures were published (http://jncc.defra.gov.uk/page-4229).

The trend of each measure is assessed in the long term (covering the period for which data are available, if 10 years or more) and the short term (the latest five years for which data are available). The trends are assessed using a 'traffic light' system which shows changes over time as: 'improving'; 'little or no overall change'; and, 'deteriorating'. Where possible change is assessed using measures of statistical significance. In 2014 a confidence rating was assigned to each assessment. The assessment does not show whether the measure has reached any published or implied targets.

The set of indicators is being developed and there are some topics for which there are gaps in data or methods, and some topics where alternative indicators are being prepared.

Further background information on status and trends in biodiversity and ecosystem services was provided by the UK National Ecosystem Assessment (http://uknea.unep-wcmc.org/Default.aspx), the UK report under Article 17 of the EU Habitats Directive (http://jncc.defra.gov.uk/page-6387), and Charting Progress 2 (http://catalog.ipbes.net/assessments/180). Additional information on policy measures and actions undertaken in each of the Devolved Administrations was also utilized. These sources were used to supplement the information from the UK Biodiversity Indicators to make a qualitative assessment on progress in the UK towards the Aichi Biodiversity Targets at the aggregate level of Strategic Goal

Indicators, other reports on progress and evaluations of policy are prepared by Defra and the Devolved Administrations in the context of strategies for biodiversity and natural resources in each of the four countries in the UK. These indicators, reports and evaluations are aligned with specific policy commitments.

The following categorical assessment for each Strategic Goal was used:

- Goal met in full – all indicators show positive trends and actions fully implemented.
- Substantial progress – majority of indicators show positive trends and implementation of actions well advanced across all relevant Aichi Biodiversity Targets.
- Progress in most areas – most indicators show positive trends or no change and implementation of actions in progress across all relevant Aichi Biodiversity Targets.

- Limited progress – few indicators showing positive trends or no change and implementation of actions in progress across some relevant Aichi Biodiversity Targets.
- No progress – no indicators showing positive trends or no change and actions not being implemented.
- Unknown – evidence insufficient to make an assessment.

The assessment for each goal used a standard template with the following sections:

1. Assessment of progress (using categories above)
2. Assessment of strength of evidence
3. Rational for assessment (review of evidence with reference to each of the relevant Aichi Biodiversity Targets)
4. Reference to key evidence sources used
5. Examples of policies and instruments
6. Areas of uncertainty and knowledge gaps
7. Overall conclusions
8. Summary of indicators assessed

Further descriptions of methods and approaches are described in the 5th National Report and the other reports referenced above.

Strengths

Indicator suite

The indicators focus on biodiversity outcomes, are based on reliable and consistent data, and make use of existing data sources which are updated regularly. Where available updates are published annually as 'Official Statistics' and follow strict rules for handling of such statistics within Government. They therefore provide a valuable quantitative evidence base.

The UK carried out its assessment of progress by Strategic Goal, rather than by individual Target. This enabled a larger number of indicators, of more general relevance to the goal, to be used to make an assessment; at the specific Target level the number of indicators would have been greatly reduced, and it would have been more difficult to draw conclusions based on a limited set of indicators. This method was also less time and resource intensive, and overcame some of the complexities of working with the four Devolved Administrations of the UK.

Multiple lines of evidence

Relying solely on indicators to assess progress towards the Aichi Biodiversity Targets presents a number of challenges and limitations, as described below; incorporating author opinion allowed some of these limitations to be balanced.

Limitations

Indicator suite

The multifaceted nature of the Aichi Biodiversity Targets means that indicators alone are unlikely to be able to provide a complete assessment of progress of all aspects of the Targets; even the use of a large number of indicators for each Target is likely to have issues in terms of analysis and interpretation, and would require a large amount of data and a high level of resources and technical capacity. However, although the use of just one or a small number of indicators to assess progress towards a Target is simpler, it cannot provide a comprehensive assessment of the whole Target.

There is therefore an important trade-off to be made between the number of indicators which can be usefully used to assess progress towards a Target and the use of other sources of evidence.

The UK's indicators are focussed more on outcomes than on inputs or actions, yet there may be a number of actions under way which are not evident in the indicator, perhaps due to the time it takes to have an effect, or due to multiple factors contributing to one issue.

Author opinion

A qualitative assessment has the potential for subjectivity and selectivity in terms of the information presented – it is easy to highlight the areas where good progress has been made, and to draw on case studies to illustrate them. It is also dependent on the availability of case studies, and so coverage may be inconsistent. A quantitative set of indicators is therefore important to alleviate a degree of the subjectivity.

For the UK report, the underlying data and case studies were made available for external comment and input. The stakeholder consultation allowed the report to be revised where appropriate, although the final stage of determining the progress that had been made was a government process.

Considerations for use

Understanding the quality of data and analytical methods, and understanding how the indicators relate to external drivers and policies is of paramount importance for the appropriate use of indicators.

The UK would encourage other parties to take a similar approach, balancing a robust evidence base of quantitative indicators with case-studies, policy evaluations, qualitative assessments and expert judgement as necessary. This is likely to be more achievable than aspiring to have a full and comprehensive suite of indicators from which to conduct the assessment.

Approach to be taken for subsequent assessments of progress towards the Aichi Biodiversity Targets

The approach to be used for the next National Report will depend on any further guidance from the CBD, a review of the best way to report progress at the UK level, and consultations with the Devolved Administrations and the Governments of UK Crown Dependencies and Overseas Territories. Defra has recently commissioned two studies to review the quality of species trend indicators and to prepare evidence statements to assist their interpretation. This will consolidate the evidence to help draw robust conclusions from the indicators, and to interpret them in an ecological and policy sense.