

Government Chemist Programme Expert Group Meeting

Tuesday 22 November 2022

Hybrid (BEIS, 1 Victoria Street, London, SW1H 0ET & MS Teams)

Attendees:

<p><u>PEG</u></p> <p>David Franklin John L Collins Diane Turner Chelvi Leonard David Pickering Jonathon Griffin Sophie Rollinson Brenda McRory Paul Berryman (<i>Chair</i>) Declan Naughton Kasia Kazimierczak</p> <p><u>Observers</u></p> <p>Eleanor Smith (Defra)</p>	<p><u>BEIS</u></p> <p>Maria Turner Eli Johnson</p> <p><u>LGC</u></p> <p>Sara Babahami John Black Julian Braybrook Selvarani Elahi Paul Hancock Malcolm Burns Caroline Pritchard Will Webster Kirstin Gray Ian Axford Chris Hopley Heidi Goenaga Infante Tejal Soni-Khamar</p>
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Apologies: Roger Wood (resigned), Keneth Chinyama (resigned), Robbie Beattie (resigned), Lucy Foster and Simon Branch.

1. Minutes/Actions

- 1.1 The GC PEG Chair, welcomed all attendees and reminded all those present of the usual housekeeping rules. They also reminded PEG members to make any necessary declarations of interest in relation to topics discussed.
- 1.2 PEG members were reminded that the main aim of this meeting was to agree on the final list of Capability Building projects that will be included in the next GC Programme. PEG members were thanked for taking the time to review the new proposals.
- 1.3 Minutes from previous meeting (May 2022) were approved with 1 correction. It was agreed that the last sentence from 8.5 be removed which referred raising at Codex level the dichotomous legislation for gene editing and the impact this may have on trade.
- 1.4 All other actions from the previous meeting, were completed and closed.

2. BEIS Update

- 2.1 The BEIS presentation (slides circulated with these minutes) summarised the following:
 - Successful workshop for Chief Scientific Advisers in June; Strengthening existing relationships and creating new ones; New workstreams as a result of feedback on metrology roadmaps and horizon scanning.

- Continuing work on NMS metrics revision; Part A of the project concluding this year, introducing new metrics from 2023; Part B developing challenge-based metrics will start from April 2023

2.2 There were no comments or questions from PEG members on the update.

3. Programme Progress Update

3.1 The GC Programme Manager's presentation (circulated with these minutes) gave an operational update for the GC programme.

3.2 In summary, the GC Programme continues to show good progress towards planned programme delivery levels, with just four of the laboratory-based capability building projects not fully back to planned levels. Referee cases completed over the last six months of the programme and prioritisation thereof has been a major factor in this. Catch up and completion across the programme is still expected by 31 March 2023

3.3 One PEG member asked if it possible to share the results of the titanium dioxide analysis with the FSA which would be useful and informative from a risk assessment perspective.

Action 1: CB9 project team to share results of the titanium dioxide analysis with the FSA.

3.4 A PEG member asked what the budget was for the current GC Programme. The GC Programme Manager replied that the current budget was around £1.1M/year. The PEG member further commented that the GC Programme was underfunded and there are very few programmes that provide confidence in the marketplace to producers and suppliers. BEIS should make the GC Programme a decent amount of money out of the whole NMS Programme.

3.5 One PEG member asked a question on the progress of the cross-Government group on CBD. The Deputy Government Chemist answered that the crucial input was from the Home Office, but we haven't had much of a response from them. The GC is working with the FSA to address the ACMD recommendations.

3.6 A PEG member commented that a number of projects within the current GC Programme are listed in the new Programme and asked if there were going to be any further discussions on the results of the current projects to see how important they are for any ongoing work. The GC Programme Manager replied that in some projects there is a natural end but in others there was some core work that the GC needs to maintain. Based on feedback from the Stakeholder workshop the new GC Programme will be moving into new areas. The Deputy Government Chemist added that there was a balance between maintaining existing capability but also building new capability for any potential referee cases in the future.

3.7 One PEG member asked if there were any areas of concern where an increase in Referee Cases could affect delivery of the remainder of the current GC Programme. The Government Chemist commented that the level of Referee Cases has reduced to low levels currently, but any increase should be manageable and not affect delivery of the remainder the current GC Programme.

- 3.8 A point was raised by one PEG member on the outcomes and impact of the current projects and that as statement around where the GC has now built capability in certain areas and where the gaps in capabilities would be useful in future updates on the current GC Programme.
- 3.9 One PEG member asked a question regarding decisions on whether to publish results of interlaboratory trials or work to standardise the methods used. The Government Chemist gave an example of the CBD work whereby the methods developed are being rolled out into the Public Analyst laboratories and there is then a question of enforcement levels, and therefore where standardised approaches should be used.
- 3.10 One PEG member commented on how involvement there is with industry and the potential for securing industry funding to the GC such as from the Process Packaging Machineries Association (PPMA) and the National Food Crime Unit.

4. Decision Conference – prioritisation of 2023-26 projects

- 4.1 The GC Programme Manager presented an overview of the GC formulation process, from the Stakeholder workshop which identified the priorities for the next GC Programme to address to drafting Project proposals which were scored by PEG members.
- 4.2 The GC Programme Manager highlighted that there has been an equal weighting on most of the proposals however there was a big enough difference between those and the bottom three which would likely stay in that position unless anyone felt strongly enough. It was mentioned that LGC looked at the variability of the scores but there was no significant difference.
- 4.3 PEG members were asked to input into discussion of scoring of proposals, weighting of criteria and ranking of proposals.
- 4.4 One PEG member stated from an FSA angle, there was feedback on specific projects which could be useful input for those projects to get maximum value. **Action 2:** GC staff to engage with the FSA on these projects.
- 4.5 As chair, The GC PEG chair went through the list of proposals from the top scoring down. It was noted that in advancing the capability detection of GMO's, it was not surprising that project CB4 (Enhancing capability for detection and quantitation of GMOs and gene edited ("precision bred") products) was towards the top as its one of the key areas of expertise. It was also noted that CBD is a superb example of how LGC has responded quickly to the market, and it also shows how the project can be rolled out to the enforcement authorities and public analysts. Trace measurements of allergens is also another great example as well as NGS and supportive technologies. It was noted that alternative proteins project is a new project from the stakeholder workshop based on the new interest in the market.
- 4.6 One PEG member highlighted the importance of cross fertilisation of information across all NMS PEGs. They also highlighted the increased number of plant-based proteins being developed and the need of capacity of analysis and also being able to look globally as a lot of plant-based protein is imported but this area is essentially unregulated. The

budget of £300k for CB2 (Analysis of alternative proteins) over 3 years seems inadequate based on the amount of money being spent in this field.

- 4.7 The Government Chemist commented that CB1 (Comparative quantitative review of the sustainability of novel food production methods) was looking at where the priority should sit regarding the ecological/carbon footprint of novel foods and that as there wasn't a lot of information to be lead regulation as in the case of biofuels. A PEG member commented that their score for CB1 was influenced by the fact that there seem to be more vegan options, but it is questionable as to whether there were trace animal products.
- 4.8 The GC PEG chair stated that the measurement of microplastics was a global problem and so the cost of project CB10 (Measurement methods for microplastics in food) seemed low. A PEG member commented that it shouldn't just be microplastics but particles in general, of which an example is particles from tyres. One PEG member commented around whether we have already reached a sufficient capability in this area and already have the methods in place and if so, whether the money could be put into the review of global sustainability. Another PEG member commented that the current methods for microplastics are not fit for purpose and that large scale screening for microplastics had a lot of complexities. They also commented that CB10 was very similar to a project being funded by EURAMET and whether there was any double funding. David also commented around the choice of methods being proposed and whether the project should be looking at mass spectrometry or Raman spectroscopy. The Government Chemist clarified that work elsewhere was looking at deriving capability for more simple matrices. Heidi Goenaga-Infante further commented that the FSA was worried about not having reliable methods in place in the UK to be able to do comprehensive risk assessments and that mass spectrometry was one of a number of technologies included in the proposal.
- 4.9 One PEG member stated that he scored CB10 lower due to the legislative angle. It was difficult to see what the outcome of the project would be and if the GC would be creating a database. Jonathon also commented that there have been a number of requests from trading standards and local authorities on this and the PAs have struggled to find laboratories to carry out the analysis. There was also a question regarding whether the project would cover both drink and food. The Government Chemist clarified that CB10 is moving into foods and therefore more complex matrices. LGC staff commented that the sample preparation is the key focus within CB10. The Government Chemist further commented that the GC would not be looking at creating a database, however, could be more involved in making sure that any databases were robust.
- 4.10 Regarding projects CB1 (Comparative quantitative review of the sustainability of novel food production methods) and CB2 (Analysis of alternative proteins), one PEG member commented that there was a potential overlap as there is a lot of public funded R&D programmes addressing these areas and maybe some mapping was needed at the start of these projects to make sure they were aligned with other activities. Another question was regarding the target audience for the recommendations produced under CB1. Another PEG member mentioned that projects elsewhere shouldn't preclude the fact that it should also be done within the GC Programme and that there aren't the same

levels and depths of quantitative analysis being investigated. The Government Chemist further commented that the GC needs to develop its own capability in this area but would be looking at it from a more quantitative rather than qualitative point of view.

- 4.11 Regarding CB10 (Measurement methods for microplastics in food), one PEG member commented that maybe work with other partners could be done to tackle both complex food and clinical samples to maximise current level of funding. It was suggested that microplastics in complex samples should be put forward as a potential area in the Solutions in Science (SIN) conference in Cardiff in July which they are involved in organising. Another PEG member further commented that microplastics is an important field.
- 4.12 One PEG member raised that he had the most reservations about CB9 (Novel contaminants from recycled and novel food packaging materials) as the FSA and the NRL are already doing work in this area along with a wider community and there was a good opportunity to join up with the wider research landscape. The Government Chemist agreed and stated that an in-house capability is needed by the GC and that the issue of the recycled plastics was something that needed looking into. LGC staff commented that the project rationale was more towards the new generation of materials and contaminants rather than PFOS etc. The current GC project is looking at PET but also the including the problem of contaminants from glue which is used to stick labels onto the recycled plastic bottles. The new project proposes to look at biodegradable plastics such as Polylactic acid and materials that are designed to degrade or compost. You therefore have food contact materials which are essentially designed to break down within a time period. The Deputy Government Chemist commented that the GC would contact FERA and work with them to ensure no duplication. PEG members were happy with their existing scores for CB9.
- 4.13 One PEG member justified the proposal for CB8 (Transportable Mass Spectrometry for food fraud) and stated that it was essential to have new analysis techniques such as transportable mass spectrometry to stop for example, the meat producing industry from adding unknowns into the foods. One PEG member supported CB8, particularly around testing relevant technologies in the field. A PEG member said that it was important to think about the end user needs, who would be using it and what they might be using it for. LGC staff commented that CB8 is building on previous work under the GC Programme and ensuring the technology is robust but also easy to use with minimal training. The technologies need to be quick, cheap but also capable of enabling the end user to make informed decisions.
- 4.14 Regarding CB1 (Comparative quantitative review of the sustainability of novel food production methods), One PEG member supported this project but commented that they thought it was possibly outside the remit of the GC and questioned the role of the GC within this project. One PEG member commented that it enables the GC and NMS to answer questions regarding sustainability.
- 4.15 A PEG member commented that where the legislation and policy is still developing the projects need to keep in step with any regulatory developments. The Government Chemist replied that it was also important for the GC to have the experience so that input can be made into these developments. The Government Chemist also commented that

2 of the bottom 3 projects were surprising as these were based on the priorities identified in the GC Stakeholder workshop. The GC PEG chair agreed this regarding CB11 (Supporting Nutrition Security for One Health) and opened the discussion as to why the bottom two projects, CB11 & CB6 (Improving robustness of isotope ratio data for food origin authentication) were scored in that way.

- 4.16 One PEG member stated that for CB6 (Improving robustness of isotope ratio data for food origin authentication) it should be the role of the food traders to measure the robustness of the isotope ratios and not that of the GC. The Deputy Government Chemist made some general comments as to why the projects were picked. Although it could be seen as outside of the GC remit, it was to introduce some robustness into some of those measurements and address the specific asks of the GC through advisory roles and capability. One PEG member suggested that maybe BEIS could find the costs from within the existing NMS funding for CB11. BEIS noted the PEG member's comments and will see what they could do for subsequent years. One PEG member commented that if CB6 was focused more on meat & fish then it would have been a higher priority. David also commented that they didn't feel qualified to score CB11. Another PEG member mentioned that they scored CB6 higher from the legislative framework point of view.
- 4.17 The GC Programme Manager stated that from a funding point of view, there is some flexibility dependent on the number of referee cases and The GC PEG chair suggested CB11 (Supporting Nutrition Security for One Health) could possibly be funded that way, once the new GC Programme starts. One PEG member commented that joint funding may be an option with some of the new GC projects but will see what their budget next year is.
- 4.18 LGC staff commented on the scoring and thanked the GC PEG on their robustness of responses and cross section of expertise. One PEG member asked if the GC had considered industry funding and it was noted by The Government Chemist that this was an option but that the GC has to be careful from a statutory point of view. The Deputy Government Chemist pointed out that in the case of CBD, a public private partnership funding model was followed, and this model could be continued where appropriate.

5. GC Impact Evaluation

- 5.1 The presentation about Impact evaluation (slides circulated with these minutes) summarised the aims of the project, the impact evaluation work, results & key recommendations.
- 5.2 A PEG member asked whether any survey work has been carried out on exact skills and training and what was lacking. The Deputy Government Chemist highlighted the joint knowledge transfer for standards and safety (in collaboration with Defra, FSA and FSS) and how training needs are looked at over a twelve-month period. LGC staff commented that LGC has another fast-streamer who is looking at counterfactual work as to the benefit of the UK having the GC role verses similar economies.

- 5.3 One PEG member complemented the team on the great work and evidence provided and The GC PEG chair commented that it was reassuring to see positive feedback from the stakeholders.

6. Learnings from GC2023 Referee Cases

- 6.1 The presentation (slides circulated with these minutes) summarised the following: Learning can be broken down into technical capability and capacity, information sharing and awareness of the role and function of the Government Chemist. Referee case analysis continues to resolve disputes in the food and feed sectors outside of the court system.
- 6.2 LGC staff commented that the increase in GMO referee cases was mirrored in the EU. They also commented that the current detection approach does require review and revision. Under the new CB4 project there is an opportunity to participate in an international interlaboratory collaborative trial to assess the robustness and reproducibility of a real-time PCR approach (Taqman) published by the German Federal laboratory.
- 6.3 One PEG member emphasised the work carried out by the GC regarding plastic kitchenware items and pesticides.
- 6.4 A PEG member agreed the role of the GC should be more widely recognised by food business operators and whether Defra could help with this via the newsletter to raise awareness of the role of the GC. **Action 3:** LGC staff to discuss with Defra.
- 6.5 One PEG member commented that their website has a section on the requirements for retesting failed lab samples for food business operators. The service provided by the GC reinforces what the Port Authorities are doing. LGC staff commented that the GC website was targeted at analytical chemists rather than food business operators.
- 6.6 One PEG member commented that the FSA has access to a range of different forums so the GC could come in and give a presentation on the role of the GC. **Action 4:** LGC staff to discuss with FSA.

7. PEG feedback

- 7.1 The GC PEG chair asked PEG members if they wanted a closed session, but the overall consensus was to give their feedback directly.
- 7.2 The GC PEG chair commented that he never ceases to be impressed by the level of detail and skill shown by the GC and is better to things right rather than quickly. Paul also commented that although there still some delays within the current GC Programme, they are well mitigated.
- 7.3 One PEG member commented that he was very impressed with everything they had heard and there was nothing of any concern.
- 7.4 One PEG member commented that they were not a great fan of the ranking system and that there were still no criteria around value for money.

- 7.5 One PEG member commented on the exceptional work of the GC and stated that on the subject of value for money, there is so little money involved in the GC, but so much value coming out.
- 7.6 A PEG member commented that it would be good to see a summary of the outcomes per project, but also what are the learnings, both positive and negative.
- 7.7 One PEG member echoed other PEG member comments, but also highlighted link up with other government departments and industry.
- 7.8 Another PEG member commented that it had been a really interesting meeting and good to see the work the GC is doing.
- 7.9 A PEG member added her thanks for a really interesting meeting and good discussions.
- 7.10 BEIS thanked the PEG for its input and scoring and the discussion. They also added that BEIS would support more collaborative working where they can.
- 7.11 One PEG member commented that they were very happy with the work of LGC. They also commented that they' received training from LGC on cases over the years and if there was any further training on the horizon with things like plastic kitchenware, they'd be very happy.
- 7.12 One PEG member commented on new project CB3 (CBD and controlled cannabinoids for novel foods and animal feed supplements) asking if any work to distinguish cold pressed hemp oil could be built into the proposal. Following discussion with LGC staff, the GC team will consider what could be added. One PEG member's final comment was any outcomes from the project that can feed into the OL's would be hugely beneficial.
- 7.13 One PEG member thanked the GC for its hard work.
- 7.14 A PEG member commented that the list of GC PEG members on the GC website needs updating. **ACTION 5:** GC to update the PEG member section of the GC website.

8. Close

- 8.1 The GC PEG chair thanked PEG members for their contributions.

9. Next meeting

- 9.1 **ACTION 6:** LGC to circulate a Doodle Poll for the Spring 2023 meeting.