# **SIXTY FIFTH MEETING OF THE SCIENTIFIC ADVISORY COMMITTEE HELD ON MONDAY 27th MARCH 2023**

**AT: Silvan House, Edinburgh**

**OPEN SESSION**

**MINUTES**

**Present**

Professor Peter Higgins (Chair)

Professor Jane Reid

Dr Ruth Mitchell

Professor Neil Metcalfe

Professor Marian Scott (VC)

Professor Dan Haydon (VC)

**Apologies:** Professor Jaboury Ghazoul

**In attendance**

Paul Robertson (minutes)

Sarah Hutcheon (SAC Secretariat)

Professor Mathew Williams

Dr Sallie Bailey

Professor Anna Meredith

Eileen Stuart

Professor Des Thompson

Clive Mitchell

Ben James

Duncan Stone (VC)

Paul Roberts (item 6)

Peter Hutchinson (item 7) (VC)

Chris Boyce (item 7)

## **ITEM 1. Welcome, apologies for absence and declarations of interest**

1. The Chair welcomed everyone to the meeting and noted apologies from Jaboury Ghazoul.
2. The Chair welcomed Mat Williams and Sallie Bailey, Chief and Deputy Scientific Adviser - Environment, Natural Resources and Agriculture.  He also welcomed Anna Meredith, Professor of Conservation Medicine at the University of Edinburgh, based in the Royal Dick School of Veterinary Medicine.  Anna is a member of the SAC sub-group advising on avian flu, and is presenting today on ‘One Health’.
3. The Chair was pleased to announce that a number of colleagues have been elected fellows of the Royal Society of Edinburgh including Jaboury Ghazoul, Davy McCracken (a former SAC Expert Panel member) and Chris Quine, Chief Scientist with Forest Research, who works very closely with a number of us. The chair also noted that he too had been elected.
4. The Chair noted that a lot of work has been going on around the nature-climate crisis. The Scottish Government published its draft biodiversity strategy on the 13th December during the COP15 in Montreal. NatureScot staff have worked on this with the minister and officials.
5. The Chair noted that the meeting would be aware that the IPCC published on 20th March the final part of its sixth Assessment report.  Entitled ‘Climate Change 2023: Synthesis Report’, described by António Guterres, UN Secretary-General, as a ‘survival guide for humanity’, which is arguably the 'last chance saloon' guidance on tackling the climate emergency globally.
6. The Chair updated the group with regards to the fact that we are recruiting a new Chair for NatureScot as well as committee and expert panel members. The Terms of Reference for the expert panel have been revised to allow members to be on the panel for eight years (the same as the SAC). We are looking at extending the terms of current members as well as recruiting some new members.

## **ITEM 2. Minutes, action points and matters arising from the meeting held on 3rd March 2022**

1. There were no changes suggested to the minutes of the November 2022 meeting. There were no matters arising.
2. AP05/22 on species prioritisation is still on-going with progress being made. The other actions were all discharged.

## **ITEM 3. Oral update on NatureScot Board business**

1. The main work for the Board continues to be around the twin climate and biodiversity emergencies in Scotland, and how to support Scotland to become Net Zero. Avian Influenza also continues to be a high-profile area of work.
2. Eileen Stuart mentioned the rising profile of work on Highly Protected Marine Areas (HPMAs). Mat Williams noted that Scottish Government has agreed to appoint a Chief Scientific Adviser for marine.

**Discussion Papers**

**ITEM 4. Horizon Scanning**

1. Clive Mitchell introduced the paper to update the Committee on approaches to horizon scanning and how the SAC could engage with this. We are looking at a short-term period of 1 – 5 years and a longer-term period of 5 – 10 years, but we are not looking at timescales further ahead than that.

## Action

The committee was asked to:

* discuss the paper, including any additional items to note, and to identify whether a deeper dive into specific issues is required (none identified/ recommended based on this paper).
* comment on style and content, to refine future versions accordingly

1. The Committee discussed:

* What action NatureScot should take in response to the horizon scan and how the process could be refined for example by identifying the most important items and including NatureScot staff in the horizon scanning process.
* That water and soil are fundamental to this approach and so need to be treated with high importance.
* That there are significant concerns in rural areas regarding job security with all the changes taking place. Jobs may change but there may not necessarily be an overall loss in future. 'Just transition' is important in considering changes in land use.
* The need to consider social and system factors as well as technology.

1. In conclusion the Committee:

* Agreed that we need to ensure that we are 'joined up' with this work, including with staff in the Foresight Unit in Scottish Government and others carrying out horizon scanning exercises.
* Agreed that this was an interesting paper and that the SAC would like to see this type of paper at future meetings, incorporating the amendments suggested by the committee.

**ITEM 5. Horizon Scanning (plant health)**

1. Ruth Mitchell introduced the paper which was developed following a workshop with plant health experts.

## Action

The committee was asked to note that, and/or comment on:

* + Plant pests and pathogens are currently causing biodiversity declines and losses. Future plant pests and pathogens (non-native; not currently present; those currently present but whose severity may change due to climate change) pose a significant risk to native plants and their associated biodiversity and ecosystem services. Details of exact impacts, such as number of associated species affected, are unknown in many cases. There are however potential risks to plans to increase carbon removals in biological systems, and the management of risks to the state of nature, including ecological restoration (paras 4-10)
  + The framework to guide future work (paras 11-13).
  + The responsibilities for plant health in semi-natural habitats is unclear and should be clarified in conjunction with appropriate organisations, especially the Plant Health Centre, initially through a mapping exercise, learning from emergency response protocols in better known areas such as INNS and avian influenza (para 14-18).
  + Plant health is a large and potentially complex risk to manage. We suggest learning-by-doing, for example: identify business-critical areas for NatureScot (e.g. habitat restoration or creation projects); initial focus on c.10 key foundation plants to target for a trial monitoring of plant health (para 14-18)

1. The Committee discussed:

* Concern that responsibilities for plant health were not clear, particularly in relation to natural habitats.
* The opportunity for partner organisations to start work in this area for example butterfly NGOs looking at plant health of food plants for butterflies.
* The use of apps to record plant health. This is currently available for forestry but could be expanded for key species and targeted at particular audiences.
* The need for biosecurity to become a recognised factor in taking forward habitat restoration work.
* The ability to learn from and build on the biosecurity guidance for forestry.
* That there are many concerns over biosecurity risks around the UK.

1. In conclusion the Committee:

* Agreed that this deep dive was useful.
* This should be picked up with JNCC at a UK level.

AP1 Eileen Stuart to raise the issue of plant health at Chief Scientists Group.

**ITEM 6. Deer Research – a proposal for a subgroup**

1. Paul Roberts introduced the paper to update the group on research needs in relation to deer, building on the recommendations from the deer-working group and supporting biodiversity and the net zero approach through deer management.

## Action

The committee was asked to:

* support the establishment of a sub-group on deer, to scope and support the research and evidence needs to deliver Scottish Biodiversity Strategy and Net Zero outcomes.

1. The Committee discussed:

* That most of the work on the paper is discussing deer impact on upland habitat and forest habitat. Is there enough data to model deer impact on other habitats?
* The importance of adaptive management alongside a modelling approach.
* The possibility of using BIOSS to help with modelling work.
* The need to encourage the sales of venison.

1. In conclusion the Committee:

* Agreed that this is a large area of work and further work is needed to clarify the key areas to focus on with a sub-group and set this out in a clear terms of reference for the group.

AP2 Paul Roberts to consider the advice from the Committee, discuss with colleagues and come back to the SAC with a revised proposal and terms of reference for a sub-group on deer research.

**ITEM 7. Peatland Action – monitoring and research issues**

1. Peter Hutchinson introduced the paper to provide the committee with an update on Peatland ACTION monitoring and research. It is important to monitor peatland to determine the benefits of restoration.

## Action

The committee is asked to:

* To note work being undertaken to monitor our peatland actions;
* To advise on the monitoring and research challenges/issues raised; and
* To advise on whether it wishes to be engaged in consideration of complex or novel research and monitoring projects.

1. The Committee discussed:

* Noted the wide range of work underway and need to ensure work is linked to other related monitoring underway to avoid duplication.
* The use of different technologies for survey work including satellites and LIDAR.
* The need for clarity on how we are going to measure success for the work.

1. In conclusion the Committee:

* Agreed that we still need more work to confirm the best approach to use for monitoring and how to get the best value for money and would be open to support more detailed discussions on projects as needed.

**ITEM 8. Biodiversity Metrics**

1. Des Thompson introduced the paper on metrics.

## Action

The committee is asked to comment upon our proposed approach to biodiversity metrics, in particular:

* + Are there shortfalls or gaps in the proposed approach?
  + Are there alternative metrics that might be more useful in Scotland?
  + Does the Committee support the use of a small number (up to five) of high-level metrics, or can they suggest a single high-level metric that adequately represents biodiversity in Scotland?
  + Is there capacity to form an SAC sub-group to advise on metrics, along the lines of that formed to guide Scotland’s reporting against the ‘Aichi targets’?

1. The Committee discussed:

* The need to reflect the wealth of biodiversity in metrics.
* The need for many individual metrics to provide information and communicate complexity.
* The need to develop new indicators where existing ones are inadequate or there are gaps in evidence.
* The need to consider comparability across different countries.
* Consider indicators such as soil health. CXC are currently working on this.
* The gap around indicators on ecosystem health and integrity through ecosystem function.
* The importance of clarity on what metrics are being used for and their purpose.
* The use of a metric to look at specialist roles of some species rather than species abundance.

1. In conclusion the Committee:

* Considered that there was not a simple or single representative metric that was sufficiently comprehensive to encompass the health of our biodiversity.
* Agreed that metrics should be based on biology and not actions.
* Agreed that this was a very important area of work but not necessarily the right time for a sub-group. The SBS Advisory Group might take this forward.

**ITEM 9. One health approach – presentation**

1. Anna Meredith gave a presentation to the committee on the one health approach. This approach is where the health of nature (animals and plants), domestic livestock and humans are all linked. This is not a new approach but after a period when it had low profile has been recently coming to the forefront again partly due to the impact of Covid and avian flu.
2. Care needs to be taken that we are not blaming wildlife for disease, but that this approach recognised linkages and need to tackle human and planetary health in an integrated way.

## Action

The committee is asked to consider the concept of ‘One Health’ and how it might be adopted as part of lexicon in NatureScot.

1. The Committee discussed:

* The fact that when we are talking about ecosystem health that it is important that we also include plant health.
* How the UK compares with other countries on wildlife health surveillance. The UK is doing well compared to many countries, but we are behind the USA and Canada who invest a lot more money in this work.
* That this is all part of human impacts on nature and requires a systems-based response.
* How to address this in the Scottish Biodiversity Strategy.

1. In conclusion the Committee:

* Agreed that this is a very important approach and that it would be good for NatureScot to incorporate this approach in their work in future.
* Agreed that it is important to continue to aim to get more social science expertise within the committee.

**ITEM 10. Information Papers**

SAC sub-groups – update on SAC sub groups

1. Des provided an update on the work of the current sub-groups. On the Muirburn sub-group, this has been a very challenging area of work. More meetings and discussions have been required than had originally been planned. The next meeting is due in early April.

**ITEM 11. AOB**

1. No items were raised for discussion under AOB

**END OF OPEN SESSION**