

Global Biodiversity Sub-Committee (GBSC)

Meeting papers

GECC sub-committee on Global Biodiversity

1 April 2008

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**GECC SUB-COMMITTEE ON GLOBAL BIODIVERSITY ISSUES
MINUTES: 1 APRIL 2008**

Attendees:

Miles Parker, Defra
Andy Stott, Defra
Chris Baker, NERC
Simon Jennings, Cefas
Elizabeth Moore, JNCC (Secretariat)
Izabella Koziell, DfID
Vin Fleming, JNCC
Ian Bainbridge, SG
Mary Gibby, RBGE
Chris Lyal, NHM.
Sarah Nelson, Defra

Plus guests:

Mark Stevenson, Defra
Nick King, GBIF
Martin Brasher, Defra
Arwyn Davies, BNSC/NERC
Andy Shaw, BNSC/NERC
Alan Whitelaw, Esys

Agenda Item 1: Introductions and Apologies

Miles Parker welcomed everyone to the meeting and noted that this was the first time the group has met under the new Terms of Reference with the renewed focus on the core mandate of the main GECC to ensure gaps in global biodiversity are actively filled.

Apologies were received from Eimear Nic Lughadha, RBG Kew; Amanda Read, BBSRC; Shaun Earl, FCO; Eric Blencowe, Defra; Sharon McAuslan, Defra; Gary Grubb, ESRC; and Rachel Garthwaite, Royal Society.

Agenda Item 2: GBIF

Dr Nick King, Executive Director of the Global Biodiversity Information Facility (GBIF), gave a presentation on this government sponsored science initiative. GBIF aims to play a catalytic role in the global biodiversity arena. GBIF is a multi country initiative promoting global participation in order to make the world's biodiversity data freely and universally available via the internet. The initiative started in 2002, following various drivers including findings from the Millennium Ecosystem Assessment (MA) regarding biodiversity loss, and recommendations from the MA and CBD to mobilize knowledge about biodiversity and ensure there is free and open access to it.

Currently the growth rate for organisations contributing data to GBIF is linear, however this is insufficient for making analyses of the data effective. Consequentially, GBIF have set themselves a target to rack up the rate exponentially to 1 billion data records by the end of 2008. Biodiversity data is scattered and diverse, captured through difference institutes, however GBIF offers a means to coalesce and exchange biodiversity information. The analyses that are typically conducted include mapping past, present and future biodiversity,

for example predicting the effects of invasive species or ecological change which can lead to improved policy decisions.

During the question and discussion session it was noted that there are 27 voting participants of GBIF, all of which are key member states signed up to the CBD. However there are a number of key data holders including China and Russia which hold vast stores of biodiversity information but these are in different languages and taxonomies. There are other countries such as India and the Philippines who are associated participants but could be elevated to full members with voting rights.

Miles Parker noted that currently most of the data in GBIF is point data, however Nick confirmed that the functionality is being developed to enable ecological niche modelling with habitat data. Vin Fleming asked how capacity in developing countries could be built in order to encourage them to participate in GBIF as data providers and users. Nick referred to GBIF mentorship projects, which identify countries with highly developed infrastructures to take on developing countries and put in resources to facilitate data exchange.

Chris Baker asked how members interact with GBIF. Nick explained that there is a GBIF node in each member country which acts as the coordinating institute. In the UK this is the National Biodiversity Network, which mobilizes 95% of the biodiversity data records for the UK.

Andy Stott noted that projects funded by the Biodiversa ERA-Net are required to make their results available via GBIF. Miles Parker asked what the financial requirement would be to achieve the target growth rate of 1 billion records by the end of 2008. Nick noted that this is very hard to estimate, since some records are simpler and quicker to digitise and mobilise than others. There are 10s of millions of data sets that could be mobilized as records, however the question is the commitment in the country to finance this.

Nick King referred to 4 GBIF campaigns, which are thematic areas members have identified as important and take the lead on. These include the 2010 target led by WCMC, the Amazon Basin, pollinators and the world record of marine species. It was noted that the UK has not specifically backed any of the campaigns since the science underpinning them was not considered sound. However the UK were willing to input to strengthen the campaigns.

The GBSC agreed that the GBIF target to ramp up the number of records is a good idea however there is a need to focus on GBIF's potential uses. If more organisations are interested in using it then it is likely to follow that more data will be made available. Currently there is a lack of long-term funding for GBIF. It was noted that the UK is the fourth largest contributor to GBIF.

The Chair commented that whilst it is desirable to fund mobilization of data there is a lack of capacity in resourcing digitisation. Andy Stott suggested that all members could think about opportunities for increasing resources to funding digitisation, and that it would also be wise to look at existing initiatives and build on them, for instance Darwin projects, NERC research and the ESPA project which has links to the Amazon basin GBIF campaign.

The Chair suggested that a sub-group take forward the discussion to consider the priorities for the UK and what the GBSC can do further and to bring a paper to the next meeting in September.

ACTION 2/1: Sarah Nelson (Defra) to lead a sub group considering the role of the UK as a data provider to GBIF and to consider where the GBIF is a data provider for the UK in specific project areas, e.g. biodiversity information needs in the OTs. **GBSC members** to volunteer to work with this group. Sub-group to report back to September GBSC meeting.

Agenda Item 3: Earth Observations

Dr Arwyn Davies, Director Earth Observations, NERC and Andy Shaw, Science and Innovation Manager, NERC gave a presentation on the role of earth observations in the assessment and monitoring of biodiversity.

The Group on Earth Observations (GEO) is a voluntary partnership coordinating efforts to build a Global Earth Observations System of Systems (GEOSS). The 2002 WSSD called for international collaboration to exploit the growing potential of earth observations. The GEO was launched in 2005, led by the US. There are currently 72 GEO members including Governments, the EC and 52 participating organisations (including GBIF). The UK is a member and Defra are the policy lead.

The GEO includes both ground based and space observations. Since its launch, the GEO has had a large impact globally, raising the profile of earth observations. It now faces challenges working with different organisations in different countries in providing free and open access to data. The observations need to be supplemented, improved and sustained, modelling and prediction capabilities need improving and expanding, and there needs to be a renewed commitment for capacity building and understanding user needs.

The Biodiversity Observation Network (GEO-BON) is part of the GEO specifically focussed on biodiversity and ecosystems. This is led by Diversitas and NASA with participation from WCMC, JNCC, NERC, CEH and Imperial College.

Andy Shaw provided feedback from the Defra and WCMC workshop on GEO held in 2007. This had good representation from Government and the academic community. The outputs considered earth observations capabilities. The synoptic capability of earth observations was considered to be good, when used in conjunction with in-situ data to provide adequate sampling and feasible opportunities. Overall it was accepted that there was a role for earth observations and its capability. In reviewing the gaps it was recognized that there is a lack of prioritisation and there are issues concerning biodiversity indicators, i.e. definitions are required in order to assess earth observation contributions.

At the workshop UK capacity was considered to be strong in many areas, for instance in access to ground truth data and the UK's strong history in collections. This perception by others gives the UK an advantage in terms of involvement with GEO and potential leadership capabilities. The workshop considered what actions could be taken and it was suggested that a top level strategy was required to bring all the relevant initiatives together, establish the priorities and direction, and the GBSC was suggested to lead this.

During the question and discussion session it was noted that the CBD Secretariat has been involved in discussions concerning biodiversity observations and that SBSTTA has made recommendations in regard to GEOSS. It was noted that the UK has made a financial contribution to the running costs of the Secretariat which is based in Geneva. The issue of concern is around co-ordination and the lack of engagement with GEO. There is a need for

improved co-ordination and this would be helped by greater clarity of the importance of GEO to the UK biodiversity and ecosystem communities. It was agreed that GEO is a very ambitious programme and since the data and infrastructure cuts across all areas there is a need for a separate unifying structure.

The Chair noted that there is still confusion about the potential of monitoring and earth observations in biodiversity conservation. In some areas such as agri-environment schemes monitoring is available via earth observations but other areas do not have such well developed systems in place. Since all forms of observation overlap with GBIF it was suggested that GBIF needs to be active at the GEO-BON workshop in Berlin, 8-10 April to ensure the potential for overlap is managed appropriately. The purpose of the workshop is to look at examples, review needs and make an assessment of what earth observations can contribute.

It was suggested that it would be useful to see more details about the potential of earth observations. Ian Bainbridge suggested an iterative process in which the biodiversity experts set up an 'Aunt Sally' of what needs to be monitored and how it can be done. The remote sensing experts can then run their observations and produce results. This would help the biodiversity community understand the value of earth observations to their work. NERC placement fellowships may offer an opportunity for this exercise.

Andy Stott asked about the science and application of earth observations and questioned what we want to use it for and what the UK wants to achieve globally. He noted strategic governance issues and questioned how different initiatives such as GEO and GEOSS work together. Sarah Nelson commented on work that is planned within Defra to review all CBD decisions for gaps. Work to address the gaps may be funded under a new global biodiversity research fund. It may be possible for programmes coming out of this exercise to make reference to earth observations, and there could be a small research fund to consider the uses of earth observations for global biodiversity.

It was agreed that there was a need for ongoing communication in regard to earth observations and that a small group would meet to discuss some of the issues in more detail.

ACTION 3/1: Miles Parker, Andy Stott, Sarah Nelson and Ian Bainbridge to take forward the discussion concerning earth observations and extend an invitation to Lawrence Way (JNCC) to join this group. Discussions should include the potential to extend the work of the Defra research priorities study to consider EO, the potential for a NERC placement and an analysis of the gaps and how they may be filled. Engagement should be made with Arwyn Davies and Andy Shaw.

Agenda Item 4: Minutes and actions from 7 November 2007

The minutes were taken as a true and accurate record of the meeting. Ian Bainbridge noted that Bill Sutherland's paper identifying top biodiversity loss factors has now been published in the *Journal of Applied Ecology*¹. It was noted that UK BRAG are due to discuss this at

¹ **Future novel threats and opportunities facing UK biodiversity identified by horizon scanning**

William J. Sutherland et al ,

<http://www.blackwell-synergy.com/doi/full/10.1111/j.1365-2664.2008.01474.x>

their next meeting in June and that they would be invited to pass on global biodiversity issues to the GBSC via the Secretariat.

Two action points were carried forward.

ACTION 4/1 (old action 6/2): **Miles Parker** to write to Sir Gordon Conway (DfID) expressing appreciation for Izabella Koziell's contribution to the GBSC and reiterating the value of DfID involvement.

ACTION 4/2: (old action 8/2): **Andy Stott** to work up a proposal for a futures workshop, to include budget considerations and report back to a future GBSC meeting

Agenda Item 5: ESPA (Ecosystem Services for Poverty Alleviation)

Izabella Koziell provided an update on this joint DfID, NERC and ESRC programme which is currently in the design phase. The tentative sum for the programme is £30m, and this is subject to Ministerial approval. Currently institutions are drawing up scoping studies which draw all the themes and key issues together. This information will be used to underpin the programme design. The studies are due for submission in June, after which they will be discussed over the summer. GBSC members could contact institutes involved in the scoping studies to ask for a draft and to provide comments. Details of the institutes can be found at: <http://www.nerc.ac.uk/research/programmes/espa/>

There will be another call for proposals at the end of May and July. The aim is to establish strong research networks in developing countries to build institutional capacity and this should run for the length of the full ESPA programme. The scheme will be open to UK research institutes and non-UK researchers and individual projects will be eligible for up to £150,000 for the duration of the project, which will vary from 6 months to one year. The aim is to build research networks so that they are primed and ready to take up the full ESPA programme.

Izabella noted that the ESPA programme falls within DfID's £100m research funds for climate change, and made the point that the GBSC needs to ensure biodiversity interests are covered in the £70m outside of the ESPA programme. DfID are launching their research strategy at the end of April and this will describe how research is going to be managed within DfID. The intention is to bring research and policy together to ensure research is being used for policy gains.

Andy Stott noted that the Biodivesa ERA-Net was talking about a second call for developing countries. A few countries are seriously considering joining together for a joint call, but the UK has no interest in joining at this stage.

Chris Baker (NERC) gave a brief summary of the paper which he had circulated (GECC GBSC (08)02) on the links between ESPA, Living with Environmental Change (LWEC) and Quantifying and Understanding the Earth System (QUEST). NERC is leading the LWEC programme which involved recycling some existing funds plus a small proportion of new funds. LWEC acts as an umbrella programme, focussing activity from various different programmes and projects and ESPA is a good example of what is hoped will come out of it. The aim is to bring programmes together and make the links and where possible interactions between them.

The Secretariat provided an update on the BES Annual Conference, at which the UK BRAG is organising a special session on ecosystem services. This will be held at Imperial College London, 5-8 September. A small liaison group has been set up to work closely with the BES to draw up the scope of the session, consider promotion of the event and offer advice on appropriate speakers.

Agenda Item 6: Gaps and emerging science issues

Update of GER Review of science priorities

Andy Stott referred to the GECC Environmental Research Sub-Group's (GER) review of research priorities on climate change which was undertaken last year and reported to the main GECC meeting in October. This was on the physical aspects of climate change and did not include any issues relating to biodiversity. At the annual GECC meeting it was agreed to extend the review to include biodiversity issues. Andy reviewed the paper on the basis of the report from the Royal Society and GBSC workshop on biodiversity and climate change and provided comments to the paper.

Alan Whitelaw thanked Andy for his input to the paper and inclusion of the biodiversity issues. Alan discussed the next steps for this paper with the chair of the GER, David Warrilow. The GER is due to meet in the next few months and intends to review the paper and undertake a prioritisation exercise with the aim of reporting back to the annual GECC meeting in October 2008 to record what use has been made of the review. It was stressed that the review should be a living document and Andy Stott asked for the opportunity for the GBSC to provide comments on the review, since he was the only one from the group to have contributed.

ACTION 6/1: Secretariat to circulate the latest draft of the GER review to the GBSC and all members to make comments and send them back to the Secretariat by 15 May. Secretariat to submit coordinated response to Alan Whitelaw by end May.

Biofuels and land leakage

The Secretariat referred to the JNCC position statement on biofuels which had been circulated in advance of the meeting. It was noted that biofuels are a great threat to global biodiversity and at a UK and European level targets have been set to convert energy use from conventional sources to biofuels and yet there are many uncertainties and issues to consider around the production and use of biofuels, for example how and where to plant biofuel crops in a sustainable manner. A huge biomass is required to produce biofuels and this has knock-on effects for food production and land use. Biofuels came up as an emerging issue at SBSTTA 12 however discussions were consistently blocked by Brazil. It came up again at SBSTTA 13 under the agriculture programme, however Brazil quashed discussions again. It was noted that biofuels is on the CBD CoP9 agenda under the agriculture programme.

The GBSC were not sure whether there was a need for more biodiversity research since it was felt that there has been a lot of work done on biofuels. However Vin Fleming asked whether we have enough evidence on which to base policy advice and decisions. Sarah Nelson offered to circulate a short note providing the contact details of the Defra lead on biofuels, a summary of the Whitehall governance structure for biofuels, some information about the Defra biofuels research project and whether any further research is required.

ACTION 6/2: Sarah Nelson to circulate a short note on biofuels to include Defra lead contact details and information about biofuels research undertaken by Defra.

Arctic Research

Vin Fleming noted that he recently attended a workshop in Oban looking at research needs in the Arctic. He offered to circulate the workshop report when available and suggested that there may be some areas of work concerning biodiversity which are not well structured or co-ordinated which the GBSC could consider.

ACTION 6/3: Vin Fleming to circulate the report from the workshop on the Arctic. Secretariat to consider adding this to September agenda and inviting Rob Bowman to attend.

What can GBSC do about the gaps?

The Chair noted that the GBSC should take the opportunity to consider what can be done about the gaps and emerging issues that have been identified. In the past, we have tended to have a presentation following by substantive discussion. This could lead to the development of a paper or workshop which concludes with a set of recommendations. Alan Whitelaw commented that the other Sub-Groups take a similar process and that it seems to be the most effective in terms of lodging the issues in people's minds. He also noted that the main GECC is being reviewed this year and that it would be possible for the GBSC to input to the scoping document.

Andy Stott commented that the GBSC has not tended to be too strategic in its thinking and that it is hard to look sufficiently far ahead to gauge how to get to where we are aiming for. Sarah Nelson noted that the study reviewing the CBD decisions should identify gaps in research and this may help the GBSC to plan at a more strategic level.

Agenda item 7: Dissemination of GBSC science

The Chair commented that this item arose from the GBSC review, where it had been noted that there was a need for the work of the GBSC (e.g. the papers and workshops) to have a higher profile. Although the GBSC papers and results from the workshops are routinely posted onto the GBSC websites, they would reach a wider audience if members circulated the link to their contacts, and made the link from their website to the GBSC websites. It was noted that all members are expected to disseminate the GBSC reports and papers within their own networks as deemed appropriate.

ACTION 7/1: All members to add the GBSC website as a link to their websites (http://www.ukgecc.org/dvl_Biodiversity.htm). Once this is done members to confirm the website details to the Secretariat. Action to be completed by 31 August.

Agenda Item 8: Informing MEAs

Sarah Nelson had circulated Stephanie Godliman's report from SBSTTA13. She noted that it had been a difficult meeting since it was very political and unscientific. Sarah confirmed that Defra will be commissioning briefing for CBD CoP9 in the normal way and that many of the GBSC members would be involved in this process. There may be a need for GBSC input post-CoP, for example providing advice on the issues surrounding the post 2010 targets.

ACTION 8/1: Sarah Nelson to circulate a note of the key issues for GBSC to discuss following CoP9.

Vin Fleming noted the need to consider the scientific questions emerging from all the other biodiversity MEAs, and how the GBSC can influence them. It was agreed that by the end of

2008 the GBSC should have identified the common issues, themes and gaps from all the biodiversity MEAs.

ACTION 8/2: Secretariat to circulate the agendas/key themes for all the biodiversity MEAs for discussion at the September GBSC meeting.

Agenda Item 9: Feedback from members on related actions within their organisations
UK BRAG report

The Secretariat provided a brief update following the last BRAG meeting which was held in December. Lloyd Peck, NERC's Biodiversity Theme Leader gave a presentation on the development of NERC's new strategy. He outlined the seven themes, of which climate change is the highest priority for NERC. Theme Leaders are charged with drawing up Action Plans, in addition to their role as a conduit for information and an interface between NERC and its user community. Action Plans went to NERC's Science and Innovation Board (SISB) on 27 February. SISB will then discuss the Plans with Theme Leaders, after which there will be an opportunity for liaison with the wider community. BRAG have been very active in lobbying for biodiversity research in the new NERC strategy. Peter Costigan wrote to both SISB and NERC Council, sending copies of the UK BRAG summary report to all members.

ACTION 9/1: Secretariat to consider whether to invite Lloyd Peck to future GBSC meeting

It was noted that there are two BRAG sub-groups, the Marine Goods and Services sub-group and the Policy Benefit from Research sub-group. The reports from these are expected before June and they will be posted on the BRAG website.

Update on progress with the OT research priorities project

Vin Fleming noted that a paper is being prepared for the next Inter-Ministerial Meeting on the OTs conservation priorities (of which research priorities are an integral but not readily divisible part). No date has yet been set for this meeting, however it should be possible to produce a version of this paper for the GBSC for the September meeting.

ACTION 9/2: Vin Fleming to circulate paper on OT conservation priorities focusing, as far as possible, on research needs as identified by the Territories and identifying significant gaps and the current and required UK and OT resource commitments. Paper to be prepared for September GBSC meeting.

The Secretariat noted that work is being done in the JNCC to follow up expressions of interest from the UK for working with OTs on their research priorities. The JNCC is acting as a broker, matching expertise in the UK with the requirements of the OTs and is pursuing one case as a trial for others to follow. The JNCC is also looking to recruit a funding officer, under the OTEP programme. Their role will include looking for funding opportunities for the OTs. Vin Fleming also noted that the JNCC research protocol has been adopted by the Cayman Islands and recommended to the other Caribbean OTs.

Feedback from the HoL Systematics and Taxonomy inquiry

The Chair noted that a paper had been prepared by a joint GBSC and UK BRAG sub-group and that this was submitted to the HoL Systematics and Taxonomy inquiry in February. A number of GBSC members were invited to participate in the inquiry in person. It was noted that the HoL inquiry recognised the value of digitising taxonomic records and the gap in the funding available for this process. It is likely that the HoL recommendations will be issued

before the summer recess and that the UK Government will be able expected to respond in the Autumn. It is likely that this will arise as a future GBSC agenda item.

Agenda Item 10: Diary/meeting dates and AOB

There were no AOB items. The Secretariat offered to host the next meeting in Peterborough in September. It was agreed that the Secretariat will trawl for dates.