

Witness Name: Professor Margaret Gill  
Statement No.: 1  
Exhibits: MG  
Dated: 05 May 2023

## **UK COVID-19 INQUIRY**

### **WITNESS STATEMENT OF MARGARET GILL**

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**In relation to the issues raised by the Rule 9 request dated 27 March 2023 in connection with Module 1, I, Margaret Gill, will say as follows: -**

#### **Introduction**

1. I am Professor Margaret Gill. I am currently Chair of the independent Scottish Science Advisory Council (SSAC).
2. I had email correspondence from, and was provided with relevant documents by, the Scottish Government Covid Inquiries Response Directorate. I also had one virtual meeting with staff from the Scottish Government Covid Inquiries Response Directorate.
3. I am asked to draw upon my experience as the Chair of the SSAC, from 1 December 2019 to date, in the context of providing information to the UK Covid Inquiry. This witness statement relates to the matters addressed by the Inquiry's Module 1, which I understand is examining the UK's preparedness, resilience and planning for a pandemic, between the following two dates; 11 June 2009 to 21 January 2020. Hence, I have also drawn on my experience as Chief Scientific Adviser (CSA) for Rural Affairs and the Environment in the Scottish Government (SG) from 2006 to 2011 and on my experience as a Senior Research Fellow (SRF) (20%) in the Department for International Development from 2009 to 2016 during which time I instigated a multi-Research Council and Government Department funded research programme on Zoonoses in Emerging Livestock Systems.

4. I only took up the role of Chair of the SSAC on 1<sup>st</sup> December 2019 and was not involved in pandemic preparedness planning. I have been informed that the Scottish Government have provided the Inquiry with full details of the remit of the SSAC and made it clear that pandemic preparedness planning is not part of our role.

### **Professional background**

5. My professional background includes a research career on sheep and cattle nutrition in a Research Council funded research institute before joining what was then the Overseas Development Administration (which then became the Department for International Development (DFID), now Foreign, Commonwealth and Development Office) as a researcher and then programme manager of research. I was employed four days per week by the SG as CSA in Rural Affairs and the Environment from 2006-11 during which time I was an ex officio member of the Defra Science Advisory Committee (SAC) and the advisory committees of various research collaborative initiatives on food and environmental issues at a UK level. I re-joined DFID as a part-time SRF from 2009-2016, reporting to Chris Whitty. In this last role I co-led the creation of a multi-Research Council and Government Department funded research programme on Zoonoses in Emerging Livestock Systems (ZELS) which was developed in consultation with the World Health Organisation, OIE (now known as the World Organisation for Animal Health) and the Food and Agricultural Organisation of the United Nations – key end-users of the research.
6. During my time as CSA Rural Affairs and the Environment, in the SG, I was involved in discussions on the management of the 2007 Foot and Mouth outbreak and became aware of the livestock epidemiological modelling expertise in UK. As an ex officio member of the Defra SAC, I was exposed to UK Government initiatives on managing risk but did not participate in any emergency response scenarios. In the SG, I was involved in identifying the need for a Centre of Expertise on animal health to support the SG in relation to animal health epidemics and wider policy issues but was not involved in giving science advice on policies for human health.
7. During my time as an SRF with DFID I was in contact with government scientists in Australia who had successfully forecast relative risk levels between cities for influenza outbreaks using social networking analysis and agent based modelling which took account of methods of travel of different demographics. I did not pass that

insight on to the SG at the time as I was not involved in risk planning. I did mention it to one of the epidemiological modellers at the start of Covid, but he assured me the epidemiological models were doing a good job.

### **My work as Chair of SSAC**

8. I took up my appointment as Chair of the independent SSAC on 1<sup>st</sup> December 2019 after an open competition which was looking (amongst other criteria) for someone with the ability to, *“take a strategic long-term vision and see the bigger picture, while recognising the technological, innovative and economic potential arising from both fundamental and applied sciences”* as stated in the application pack for the appointment of members, provided [MG/0001 – INQ000183387]. My term will end on 30<sup>th</sup> November 2023. We hold four meetings per year and undertake short-term projects examining the scientific evidence relevant to particular policy-relevant questions which are agreed in advance with the specific policy leads within the SG. The SSAC is both proactive in identifying scientific evidence which could support the management of risks and opportunities for Scotland and reactive i.e. we respond to requests to SSAC from policy officials. The work is undertaken by short-term working groups made up of SSAC members and non-SSAC experts, and the reports of these working groups are approved by the SSAC as a whole who take collective responsibility. Reports are published on the SSAC website. Annexes are also published on the website which provide details of the methodology and the evidence sources used to inform any recommendations. The SSAC's remit is to provide independent advice to the CSA for Scotland and to Scottish Ministers.
9. As SSAC Chair my only involvement early on in the Covid epidemic was to be approached by the CSA (Professor Sheila Rowan) in April 2020 regarding representation of SSAC members on the First Minister's Advisory Committee. I did suggest the need to include someone who could see the “big picture of the context”, i.e. where health issues intersect with society, rather than just health experts, but the member selected was Sir Aziz Sheik who is a human health data expert.
10. From an SSAC perspective, in September 2021 Dame Anna Dominiczak (SSAC member and also Director of Laboratories, UK Health Security Agency during the pandemic) suggested to SSAC that it should undertake a study of the Legacy of Covid. This was agreed and a short-life Working Group (SLWG) was established. There were stakeholder perceptions of a conflict of interest for the two co-leaders (Sir

Aziz Sheikh, Director, Usher Institute and Dean of Data, The University of Edinburgh and Dame Anna Dominiczak) of this SLWG. For this reason as Chair of SSAC, I authored the report, based on evidence from answers provided to a questionnaire which was circulated to over 150 key stakeholders, with over 40 responses being received, as outlined in *Annex 1 – Methodology* to the final report [MG/0003 – INQ000148757]. 50 stakeholders then attended a virtual “roundtable” discussion with representation from the SG in attendance. This involved discussion in four breakout groups, with four independent Chairs. The recommendations were discussed and agreed by the whole SSAC and the report peer-reviewed by four independent experts. Post the roundtable discussion, I held one-to-one phone calls with key individual stakeholders to fact-check information provided in responses to the questionnaires. These included discussions with the designated Chair of the Standing Committee on Pandemic Preparedness (SCoPP), as we envisaged that that Committee would be the primary users of our research.

11. The findings of the SSAC review included this statement: *“It is the SSAC’s view that Scotland’s science community is very well placed to enable Scotland to be an international leader in an integrated response to future crises, provided priority is given to continuing to build on and maintain connectivity between disciplines and sectors.”* The evidence for existing connectivity was: *“Scotland is already in a strong position to adopt a trans-disciplinary approach, due to its relatively small size and past investment (at national and local levels) in collaborative initiatives both in terms of science (e.g. Research Pools and Centres of Expertise) and between the private sector and academia (e.g. Innovation Centres and Interface).”* The final report is provided [MG/0003 – INQ000148757] It was concluded, therefore, that strategies (from SG and the Scottish Funding Council) which had fostered collaboration between science entities in Scotland (between universities but also with research institutes and the private sector) served Scotland well in its collaborative response to Covid-19.
12. Prior investment in data analysis was another pre-Covid strategy which proved its usefulness during the pandemic. As stated at page 5 of the final report, *“Scotland produced a national, linked COVID-19 surveillance platform which, for example, enabled the world’s first real world data on the effectiveness of the Pfizer-BioNTech and Oxford-AstraZeneca vaccines based on a study of the whole population. This was despite a 10-month delay due to the lack of agreed approaches to proportionate*

*information governance in the context of pertinent emergencies.” [MG/0003 – INQ000148757]*

13. The rapid availability of testing laboratories, is another example of the benefits of the foundation of collaboration across Scottish science which pre-existed the pandemic.
14. The combined effect of these investments (in time and resources) to foster scientific collaboration pre-pandemic facilitated a faster response once the scale of the impact of the pandemic was recognized.
15. During the pandemic new collaborative initiatives were launched (e.g. SG's Data and Intelligence Network) and further innovative approaches which were under discussion were shared with the SSAC through responses to our questionnaire, at the expert roundtable discussion and during follow-up phone conversations, as outlined above.
16. SSAC was not asked for any specific input but we received regular updates from members (both independent and ex-officio) at meetings on their involvement. The most relevant to the Inquiry was the measurement of coronavirus ribonucleic acid in wastewater as a predictor of extents of Covid-19 infections in cities. We were told that this had proven to be a helpful indicator for those managing the response and that the speed with which this could be introduced in Scotland was helped by the fact that a Centre of Expertise for Waters (CREW) had been in existence for 9 years prior to the pandemic. CREW's remit is to bring together Scotland's scientific expertise on water in a collaboration to support the development and implementation of water policy. Thus, when the Covid-19 crisis came, the scientists and policy officials had an established working relationship.
17. I was invited (as Chair of SSAC and a Fellow of the Royal Society of Edinburgh (RSE)) to join the Data, Evidence and Science sub-group of the RSE Post-Covid-19 Futures Commission, final report provided [MG/004 – INQ000183389]. Amongst other activities, the sub-group held a virtual roundtable discussion with a small group of scientists. These scientists had been involved in providing advice to the Scottish and UK Governments and the media on what the scientific data and evidence demonstrated how best to manage the spread of Covid-19 in the UK.

18. Summary learning points which I recorded from that meeting in a blog post, *The challenges of advising on a pandemic*, published on the RSE Post-Covid-19 Future Commission [MG/0005 – INQ000183390], were:

*“Numbers and diversity of advisers: We gained insights on the number of advisers involved - not just those with expertise on health issues but also behavioural scientists, environmentalists, pathologists and many others. They may not always agree on the risks associated with different courses of action, but all agreed on the need to reach a consensus, which becomes easier as more evidence becomes available. We also heard about the challenges of information flow between different parts of government and how individual scientists sitting on more than one committee can help accelerate that flow.*

*Learning lessons from overseas and specific situations: Covid-19 was described as a “classic pandemic” which means there was a knowledge base about the spread of infectious diseases to build on, but there was also much to learn from the data collected. The importance both of learning lessons from other countries and of understanding the influence of the local context (and value the engagement with local decision-makers) was highlighted.*

*Experts influencing decision-making: Expert Committees are not the only providers of advice to Governments and experts can have influence beyond their role on Advisory Committees. The power of some media outlets in influencing government decisions and the important role of Select Committees were referenced as additional positive channels of communication, while multiple layers of Committees between experts and the highest level of decision-making could be a negative.*

*Frustrations of those who have struggled to be heard: The opaqueness of the advisory structure was a shared concern, in particular for small businesses who felt they had innovations to contribute e.g. in therapeutics. But appreciation was expressed for some Parliamentary Select Committees which had taken time to listen and understand the evidence.*

*What can the RSE do?: The RSE is Scotland’s National Academy and its Fellows include academic experts and leaders of industry and from the public sector. More discussion needs to take place within and across these groupings to learn the lessons on how to ensure our governments have access to relevant data, evidence and objective thinking to inform their decision-making in the face of future shocks. There is also a potential role (between shocks) for the RSE in explaining to the policy community and the public the nature of the scientific process and the importance of*

*different perspectives in understanding the opportunities and risks around different solutions.”*

19. The establishment of the SCoPP is an example of a positive step taken by SG towards greater preparedness for future pandemics, although, in my view, the membership should be more inter-disciplinary, inter-sectoral and potentially include experience from a Local Government perspective. In the recommendations from the SSAC report the following was proposed: *“Preparation for future emergencies needs to look beyond viral pandemics (while recognising the importance of the Standing Committee on Pandemics in learning the lessons from the past two years) and be flexible enough to be ready to launch a rapid response to the next shock. Societal changes are happening rapidly in the 21st century and awareness of the context of applying solutions can enhance the effectiveness of their application. Greater integration of the social sciences into planning for future emergencies is essential as is planning for scaling up volunteer activity with clear lines of command and leadership.”* Recommendation 1, page 8 [MG/0003 – INQ000148757]. Social science and behaviour expertise are included on SCoPP. It would be useful to include expert representation on economics and from the business sector in my opinion.
20. The SSAC recommendation of a Standing Committee to enhance preparedness for future emergencies more generally and not only pandemics, is based on recognition that some of the responses required are generic across a range of emergencies. These include access to data, clarity in lines of command, better public understanding of the policy process and better preparedness for dealing with misinformation (the latter is not explored directly by the SSAC but is covered in the RSE report, [MG/0004 – INQ000183389]).
21. In relation to potential reforms to science advisory groups in Scotland the SSAC report suggested, at page 8, *“formalising the network of scientific advisers within the SG and its role in accessing integrated scientific knowledge from outside government. The SG has teams of analysts (economists, social scientists and statisticians) in most if not all Directorates as well as scientists in key marine and agricultural Directorates and there are many more in, e.g., the NHS, in government agencies, in Universities and Further Education Colleges and in the private sector. Links between these scientific communities have been developed and strengthened during COVID-19, but more could be done to map (and strengthen) the ecosystem and hence accelerate the exchange and application of knowledge.”* [MG/0003 – INQ000148757]

22. The current positioning of the CSA in the SG is not as close to the centre of government, as the post was when first created, nor considered as central a role (nor is it resourced at a pro-rata level) as in the UK government. On the plus side, however, the inclusion of the CSAs from the Devolved Administrations in the cadre of CSAs across the UK in weekly meetings chaired by the UK Government's CSA is a positive step. Attempts to link the network of Science Advisory Committees across the UK have been less successful but that may be due to the Chairs of those Committees having full time jobs on top of their SAC chairing roles. Supporting and encouraging networking of science advisory committees across the UK has the potential to be cost-effective in avoiding duplication of effort and effective sharing of knowledge.
23. Without experience of past simulation exercises I am not in a position to say what lessons had been learnt in advance of the pandemic but having seen reports of simulation exercises (provided to me by the SG Covid Inquiries Response Directorate) I would note that the nature of risk between different demographics did not appear to have been recognised to the same extent that risk planning had been considered in Australia, for example. I am not aware of the detail of the epidemiological models which were used in the UK.
24. I do not have sufficient knowledge to comment on prioritisation of infectious diseases within Scotland as that goes beyond both the remit of my role as Chair of SSAC and my professional expertise.
25. Scientists advising governments access international research findings. Further reforms to funding and scientific structures should focus on making the links between the science and policy communities more effective. It is particularly important to ensure that changes in funding mechanisms do not inadvertently put the sustainability of organisations, which effectively bridge the scientific and policy interface, at risk. The key to success is achieving sustainability of the function without supporting any organisation to the extent that staff become complacent. Competition for research funding leads to better quality research.
26. SSAC members frequently raise the issue of potential risks to Scottish research groups as a result of changes in funding mechanisms in UK Research and Innovation (UKRI), since research entities in Scotland are highly dependent on funding from



UKRI. One SSAC member mentioned that the UKRI trend towards larger research programmes runs a risk of smaller research groups being disadvantaged. I don't have evidence on how this might impact on health research in Scotland. However, as part of pandemic risk management it may be worth building on the mapping exercise of key research groups (including universities and research institutes) which is currently being undertaken by GO-Science, to identify which organisations provided critical inputs of scientific advice during the pandemic. The financial sustainability of those organisations could then be monitored against trends in funding (including the eventual outcome of Horizon Europe funding). Action to manage that risk could then be taken to ensure the function is supported rather than the organization *per se*.

27. The Final Report and Recommendations of the *Independent Review of the UK's Research Development and Innovation Organisational Landscape* (published March 2023), provided [MG/0006 – INQ000183391] points out that, for the UK as a whole, funding of Research and Development directly performed by UK government entities in 2019 was only half of the Organisation for Economic Co-operation and Development average. I could not find an equivalent figure for investment by the SG, but few Government Directorates in Scotland have a budget for research funding, except (for historical reasons) agriculture, environment and marine. When I was CSA Environment and Rural Affairs in the SG (until 2011) we did allocate part of our budget to establish Centres of Expertise (CoE) in Climate Change, Water and Animal Health which have brought the science and policy communities in those areas closer together and a further CoE on Plant Health has been established. The Chief Scientist's Office in the SG does have a budget for health research, but to reiterate a point made earlier in this statement, pandemic preparedness should be about more than health research. I am aware, however, that the current Chief Scientist Health is reviewing that area of research funding. That is a separate Directorate from the funding for the other Centres, which is separate again from the funding for the Scottish Funding Council which funds collaboration between universities. This is reflective of the fragmentation of research funding in Scotland and based on exposure to the operation of Go-Science in Whitehall I would favour more centralisation of science within the SG. The aim of this would be to facilitate a more strategic approach to setting the total budget for science within SG to help safeguard funding (particularly in a time of budgetary constraint) for the type of science. As the SSAC *Building on the Science Legacy of Covid-19 in Scotland* (2022) report [MG/0003 – INQ000148757] on the Science Legacy of Covid put it:

*“The science community worked together in unprecedented ways in the pandemic response: There was general agreement that the degree of collaboration between scientists in universities, colleges and research institutes, the NHS, the life sciences industry, government and its agencies made a major contribution to management of the pandemic.”*

28. Finally, I would also like to note that I provided comments for possible inclusion in the Inquiry’s request to the RSE for a witness statement, Reference for Request - (M1/RSE/01).

29. References to exhibits in this statement are in the form [MG/number – INQ000000].

30. I have considered the Module 1 List of Issues dated 4<sup>th</sup> April 2023 and shared with me on 13<sup>th</sup> April 2023. I confirm that I have included all relevant comments in relation to those issues, within the context of the questions asked of me as the Chair of SSAC since 2019 as per the Rule 9 Request issued to me on 27<sup>th</sup> March 2023.

#### **Statement of Truth**

I believe that the facts stated in this witness statement are true. I understand that proceedings may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief of its truth.

**Signed:**

**Personal Data**

**Dated:** \_\_\_\_\_ 05 May 2023 \_\_\_\_\_