

13th Meeting of the Advisory Committee

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Report on the Activities of IWG Bats as Indicators

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Introduction

The IWG on Bats as Indicators was established to: investigate and take forward opportunities to use bats as biodiversity indicators; circulate information on opportunities for participation in index initiatives; connect with other relevant IWGs recognizing areas of common interest. This report summarizes the recent activities of the group and its individual members that have contributed to the advancement of bats as indicators. The IWG last convened in full at AC12, with Kate Jones (ZSL/BCT) acting as convenor during Karen Haysom's maternity leave. This report comprises general information on selected activities followed by a concise summary of how specific actions recorded in the minutes of the last meeting at AC12 have been addressed. It should be noted that the last meeting of the IWG used the headline indicators of the CBD as a framework for discussions on the potential applications of bats as indicators.

General Achievements

KH sits on the UK Biodiversity Indicators Steering group and has worked with the UK Biodiversity Indicators project group to develop a biodiversity indicator using population trend data from the National Bat Monitoring Programme (NBMP). This indicator provides information for the focal area "Status and trends in the components of biological diversity". Bats are one of three key species groups represented, the other two being birds and butterflies. The bat indicator is based on 6 species that are relatively widespread within the UK and for which NBMP has good sample sizes. The UK biodiversity indicators and the new bat indicator can be viewed at <http://www.jncc.gov.uk/default.aspx?page=4229>.

BCT undertook a contract for European Environment Agency EEA entitled "Streamlining European 2010 Biodiversity Indicators (SEBI 2010)": Developing a methodology for using bats as indicator species; and testing the usability of GBIF

data for use in 2010 biodiversity indicators. The project comprised three tasks: 1. Describe the status of information on trends in bat populations in Europe, and discuss the scientific relevance of bats as biodiversity indicators; 2. Suggest how the information described under 1 can be used to calculate an indicator on bats in Europe; 3. Describe which species data are held by Global Biodiversity Information Facility (GBIF), explore how different types of data can be used to calculate biodiversity indicators, and make concrete proposals for indicators that could be based on GBIF data. Tasks 1 and 2 were led by BCT and focused only on bats. Task 3 addressed all taxa and was subcontracted to Institute of Zoology, Zoological Society of London (ZSL). The contract provided the opportunity to draw together and update information on the status of bat monitoring through Europe via correspondence with the members of this IWG, and other contacts. These contacts kindly responded to a questionnaire to identify species relevant to various categories of indicator and updated a template excel summary on monitoring activities in their countries. Analysis of the information collated suggests that it would be feasible to construct an index based on European bat data and that at least 9 countries are likely to hold data suitable for immediate incorporation in a prototype index. Arco van Strien and Tom van der Meij at Statistics Netherlands provided advice on the methodology for such an index. This team supported the SEBI 2010 indices for birds and butterflies. A series of steps to take forward the development of a bat indicator were outlined. These prioritized an international workshop to agree an indicator methodology and recruit participating schemes and outlined the need for more opportunities for countries who monitor bats to exchange information on trends and monitoring approaches. The report drew attention to the plans for the development of the pan European programme to monitor bats at underground sites.

KH has liaised closely with Roman Guziack, the officer appointed to take forward the pan European bat monitoring programme. She has participated in several steering group meetings and drawn attention to this project.

iBats – KJ has been expanding the Indicator Bats Program since last meeting. This program uses car based acoustic monitoring using networks of volunteers. Projects in Romania and Bulgaria are continuing to be very successful and the program has been trialed in surrounding European countries (Hungary, Croatia) and further afield in New York, Mexico, Zambia, Madagascar, Thailand and Mongolia.

Specific Actions from Minutes of last IWG held at AC12.

CBD 2 & 3. Trends in Abundance / Distribution of species and Change in Status of Protected Species.

Action points:

1. Ask EUROBATS Secretariat to request EU countries to provide copies of their national Conservation Assessment Reports to the convenor of the group.
2. Discuss with Tony Hutson (IUCN) about using data from Global Mammal Assessment.
3. IWG to collate information to generate population trends of bats across Europe by next AC meeting.

Actions taken:

1. BCT produced and circulated directly a questionnaire and a template excel sheet to each of the IWG participants and to other EUROBATS representatives and country bat specialists. The questionnaire asked countries to indicate the relevance of particular species in their countries to particular issues/indicator categories, summarize information on pressures acting on the different species in their country and comment on the state of other supporting data resources such as digitized geographical data. The excel template built on work completed by the IWG on Bat Monitoring, drawing together information on monitoring schemes on individual species to ascertain the present status of information that might allow the production of an index based on existing data. The EUROBATS secretariat also made available a synopsis of species status information from national reports which was collated for AC12 and provided a web link to enable direct access to the most recent reports.

2. Kate Jones and Wieslaw Bogdanowicz approached Tony Hutson at IUCN and obtained maps from the Global Mammals Assessment that were used in their climate change modeling work (see under CBD 9). KH has discussed the current status of the European and Global Mammals Assessment with Tony Hutson, with mind to the potential uses of such data in Red List Indices, as has been demonstrated for birds. The assessments for (most) European species under the European Mammal Assessment have been published at <http://ec.europa.eu/environment/nature/conservation/ema/index.htm> and a small

summary booklet in hard copy has also been published. The results of the Global Mammals Assessment are expected this autumn.

3. This action has been the topic of a BCT scoping report for EEA (see above) which has assessed data availability across Europe, assessed methods used for biodiversity indices for other taxa and proposed a methodology and costing to produce an indicator. The actual generation of a combined index has so far been beyond the capacity of the group, but a clear framework for its development has been established, given the required resources. There has also been further development of the iBats program (see above).

CBD 6: Area of agriculture /forestry under sustainable management

Action points:

1. Discuss this CBD headline indicator with the IWG Forest group by next AC meeting.

Actions taken: This action is outstanding and will be progressed at the next AC meeting. However, related to this, BCT have been in discussion with Forestry Commission (UK government forest agency) about the potential development of a bats indicator for forestry/woodland management. Bat species relevant to a forestry indicator were identified by those countries who responded to BCT's questionnaire (see above).

CBD 9: Impact of Climate Change:

Action points:

1. Prof. Wieslaw Bogdanowicz (Poland) and Dr. Kate Jones (ZSL/BCT) to work together to start modeling effects of climate change on a number of bat species by next IWG meeting.
2. Look at other existing projects (e.g. Monarch-Oxford University) that are doing this for other taxa.

Actions taken:

1. The data analysis /modeling has been completed. KJ is in the process of finalizing the text explanation of findings.

2. KH has made links with other projects including Monarch. The Monarch study has been completed and the final report received (KH attended a workshop to comment on provisional models in 2006). KH attended an international workshop on indicators of the impact of climate change on migratory species which was organized by the British Trust for Ornithology (December 2007). Tony Hutson is a participant in this BTO led project and has proposed several bat indicators as potential options including changes in the abundance and species composition of bats in underground sites. This particular project is global in its focus. KH also attended two UK government organized meetings “Biodiversity Conservation in a Changing Climate” (London March 2008) and “Projecting the Impact of Climate Change on Biodiversity” (Reading June 2008).

CBD 11 & 12. Connectivity of Ecosystems & Water Quality

Action Points:

1. Ms. Daniela Hamidovic (Croatian Natural History Museum) and Prof. Wieslaw Bogdanowicz (Poland) to conduct a literature review by next AC Meeting.

Actions taken:

1. Ms. Daniela Hamidovic and Prof. Wieslaw Bogdanowicz have completed a literature review of the topic and expect to bring a summary of findings to AC13.

CBD 14 & 15. Funding Biodiversity & Public Awareness and Participation.

Action Points:

1. Generate a questionnaire to gather this information, pass around to Parties and collate data for next AC Meeting.

Actions taken:

KH has noted that many of the country reports compiled for the AC meetings already include this information. To avoid duplication of effort, and particularly to avoid overburdening countries who have already input into the monitoring data questionnaire circulated by BCT, this action has not been undertaken in its present form. Instead KH will undertake to a review a sample of country reports to comment on the way this type of information is reported, so that standardization can be

considered suitable for use in an indicator. KH recommends that members of the IWG on bats as indicators bring information for their own country to the meeting.

KH and BCT have contributed to a biodiversity participation indicator within the UK Biodiversity Indicators. BCT supplied information on volunteering figures to Defra who combined these data with data on volunteers from other UK NGO's and English government agencies which use volunteers.

Overall Action Points:

1. Collate available information for next AC meeting to make a case to the CBD for including bats as bio-indicators in the long-term beyond 2010 targets.

The scoping report "Streamlining European 2010 Biodiversity Indicators (SEBI 2010)": Developing a methodology for using bats as indicator species" led by KH at BCT under contract to European Environment Agency was an in depth collation of population monitoring scheme and data availability through Europe, analysis of the rationale for using bats as indicators based on relevant literature. The report included a proposal for a methodology with an estimated costing. The information in the report provides a strong argument for the use of bats as indicators. Although the report primarily focused on the SEBI 2010 indicators, the analysis is equally relevant to the CBD headline indicators as the SEBI 2010 indicators were created in response to CBD commitments.

2. Discuss our intentions with CBD to support the development and funding of bats as bioindicators.

Actions taken: No direct discussions with CBD have occurred yet, but the European Environment Agency project manager of the above project attends CBD meetings so information on the use of bats as indicators will be shared indirectly. Various country level discussions have occurred. KH sits on the UK Biodiversity Indicators Steering group and has worked with the UK Biodiversity Indicators project group to develop a bat biodiversity indicator for the UK (see general achievements).