

# WhiteOx

Structured Decision Making

## **TB MAC 3 EVALUATION SUMMARY 2020**

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White Ox Evaluation & Review Group

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# EXECUTIVE SUMMARY

## Introduction

1. The TB Modelling and Analysis Consortium (TB MAC) is funded by the Bill & Melinda Gates Foundation ('the Foundation'). Its purpose is to improve the interaction between quantitative researchers, policy makers, TB programmes and donors to improve global TB control. Its secretariat is based at the London School of Hygiene and Tropical Medicine (LSHTM).
2. Phase 1 TB MAC funding covered the initial 18-month development of the network, from June 2012 to November 2013. Phase 2 covered 2014-15 and funding was requested for 2016-2018. However, this start date could not be met so Phase 3 now covers 2017-2019 with a no-cost extension to March 2021. The main objectives are set out in TB MAC's Grant Proposal Narrative and Theory of Change.
3. We delivered a post-hoc evaluation of TB MAC Phase 2 and were then commissioned to deliver an independent, formative, evaluation of the Phase 3 programme and associated 'RFA' sub-grant process.
4. This Evaluation Report Summary covers the whole three-year period 2017-19, with the caveat that the no-cost extension was still running when the data was finalised in March 2020. Separate interim reports published in 2018, 2019 and 2020 between them cover all the key governance and strategy themes in more detail, including the 'RFA' subgrants programme. We have also issued 15 Advice notes in response to requests for input (listed in Appendix A).

## Conclusions

5. In our view, and that of stakeholders we talked to, TB MAC has had a very successful three years. It has largely delivered on what was originally asked of it and core initiatives such as the creation of the MRG, the country-level modelling guidance and catalogue, the RFA programme, and the annual meetings have worked well. TB MAC has also made valuable contributions beyond that originally anticipated e.g. the Road Map Steering Committee, BRR, and responsive work supporting COVID>TB modelling.
6. It is not easy, but real efforts have been made to extend the MRG network to 'non-core' groups and to include NTPs in country modelling initiatives and annual meetings. TB MAC has been very successful at building cross-disciplinary relationships and collaborations.
7. Inevitably however, some initiatives proved less successful and TB MAC has been unable – generally for good reasons - to fulfil some stakeholder asks e.g. on model endorsement (where agreement was reached that it was not practicable). Some, though no doubt useful, did not have enough impact to justify their inclusion, or will only do so as part of further initiatives e.g. some aimed at spreading awareness of potential modelling use more broadly within funder organisations.
8. Nevertheless, prioritisation decisions all seem to have been made in good faith and it is perhaps inevitable that needs and opportunities will change over the investment period. Our only real criticism is that the original mix of projects and deliverables was probably too complex and the rationale behind the groupings was sometimes hard to discern.

9. Stakeholders clearly recognise the value of TB MAC's engagement with economists and TB MAC activities and events have led to useful new partnerships. To maximise the utility of the modelling to decision makers, we believe this should continue. However, the major initiatives in TB economics happen outside TB MAC and those TB MAC deliverables which sought to add direct additional value seem likely to have a relatively low impact.
10. Governance has continued to improve through initiatives such as rotating Committee membership, more robust RFA processes, and a new focus on transparency and COI. We have no significant concerns, though we note interviewees continue to suggest that there should be more NTP representation. Project management now seems relatively stable and effective and our recommendations have recently only been concerned with detailed level improvements.

### **Strategic Recommendations**

11. We have set out below the main recommendations from this summary report. However, our three interim reports also contained a wider range of detailed recommendations so for completeness we have also included them in the recommendations section in the main text.
  - The Theory of Change process has proved very helpful to TB MAC in organising and communicating its activities, outcomes, and anticipated impacts. For the future, more use could perhaps be made of it to develop TB MAC's portfolio of activities in the first place. This would help focus on activities with substantial impact where TB MAC's collaborative working ethos and mechanisms give it a significant advantage.
  - For example, in respect of the economics strand, it would help the Committee decide whether TB MAC should focus on building partnerships and trim these lower impact deliverables or scale up its economics activities to give them strategic significance.
  - The RFA programme seems well run and the projects funded look set to have useful impacts. There were collaborators from LMIC/HBCs in each case but looking to the future, TB MAC may be seeking deeper RFA involvement from teams outside the mainstream international modelling community. If it is, then adjustments would be needed to achieve this aim.
  - We have passed on stakeholders' suggestions regarding TB MAC's potential role in capacity building. We believe the Committee should consider this as a potential new strand of work for 2020 onwards but we remain cautious, because this is an area where people too often assert that there will be significant impact without actually demonstrating it.  
On a related point, TB MAC's wider awareness raising under Outcome 3 is still important, and it arguably needs to reach deeper into Funding/TR organisations than it currently does.
  - The Committee asked us to gather evidence of policy and practice impact as part of our evaluation but it is difficult to measure change, difficult to disentangle different potential influences without detailed study, and the timescales may be much longer than TB MAC's. We subsequently agreed to work only within TB MAC's Ceiling of Accountability.
  - Based on work with The Global Fund to Fight AIDS, Tuberculosis and Malaria in 2015, we did, however, suggest that in future evidence might be found in shifts in the way allocations are justified in funding applicant Concept Notes and we recommended that TB MAC explores this avenue.

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# 1 Introduction

## Background

1. The TB Modelling and Analysis Consortium (TB MAC) is funded by the Bill & Melinda Gates Foundation ('the Foundation'). Its purpose is to improve the interaction between quantitative researchers, policy makers, TB programmes and donors to improve global TB control. Its secretariat is based at the London School of Hygiene and Tropical Medicine (LSHTM).
2. Phase 1 TB MAC funding covered the initial 18-month development of the network, from June 2012 to November 2013. Phase 2 covered 2014-15 and funding was requested for 2016-2018. However, this start date could not be met so Phase 3 now covers 2017-2019 with a no-cost extension to March 2021.
3. The main objectives are set out in TB MAC's Grant Proposal Narrative and Theory of Change.
  - Strengthening networks: improved co-ordination, knowledge sharing and management within the TB community (~17% of the budget).
  - Creating solutions: new high-quality modelling guidelines and resources (~57% of the budget).
  - Empowering decision-makers: better informed TA/decision-making communities and modellers (~15% of the budget).
4. The remaining 11% was allocated to 'governance and evaluation'. Our evaluation fee component is around 1%.

## This Report

5. We delivered a post-hoc evaluation of TB MAC Phase 2 and were then commissioned to deliver an independent, formative, evaluation of the Phase 3 programme and associated 'RFA' sub-grant process.
6. This Evaluation Report Summary covers the whole three-year period 2017-19, with the caveat that the no-cost extension was still running when the data was finalised in March 2020. Information gathered over this period has been updated with additional interviews and observations, plus a review of progress with the PIs and Secretariat.
7. We first review TB MAC's Theory of Change (ToC) as a whole and then comment on each of the immediate ToC objectives in turn and the effectiveness of the Country-level Modelling (CLM) and Modelling Research Group (MRG) strands. The detail of the status of each of the component activities in TB MAC's Results Framework is reviewed in Appendix C.
8. Separate interim reports published in 2018, 2019 and 2020 between them cover all the key governance and strategy themes in more detail, including the 'RFA' subgrants programme. We have also issued 15 Advice notes in response to requests for input (listed in Appendix A).

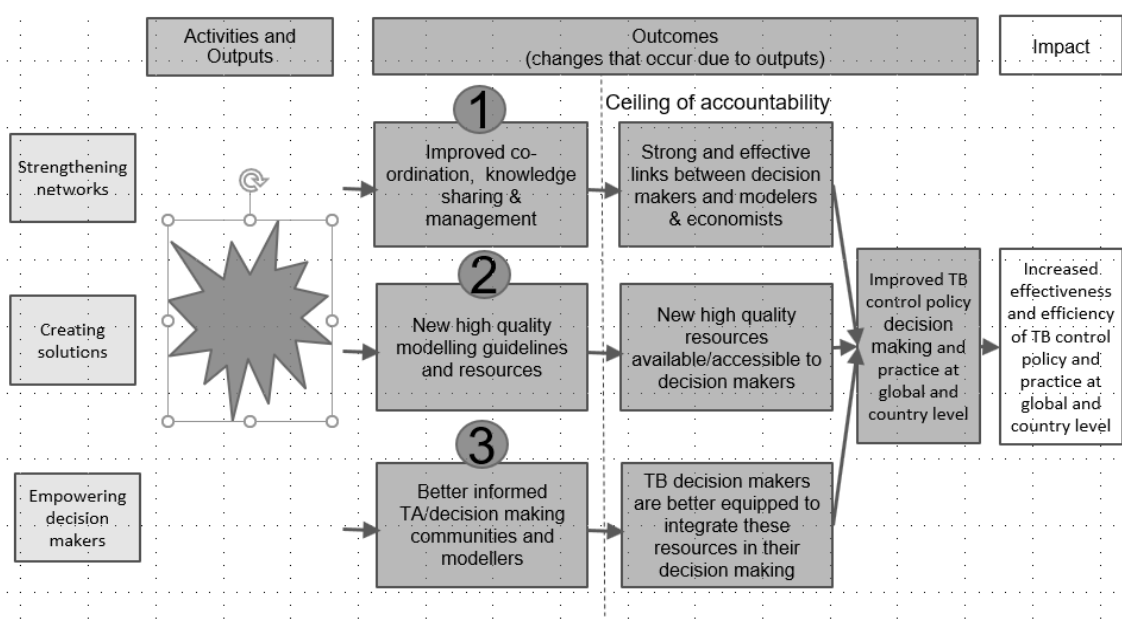
Acknowledgments and Caveats

9. We are grateful for the help of our interviewees, who were unfailingly open and generous with their time. No one refused an interview request. However, the conclusions and comments in this report are ours alone and may not accord with those of any other party. We do not claim to be speaking for everyone and this report needs to be considered alongside team members’ and stakeholders’ direct feedback. All interviews relating to this project evaluation were non-attributable.
10. A draft of this report has been reviewed by project team members for factual accuracy. The strategic implications have been discussed at some length in line with our formative remit and the detailed wording of our conclusions was commented on. However, no changes have been made because of comments relating to our interpretation or judgements on adequacy.

## 2 Theory of Change

ToC Diagram

11. TB MAC’s high-level Theory of Change (ToC) diagram is shown below. It shows the three ‘headline’ outcomes within TB MAC’s control that were agreed with the Foundation, and against which TB MAC’s success can be judged.



12. Additional corresponding desired outcomes above its ceiling of accountability were also agreed and included on the ToC, because without them TB MAC’s objectives would not have the desired impact. However, it was recognising that others had to play their part if they were to be achieved.
  1. Improved coordination, knowledge-sharing, and management are within TB MAC’s ceiling of responsibility and have impact through support of stronger and more effective links between decision makers and modellers / economists.
  2. TB MAC’s outputs include new high-quality modelling guidelines and resources, which have impact through making new high-quality resources available/accessible to decision makers.

3. Better informed Technical Assistance (TA) and decision-making (DM) communities and modellers have impact through decision-makers who are better equipped to integrate these resources in their decision making.
13. In each case, we understand that the decision-makers in question are at both global and country level and the outcomes in combination are designed to improve in turn the effectiveness and efficiency of TB control policy and practice at both global and country level.
14. In practice, there seems to have been a concentration on global stakeholder (funder) decision making. Less has been achieved with initiatives aimed at country-level decision-makers, who we acknowledge are much harder to reach and sustainably engage with, at both the institutional and organisational levels. With hindsight, it may have been better to give each their own outcomes and to make clear which activities most contributed to each – the current ToC does not in our view achieve this.
15. The SC asked us to gather evidence of this policy and practice impact as part of our evaluation, but there are good reasons why TB MAC's ceiling of accountability lies two steps to the left of this impact objective in the ToC. It is difficult to measure change, difficult to disentangle different potential influences without detailed study, and the timescales may be much longer than TB MAC's.
16. We discussed this with our project manager at TB MAC in January 2019 and agreed to limit our evaluation to those matters within TB MAC's Ceiling of Accountability. On the basis of discussions in 2015 with members of the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) Technical Review Panel, we suggested that evidence might be found in shifts in the way allocations are justified in funding applicant Concept Notes but were not in a position to pursue this further.
17. The ToC shows on the left the three main groups of more detailed activities and outcomes that feed into these headline outcomes and – with the addition of governance - define the project reporting framework. Each is discussed in turn below.
  - Strengthening networks
  - Creating Solutions (in five target areas)
  - Empowering decision makers
  - Governance (and project management)
18. They broadly align with the reporting framework and task breakdown, but it is not easy to read from one to the other at a detailed level.
19. Looking at the detail of the ToC (Appendix B), the logic flow is complicated and in places convoluted, and it sometimes looks as if activities have been situated within a ToC framework rather than derived from it. ToCs are potentially also a useful communication tool but our observation is that it has proved difficult to communicate this logic flow, especially when limited to PowerPoint slides, which obviously reduces the ToC's value. Nevertheless, the ToC approach is a clear improvement and we expect that the next iteration will be better balanced and clearer as a result of the experience of using and communicating this one.



### **Alternative Models**

20. TB MAC organises and communicates its activities using the ToC methodology. Another way of thinking about its activities is in terms of the different combinations of roles that it fulfils.
21. The model below was developed initially to help us evaluate TB MAC's effectiveness but proved useful during 2019 when TB MAC was thinking through its future roles and so is included here (unchanged).
22. A focus on community
  - A gathering - builds awareness, capacity, collaborations, best practice, and knowledge e.g. through cross-disciplinary annual meetings.
  - A forum – a forum (social and technical, physical, and online) which sustains the sense of community, shares problems and solutions, new ideas and findings etc.
  - A collaboration – setting up working groups to tackle issues of interest from inside the community or outside stakeholders.
23. A focus on standards
  - A standards body - collaborative development of standards and best practice guidance.
  - A review body – processes and personnel to provide independent review of modelling projects and benchmarking of models.
24. A focus on coordination
  - Active coordinator – seeking to identify overlaps and areas of common interest and taking a more involved interest in coordination alongside modellers and wider stakeholders
  - Notice board – a more passive role, focused on disseminating information provided by others and thereby facilitating their ability to coordinate.
25. A focus on delivering projects
  - Think Tank – structured process whereby the community (with stakeholder input) identifies priority areas and runs an RFA process for projects to kick-start new work and collaborations.
  - Market – this was not implemented but was conceived of as a marketplace that connects those needing modelling and those offering it, helps package tasks but largely remaining neutral. Members free to bid.
  - Consortium – a potential mechanism whereby TB MAC would have a framework contract to deliver ad-hoc, small-medium size modelling tasks quickly through 'mini-tenders' based on agreed framework rates. This was not implemented and there would be governance challenges.
26. A focus on data
  - Data Bank – facilitating or contributing to (if not managing directly) data repositories.

## 27. A focus on policy

- Policy forum - provides a forum and awareness building to enable policy makers/funders and modellers to raise mutual awareness of priorities and capabilities, needs and opportunities.
- Evidence champions - concentrating on providing guidance and advocacy to encourage and strengthen evidence-informed policy, including more rigour in Concept Notes etc. and in-country policies/strategies.

## 28. A focus on LMIC/HBCs

- Capacity-building – engaging with HBC modellers and NTPs, raising awareness, mentoring and support, technical training, forums for mutual sharing and support.
- Guidance - sharing and promoting good practice in in-country use of modelling.

### 3 Strengthening Networks

29. The outcome sought was ‘improved coordination, knowledge sharing, and (knowledge?) management’. In the 2016 Proposal and Budget Narrative (the Grant Proposal), the outputs delivering this were as follows. Contributing activities and their status are listed and discussed in Appendix C.

- Developing a mechanism for identifying and prioritising stakeholder needs for modelling work and facilitating responses.
- Improving communication within the modelling community.

30. The ‘above ceiling of accountability’ outcome was ‘strong links between decision-makers and modellers’. Whilst the activities under this results framework heading contribute, on the basis of interview responses the biggest impact has come from setting up the MRG and TB MAC’s annual meeting under Outcome 2.

#### **Stakeholder Needs**

31. Key aims included better linkage between TB MAC and the WHO Global Task Force on TB Impact Measurement (‘WHO Task Force’) and setting up a mechanism that allowed modelling teams to submit proposals to meet Task Force ‘asks’.
32. WHO Task Force members have strategic influence over TB MAC’s programme through the AP and WHO is represented on the SC. This aim has therefore been met. The Task Force is, however, not generating ‘asks’ as such and TB MAC is not in practice operating as a clearing house in the way originally contemplated. This is not TB MAC’s responsibility though, and it remains willing to work this way if funders wish to use it, so the aim has been superseded.

#### **Roadmap Steering Committee**

33. Following a high-level meeting between TB funders and stakeholders, a shared vision for how TB modelling could best support country-level TB decision-making was developed, with a ‘roadmap’ of activities required to support it. This was taken forward by a TB Modelling Roadmap Steering Committee (RSC) which comprises the Foundation, WHO, GFATM, USAID and World Bank, plus WHO. Its vision was for priority countries to have applied TB models and other decision tools to increase the efficiency, effectiveness, and resourcing of their TB response by 2020.

34. A key mechanism adopted was for funders and TAs to coordinate and share experiences of applying models to answer country policy questions. The RSC tasked TB MAC with facilitating the gathering of information on activities undertaken, to inform the RSC and help identify where gaps remain. An output is a country-level prioritised summary of the status of key CLM projects. This was not in the original grant application, but progress is now reported to the Foundation under Outcome 1.1.6.
35. The feedback we received from funders was that TB MAC has done useful work for the RSC which met their needs and that subsequent analysis has revealed overlaps which some of them were unaware of (e.g. in Indonesia and Mozambique), thereby facilitating a more coordinated approach.
36. The RSC has also identified a broader set of enabling resources and capabilities needed to deliver its vision, including closing data gaps, model development and associated guidance, and building 'international' and 'in-country' capacity. The RSC therefore now appears to have taken on some of the role of collating and agreeing strategic 'asks' the WHO Task Force was originally expected to fulfil.
37. RSC members coordinate their grant programmes between themselves to fill gaps but TB MAC provides the Secretariat and a TB MAC PI participates, so TB MAC is in a potentially influential position and an obvious route through which the RSC can address some of the missing enablers, particularly those requiring a cross-community or cross-disciplinary effort. The first of these has been the 'benchmark, report and review' (BBR) initiative discussed in a later section. Although it came after we first drafted this report, we are also aware that TB MAC has been very responsive in helping coordinate work supporting COVID>TB modelling.
38. It has been suggested to us that the roadmap collaboration is one of the most influential outcomes from TB MAC Phase 3 and has contributed significantly to funders' understanding of the best way to use modelling in support of policy decisions. This may be true, but our impression is that members of the RSC are generally from strategy teams and already have a good understanding, whereas members of country-facing teams might not be so engaged in the process and might not be picking up on the learning. TB MAC's wider awareness raising under Outcome 3 is therefore still important, and it arguably needs to reach deeper into these organisations than it currently does.

### **Web Site and Newsletter**

39. The other activities against this outcome were mainly intended to improve communication and networking within the modelling community and to provide them with useful information through the TB MAC website and ~bi-monthly newsletters. All are essentially complete, though some, such as the new policy making / modelling booklet, may not have much enduring impact except in the context of other initiatives such as training courses.
40. The TB MAC website has been completely rebuilt. We have provided feedback on specific features and content at intervals throughout the grant period which we will not repeat here, but in general our view is that it is very much improved in functionality and appearance. In fact, consistent and clear branding has now been implemented across the main TB MAC publications as well as the website and is a big improvement on the Phase 2 equivalent.
41. We looked at preliminary webpage usage and download data in early 2018 and had some discussions with the Secretariat about making more use of it. The data was, however not very helpful at that stage. The country with the highest usage was Ukraine. We also have limited data for 2019 but not a full analysis. Website usage data was reported occasionally to the Committee, but we did not see any evidence that TB MAC was making any significant use of it to optimise the website or judge its impact.

42. We also carried out and shared with the Secretariat a detailed analysis of mailing list data. TB MAC uses the Mailchimp system, which provides a rating for each recipient from 1 to 5 stars based on how active they are. About 25% rated 3 or 4 stars and 25% the top 5 stars. Based on our 2018 analysis, we believe around 70% came from four countries: USA, UK, South Africa, and Switzerland.

#### Engagement Metric

In 2017, the newsletter went to about 400 recipients. By October 2019, this had increased over 35% to about 550, 25% in the top engagement bracket.

#### Conclusion

43. Significant changes to the work programme have been agreed with the Foundation against this outcome including support for the Road Map initiative but we are still satisfied that all the results expected will be delivered by the end of the investment period (as extended).

## **4 Creating Solutions / MRG & Annual Meeting**

44. The 'above ceiling of accountability' outcome sought was 'new high-quality resources available/accessible to decision makers'.
45. There are over 25 results in the Results Framework associated with this outcome, of widely varying character and significance, so - accepting there are synergies - for convenience we have split them into five: the MRG and the annual meeting (this section); modelling gaps; guidance gaps (e.g. CLM guidance); economics; and capacity building.
46. We have covered the set-up of the MRG and the detail of its engagement and annual meetings in previous evaluation reports. We have therefore only included summary comments below. Contributing activities and their status are listed and discussed in Appendix C.

#### Modelling Research Group

47. Having two strands within TB MAC under separate leadership in line with learning from the last phase of TB MAC was intended to give more focus to key activities, share the workload, and improve perceptions and realities of independence. It had practical benefits in terms of driving forward key activities such as the RFA programme on the MRG side and the Guidance and Catalogue on the CLM/WHO side. The TB MAC Committee made the decisions on MRG priorities whereas the CLM work was designed to support WHO and was therefore more directed.
48. Our view, and the unanimous view of interviewees who commented, is that the MRG has met its aims and that the split annual meeting format has (as discussed below) also worked well. All of the main modelling teams now feel engaged – though some may start from a more sceptical position than others - and interviewees complimented TB MAC on bringing less well-connected groups and collaborators from different disciplines into the network and annual meeting. Although not explicit in the ToC or Results Framework, the MRG committed to expanding TB MAC's existing network to modelling teams previously not engaged, including from Low- and Middle-Income (LMIC) or High-Burden Countries (HBC), and more cost modellers, economists and field researchers.

#### Engagement Metric

At the date of this report, the TB MAC website includes contact details for ~30 modelling groups.

### **Annual Meeting Location**

49. Four annual meetings were to have been held within this investment period (as extended) but the 2020 Singapore meeting has been cancelled due to the Corona virus outbreak. In our 2017 report, we urged the SC to consider meeting locations outside the normal Western Europe/Eastern USA regions, so we welcomed the Istanbul and Singapore venues.
- 2017, Glion in Switzerland
  - 2018, Washington in the USA
  - 2019, Istanbul in Turkey
  - 2020, Singapore
50. Overall, our impression was that these were strong events. A broad range of people participated, and the format encouraged mixing.
51. Across both strands, the presentations were almost all interesting, varied and well delivered. Inevitably timings did not always work out, but the sessions were well-chaired and conference and domestic organisation was consistently good. Everyone we spoke to at all three meetings was very positive and would try to come again next year if invited.
52. It may have disappointed some who wanted to come for the whole event but splitting a four-day workshop between MRG and CLM/WHO strands whilst allowing a small core to stay for both worked well in our opinion, and interviewees generally agreed.
53. It was quite hard work for those who stayed for the whole week and there were times when the meetings maybe needed more discussion time but several of our interviewees commented on how well the agenda blended presentations and thinking time, with cross-disciplinary breakout groups to prioritise issues and consider ways forward. Including a fifth day in 2018 with yet another set of participants seemed very useful to participants but was perhaps too ambitious.
54. We were told of several collaborations originating at the meeting between people who had not worked together before e.g. between modellers and researchers, both for RFA proposals and on other projects (see Section 5 below).

### **Annual Meeting Participation**

55. The procedure for selecting and inviting people to the AGM is detailed in the MRG Terms of Reference. We think it is reasonable and audited compliance in 2017.
56. A target of 50-60 seems to us about right, small enough that everyone has a chance to participate and get to know each other but large enough that TB MAC can achieve critical mass from the different disciplines. It allows TB MAC to progressively increase the number from different backgrounds and LMIC/HBCs without over-diluting its 'core constituency'. We believe the inclusion of at least one activist every year is important and helps keep the reality of the disease in focus.
57. Funders (Global Fund, BMGF) and TAs (WHO) have been represented and made significant contributions and participants valued the opportunity to hear their views and network, especially during the CLM/WHO sessions. The World Bank has proved harder to engage until recently but now appears to be very involved and supportive. Hopefully, strong representation from funders and TAs will continue in the future.

58. TB MAC seemed less successful in involving country-level decision-makers and the need for national TB programmes (NTPs) or equivalent participation was mentioned by several of our interviewees. The MRG has put initiatives in place to broaden its engagement with modellers outside the usual counties but something more targeted will be needed to boost representation from NTPs. They are important - particular for the CLM/WHO sessions – but we recognise the challenges; relevant NTPs were invited every year but very few (e.g. Vietnam) actually came.

#### Engagement Metric

By our estimate, HBC participation in annual meetings increased from around 4% to 12%. UK+US participation averaged 55%.

#### Remote Access

59. Remote participants miss out on many of the benefits the meeting promotes such as building new and cross-disciplinary relationships and presumably remote participants are not present for as many sessions. However, it is an important option which allows busy people to present or participate in sessions of particular interest. It also offers a wider opportunity to engage people who are less familiar with TB MAC, may be facing financial or visa constraints, or could not be accommodated.
60. The technology has improved over the last three years and session chairs now have more experience of managing meetings with remote participants and we see it as increasingly important in the future. This is of course particularly relevant for 2020, when we understand that because of COVID restrictions the annual meeting will be replaced by shorter remote-only events for particular audiences and purposes.

#### Conclusion

61. We are satisfied that all the results expected will be delivered by the end of the investment period (as extended). The MRG and CLM/WHO Task Force guided twin track approach and the annual meetings have been a notable success, and the website and the information for modellers on it are a big improvement.

## **5 Creating Solutions / Modelling and Data Gaps**

### RFA Projects

62. Our 2020 RFA commentary report included a detailed review of the 'Request for Applications' (RFA) process and project outcomes so this is a summary section only.

### RFAs Awarded

63. RFAs contributed to Outcome 2 by filling global TB modelling and data gaps and by contributing to the production of modellers with capacity/incentives to create TB models (see Section 8). RFAs could be released to fund literature reviews, model building, and grant application writing to fill the most critical gaps, though in practice model-building and data collection have been the focus.

64. Two grants of ~\$50k have been awarded each year, six in this investment period. These are relatively small grants, but our perception is that they are producing useful outputs in their own right, and all the ones we looked in detail gained leverage by either enabling subsequent projects (perhaps as a pilot), making use of separately funded researchers, and/or attracting additional resources into the project. The three MRG annual meeting themes relevant to RFAs (and the RFA themes subsequently agreed) are as follows.
- 2017, Glion - Modelling TB case detection: challenges and ways forward (Modelling the epidemiology and/or economics of TB case detection). There were 8 proposals in 2017. The winners were led by Imperial College and Liverpool School of Tropical Medicine (UK).
  - 2018, Washington - Key considerations for modelling of TB prevention (Modelling the epidemiology and/or economics of TB prevention). There were 14 proposals in 2018. The winners were led by University of Cape Town (South Africa) and Harvard (USA).
  - 2019, Istanbul - Modelling the interplay of TB with universal health care (Modelling the epidemiology and/or economics of TB and primary care/universal health coverage). There were 8 proposals in 2019. The winners were led by KNCV (Netherlands) and CEPESC-UIER (Brazil).

#### Commentary

65. The RFA process was already quite well developed by 2017 but it is now more rigorous and transparent with better defences against conflict of interest. We believe that the procedures and governance are sufficiently robust to continue into the next TB MAC phase.
66. The way in which themes are chosen seems to work well. It comes up with themes that enjoy stakeholder support and the MRG sessions in the TB MAC annual meetings are rated highly by participants. Many more proposals are received than can be funded. Proposals are reported to be almost all of a high standard and often including new collaborations.
67. The awards process seems robust and fair and is generally respected by stakeholders. We have interviewed unsuccessful as well as successful proposal teams over the three years but have received no significant complaints about it. The projects selected are highly rated in terms of value and relevance and supported by those we interviewed, though we are not in a position to judge their technical quality.
68. There were collaborators from the LMIC/HBCs in each case and, for 2019, LMIC/HBC project leadership. However, looking to the future, TB MAC may be seeking deeper RFA involvement from teams outside the mainstream international modelling community. If it is, then adjustments would be needed to achieve this aim, perhaps additional scoring criteria could be added or funds set aside (with a quality threshold) for their proposals, because such proposals might not have the highest direct impact e.g. because they are less likely to be able to leverage additional resources.
69. We reviewed RFA project management and concluded that it is more rigorous than previously, though it could still be strengthened further. The target 12 months from award to completion has proved too ambitious and has not yet been met; perhaps it never can be. The time taken to agree contracts still seemed an issue for some, but probably little further improvement can be achieved.

### **Evidence to Impact**

70. A series of sub-tasks were defined to develop a structured database collating the evidence (published and unpublished) for direct epidemiology impact for interventions. The idea is to improve the quality of evidence for country level resource allocation. This increased in scope to capture whether empirical evaluations of Tuberculosis interventions were including estimates of the resources required.
71. Active Case Finding was used as the first case study. The conclusions were that existing evaluations do contain useful information for resource allocation decision-making at country level but are likely to underestimate resource needs. More reporting and work to identify resource needs is needed in other areas of TB care and prevention.
72. This was not been marked off as complete on the results framework because the results had not been submitted for publication, but we understand it has now been done.

### **Conclusion**

73. We are satisfied that all the results expected will be delivered by the end of the investment period (as extended). Most final deliverables have yet to be disseminated so it is hard to come to an overall judgment, but our provisional view is that TB MAC's overall RFA model is sustainable and effective and is fulfilling its purpose.

## **6 Creating Solutions / Guidance Gaps**

74. These outputs focussed on improving the quality of modelling and its take-up within policy space through provision of guidance and associated quality improvement initiatives. Contributing activities and their status are listed and discussed in Appendix C.

### **Country-level Modelling Guidance**

75. TB MAC's Guidance for Country-level TB Modelling was developed with input from a wide range of modelling stakeholders and endorsed by the WHO Task Force in 2018. It sets out 10 principles and good practices for country-level TB modelling (relevance; realism; appropriateness of model structure; consideration of all evidence; validation; informativeness; transparency; timeliness; country ownership; and iteration). We reviewed the detail in our 2018 Interim Report, but the wider context is still very relevant and some key drivers for its production remain unresolved, so we have revisited them here.

### **Context**

76. The funders' challenge is that – put simply - different models continue to deliver different answers to the same question. TB MAC has previously coordinated a multi-model exercise to explore if and how proposed post-2015 Global TB Targets might be reached and there were substantial differences between results. This may be because of genuine uncertainty in e.g. TB natural history or model artifact. The former should be highlighted, the latter should be minimised. Furthermore, demonstrating that the predicted impacts are in reality achieved after implementation is difficult for many reasons, including because what was proposed may not actually have been implemented.



77. An obvious response is to ask whether some models are inherently better at prediction (validation) and/or some teams are better at using them to generate real world predictions (perhaps closer to verification). Funders have asked whether TB MAC could apply its collective expertise to endorse specific models (and by implication teams). Funders could then in turn, for instance, advise countries which are being asked to support their funding requests with modelling results.
78. However, we understand that TB MAC's position is that (a) it is not sensible to validate and endorse a particular model, because models may be suitable for one question and context, but unsuitable for another question and context, (b) there is considerable real uncertainty as to which model structure is 'best', and (c) it would be destructive to TB MAC's aim to support and foster collaboration between modelling teams if it were placed in the position of deciding between members' models.
79. Funders presumably still have the option of asking a third party to do this, but TB MAC proposed an alternative approach, which was to improve the use of data and application of models through continuous feedback over time. This was subsequently agreed to by all stakeholders and the outcome was the Guidance for Country-level TB Modelling and subsequently TB MAC's development and piloting of the Benchmark, Report and Review (BRR) methodology.

### Guidance

80. Gaining the support of such a wide range of stakeholders and building consensus on the purpose and contents of the guidance were major achievements. The consultation was extensive, including with attendees of the May 2018 WHO Taskforce meeting. We have interviewed members of all the main modelling teams and everyone we asked was happy with the collaborative approach taken by the working group.
81. The Guidance seems to us to be well-designed for its role and stakeholders tell us that over time it should have a significant impact. Whether it has its impact through active use is, however, not yet clear. Those who contributed might not need it, and there is a risk that those who need it in future might not know of it, or it may be at too high a level.
82. Irrespective of its future value though, the process will certainly have improved shared understanding and raised awareness within the modelling and wider stakeholder community of some key issues. It has played a significant role in engaging modelling teams with TB MAC and with each other, and in generally strengthening the community. It has probably been worthwhile for this latter reason alone.

### Engagement Metrics

Participation in Guidance development: over 50 acknowledged. Guidance downloads in 2019: 39 (4 from HBCs). The Guidance was also posted/emailed to all stakeholders and modelling groups.

### Benchmark, Report and Review

83. The BRR project aims to collaboratively create and then pilot benchmarks, standards of reporting and a mechanism for external review of TB modelling applications. It is funded by agreement with the Foundation from money remaining unspent in the previous investment period. It is supervised by the RSC and TB MAC's BRR lead reports on progress at RSC meetings.
84. It is too early for us to come to a definitive view, but based on our observations, the presentations at the 2019 annual meetings, and interviewees with PIs with experience of it, the process and materials are being developed in a collaborative way and good progress is being made. Those we spoke to seem supportive, speak highly of their interactions with project team, and have found it useful.

85. It has only been possible to trial it in a limited way so far (because there have been relatively few studies) but it seems likely that the team will be seeking to streamline the process without losing too much rigour. To be sustainable, it must not be too much of a burden on the modelling teams or delay their projects by too long.
86. There also needs to be a long-term pool of experienced reviewers, willing and able to do what is needed on the right timescales, and with a reputation for integrity. This appears to us to be a potential constraint, and we are also not clear that funders are yet strongly or widely enough committed to making engagement with the BRR process a condition of their grants.

### **Conclusion**

87. We are satisfied that all the results expected will be delivered by the end of the investment period (as extended). There is still a gap between funders' aims on model 'certification' and what TB MAC thinks appropriate, but a good compromise seems to have been reached regarding TB MAC's ability to contribute. The Guidance and BRR outputs to date have been useful.

## **7 Creating Solutions / Economics**

88. The economics strand of the MRG programme includes four main deliverables, covering TB MAC-specific actions and also external links. Key people responsible for delivering these TB MAC actions are also core members of other initiatives including the Global Health Cost Consortium (GHCC) and its Unit Cost Study Repository (UCSR), also funded by the Foundation. Contributing activities and their status are listed and discussed in Appendix C.
89. Many TB MAC activities have an economics dimension to them and those in the Results Framework under this heading are only a subset. The annual meetings have a strong economics theme. For instance, the 2018 annual meeting shared the results of GHCC work so far and feedback was provided from the joint TB MAC / CMMID March 2018 London Workshop jointly organised by TB MAC and LSHTM. The 2019 meeting included sessions on universal health care (UHC) and health care funding.
90. The progress TB MAC has made in bringing epidemiological and economic modellers, health economists and field researchers together over the last two years was remarked on by almost all our interviewees. Stakeholders clearly recognise the value of TB MAC's engagement with economists, and TB MAC activities and events have led to useful new partnerships between economic and epidemiological modellers. To maximise the utility of the modelling to decision makers, we believe this should continue.
91. Economic and costing issues are clearly high priorities, but the major initiatives seem to happen outside TB MAC. Some deliverables in the current programme which seek to add direct additional value seem likely to have a relatively low impact. The current actions need to be closed off but, more significantly, thought needs to be given as to how the economic modelling strand is addressed in the grant renewal application and how TB MAC can best contribute.
92. In our view, TB MAC has the most impact when playing to its strengths and doing those things that only it can do, typically bring a wide range of stakeholders together to forge a consensus on best practice or collaborate on resources for the common good. There seems to be less of an argument for including activities that – though useful – could be delivered by an individual team or researcher. Arguably, the numerous smaller activities and deliverables in the Results Framework risk being a distraction from the core tasks.

93. If the future emphasis in this area is on bringing together different modelling communities and their stakeholders, then the annual meeting and RFA programme will be the focus and lower impact deliverables should be trimmed. If on the other hand driving specific work programmes forward is seen as a core TB MAC programme element, then it must have real impact within the Theory of Change framework and key individuals must be sure they will have enough time to deliver it. Recent changes to roles in this area may help.

### **Conclusion**

94. We are satisfied that all the results expected will be delivered by the end of the investment period (as extended). However, we believe more thought needs to be given to the role TB MAC should play in this area.

## **8 Creating Solutions / Capacity Building**

95. The TB MAC ToC shows how interim outputs of a system of incentives to facilitate training and engagement of modellers and the provision of training and materials contribute to Output 2, 'new modelling guidelines and resources'. Contributing activities and their status are listed and discussed in Appendix C.

### **Routes to impact**

96. We find this part of the ToC less convincing because it is not broken out enough in terms of target audience or routes for influence. The impression is of useful activities situated within a ToC framework rather than a set of activities derived from an analysis of outcomes and impact routes.
97. Increasing the level of resource / capacity within a wider range of academic teams relies on different routes for influence and different indicators of impact compared to, for instance, capacity building intended to build modelling capability in HBCs or National TB Programmes' (NTP) ability to act as an 'intelligent customer' for modelling work in support of policy choice and concept notes.
98. It is hard to argue against capacity building being a good thing but there are some significant open questions, such as whether increasing individual capability translates to sustained organisational capacity, or whether organisational capacity needs to be targeted directly – in which case, other factors come into play, such as leadership and mentoring, continuity in professional teams, on the job training, and learning from shared experiences.
99. This is not the place for an extended discussion, but we raise these points because it is not yet apparent that TB MAC and/ its stakeholders have arrived at a convincing model of cause and effect or identified effective indicators of impacts as opposed to inputs.
100. Setting aside consideration of whether the mix of activities is optimal or optimally represented in the ToC, our view, and that of our interviewees is that TB MAC's capacity building activities have been useful. Some targeted capacity explicitly (e.g. the annual Union Meeting modelling course and online version) whereas others did it implicitly (HBC representatives at the annual meeting, in RFA projects, or engagement in developing guidelines).

101. The modelling course in particular seems to be highly regarded and cost-effectively. The indicators available are the number of participants and end-of-course feedback (Kirkpatrick Level 1). It would be interesting for TB MAC to follow up and see how behaviours had changed and what roles its alumni are now playing and what impact the course has had (Levels 3 and 4). Promotion is now required so that modellers start to use the online resources and more generally to drive website traffic.

#### Engagement Metric

Course participation lists are generated by the Union, but we have access to the 2019 course data: 19 people participated from 12 countries (6 being HBCs).

#### Conclusion

102. We have questioned some aspects of TB MAC's capacity building activities but we are satisfied that they have added value and that all the results expected will be delivered by the end of the investment period (as extended).

## 9 Empowering Decision-Makers

103. The TB MAC ToC make clear that the focus for this group of activities was to improve mutual understanding of TA/ decision makers and modellers from different disciplines, with particular reference to LMIS/HBCs.

- TA/ decision makers who were better informed about the potential contribution modellers could make and how best to realise those benefits.
- Modellers who understood the TA/decision makers' priorities and constraints and how best to reach and work with them.

104. Presumably the aim was to broaden the community of people with a useful awareness and to increase key individuals' understanding. Different activities support these two aims to different degrees. Contributing activities and their status are listed and discussed in Appendix C.

105. There are obviously overlaps here with Outcome 1 (e.g. networking and annual meetings) and Outcome 2 (e.g. capacity building) and our impression is that this part of the ToC is not as well focused or as coherent as it is in other areas. Significant impacts on awareness beyond those who already interact regularly with TB MAC have not really been demonstrated yet. Again, the impression is therefore of potentially useful activities situated within a ToC framework rather than a set of activities derived from an analysis of outcomes and impact routes.

106. The policy making / modelling booklet produced under 1.1.13 contributes towards this outcome. It seems a high-quality publication and was well received by those we talked to. TB MAC will now have to make proactive use of it for there to be an impact.

107. The newsletters have been significant in strengthening and informing the modelling community, but our detailed 2018 analysis showed very low LMIC/HBC reach and engagement, which is why we discussed them under Outcome 1.

**Engagement Metric**

In the latest data provided to us, there were recipients in 54 countries. The following counties had 10 or more newsletter recipients.

USA - 169	UK – 81	South Africa – 37	Switzerland – 30
India – 20	Australia – 20	Netherlands – 19	France – 10

108. We have not looked in any detail at TB MAC's use of social media because this has been fairly limited. We are aware there is a twitter feed, which had 577 followers when last checked in July 2020. The Secretariat posts around 25 tweets a year, typically linked to the main conferences or job vacancies. This relatively low social media profile may need to change if TB MAC's grant is renewed and greater use might be made, for instance, of media channels like YouTube.

**Engagement Metric**

Twitter feed followers: 577

109. The aims of the 'modelling ambassadors' initiative were worthy ones, including:

- To broaden the range of contacts between modelers, funders, and policy makers.
- To build mutual understanding between the two constituencies and appreciation of each other's needs and offerings.

110. An additional benefit would, we presume, be to militate against the perception that TB MAC's 'inner circle' would (without deliberate intent) have too much of a privileged position in respect of access to funders and funding.

111. However, it has not proved practical to organise the initiative as a structured process and it has been superseded by other activities and less structured approaches. We have explored this in some detail with the PIs and accept that this is the case.

112. 'Share modelling expertise with TAs' is now part of 1.1.6 on the Results Framework, which is the TB MAC's input to the Road Map Steering Committee. TA / decision maker training – which we assume had a broader original scope - has been folded into BRR training. These changes may be pragmatic and provide closure for Results Framework purposes but it is not obvious that they actually meet the original aims, so again we have explored them in some detail with the PIs and accept the logic for the changes.

**Conclusion**

113. Overall, it seems to us that that TB MAC and the global TA / decision maker community have not prioritised this particular outcome or found a way within this grant period to address it effectively, especially in the LMIC/HBC TA/decision maker context. If it is to be taken up again for the next funding round, greater focus is required.

## 10 Governance and Project Management

114. Objective 4 covered process and governance improvements to facilitate the three 'operational' outcomes. Contributing activities and their status are listed and discussed in Appendix C.
115. We have paid attention to governance and project management issues throughout this investment period, following up particularly on issues identified by stakeholders in our evaluations of previous TB MAC phases and the RFA process.
116. There has been more turnover in Secretariat staff over this investment period, but we have no observations to make regarding administration. Project management is generally good. RFA project oversight is improved, though we had some minor suggestions in our RFA Commentary for the Committee to consider. A variety of useful improvements were delivered, including consolidating procedures into a volume of Standard Operating Procedures for download from the website.
117. We include a short update on Conflicts of Interest (COI) below, but our annual interim reports and shorter advice notes contained detailed commentary and recommendations on the others, so we have not repeated it here. The advice notes covered:
- Organisation of the annual meeting
  - MRG participation and reach
  - RFA Process & Awards
  - Steering Committee Membership
  - Advisory Panel role and Membership
  - Conflicts of Interest
  - Influence of the funder

### **Conflicts of Interest**

118. At the start of this investment period, the potential for conflicts of interest was by far the most commonly raised potential problem during our 'baseline' interviews. We agreed that there was at least one significant potential COI. However, changes to representation, rotating Committee membership, and increased transparency seem to have alleviated most concerns and people now have experience of TB MAC's collaborative approach. However, the potential still exists and so we contributed to a review of COI management in Spring 2018 by the Committee and Advisory Panel.
119. As a result, all members of TB MAC's Advisory Panel, Committee, Secretariat and Staff members were requested through the Secretariat to complete a COI form in respect of themselves, their spouses, and any dependent children. A copy of the completed form is sent to us and to the Secretariat, who prepare a summary to be placed on the TB MAC website. We review the compatibility of any interest declared by a TB MAC member. If there were potential issues arising, we would provide a summary to the Secretariat for discussion by the Advisory Panel and Committee.
120. To date, we have not deemed any declared COI significant enough to raise with the Secretariat. This system works but if TB MAC's grant is renewed it could perhaps be modified to make it a simpler and easier to apply consistently. COI forms probably do not need to be posted on the website, something which may work against full disclosure within TB MAC. A very few COI declarations are still outstanding.

121. The RFA process was already quite well developed by 2017 but it is now more rigorous and transparent with better defences against Col. Potential COIs continue to be managed through e.g. selection of RFA reviewers or recusing from decisions, and they are declared in meetings where relevant. Our impression is that those involved take this very seriously and we believe that the procedures and governance are sufficiently robust to continue into the next TB MAC phase.
122. It also seems to us that, whether through changed representation or conscious change to process, there is now greater distance between internal decision making and the funder but without sacrificing regular contact. We will continue to monitor how this works in practice.

### **Conclusion**

123. Governance and project management now seems relatively stable and effective and, although there is probably still some room for improvement and perhaps some further simplification, we have no significant concerns.

## **11 Conclusions and Recommendations**

### **Conclusions**

124. In our view, and that of stakeholders we talked to, TB MAC has had a very successful three years. It has largely delivered on what was originally asked of it and core initiatives such as the creation of the MRG, the country-level modelling guidance and catalogue, the RFA programme, and the annual meetings have worked well. TB MAC has also made valuable contributions beyond that originally anticipated e.g. the Road Map Steering Committee, BRR and responsive work supporting COVID>TB modelling.
125. It is not easy, but real efforts have been made to extend the MRG network to 'non-core' groups and to include NTPs in country modelling initiatives and annual meetings. TB MAC has been very successful at building cross-disciplinary relationships and collaborations.
126. Inevitably however, some initiatives proved less successful and TB MAC has been unable – generally for good reasons - to fulfil some stakeholder asks e.g. on model endorsement (where agreement was reached that it was not practicable). Some, though no doubt useful, did not have enough impact to justify their inclusion, or will only do so as part of further initiatives e.g. some aimed at spreading awareness of potential modelling use more broadly within funder organisations.
127. Nevertheless, prioritisation decisions all seem to have been made in good faith and it is perhaps inevitable that needs and opportunities will change over the investment period. Our only real criticism is that the original mix of projects and deliverables was probably too complex and the rationale behind the groupings was sometimes hard to discern.
128. Stakeholders clearly recognise the value of TB MAC's engagement with economists and TB MAC activities and events have led to useful new partnerships. To maximise the utility of the modelling to decision makers, we believe this should continue. However, the major initiatives in TB economics happen outside TB MAC and those TB MAC deliverables which sought to add direct additional value seem likely to have a relatively low impact.

129. Governance has continued to improve through initiatives such as rotating Committee membership, more robust RFA processes, and a new focus on transparency and COI. We have no significant concerns, though we note interviewees continue to suggest that there should be more NTP representation. Project management now seems relatively stable and effective and our recommendations have recently only been concerned with detailed level improvements.

### **Strategic Recommendations**

130. We have set out below the main recommendations from this summary report. However, our three interim reports also contained a wider range of detailed recommendations so for completeness we have also included them.

- The Theory of Change process has proved very helpful to TB MAC in organising and communicating its activities, outcomes, and anticipated impacts. For the future, more use could perhaps be made of it to develop TB MAC's portfolio of activities in the first place. This would help focus on activities with substantial impact where TB MAC's collaborative working ethos and mechanisms give it a significant advantage.

For example, in respect of the economics strand, it would help the Committee decide whether TB MAC should focus on building partnerships and trim these lower impact deliverables or scale up its economics activities to give them strategic significance.

- The RFA programme seems well run and the projects funded look set to have useful impacts. There were collaborators from LMIC/HBCs in each case but looking to the future, TB MAC may be seeking deeper RFA involvement from teams outside the mainstream international modelling community. If it is, then adjustments would be needed to achieve this aim.
- We have passed on stakeholders' suggestions regarding TB MAC's potential role in capacity building. We believe the Committee should consider this as a potential new strand of work for 2020 onwards but we remain cautious, because this is an area where people too often assert that there will be significant impact without actually demonstrating it.

On a related point, TB MAC's wider awareness raising under Outcome 3 is still important, and it arguably needs to reach deeper into Funding/TR organisations than it currently does.

- The Committee asked us to gather evidence of policy and practice impact as part of our evaluation but it is difficult to measure change, difficult to disentangle different potential influences without detailed study, and the timescales may be much longer than TB MAC's. We subsequently agreed to work only within TB MAC's Ceiling of Accountability.

Based on work with GFATM in 2015, we did, however, suggest that in future evidence might be found in shifts in the way allocations are justified in funding applicant Concept Notes and we recommended that TB MAC explores this avenue.



### **Recommendations from 2017**

131. Generally, we thought TB MAC's existing programme would deliver what was required but we made some recommendation to support engagement objectives.

- A documented strategy should be developed to guide the expansion of TB MAC's network within high burden countries and academic teams from a wider range of regions and countries. We will support this with our analytics data on request.
- In line with objectives, the next Annual Meeting should increase participation from high burden countries and younger researchers. The 2019 Annual Meeting could be held in a location convenient for modellers and NTPs from high burden countries.
- Conflict of interest statements should be added to website Committee and AP member's individual profiles.

132. We also made some recommendations related to administration and communications.

- TB MAC should set out a plan for using the modelling ambassador role to expand engagement, with a strategy for deciding who to connect with which event.
- All terms of reference and formal procedures should be consistently formatted with no overlap, placed on the controlled documents list, and published on the website.
- A systematic review of website navigation and content is needed so that the website update can be completed. Site analytics will support this and help understand patterns of use.
- Consideration should be given to actively promoting the training materials now online.
- The Secretariat project management training should be completed.

### **Recommendations from 2018**

133. Generally, we thought TB MAC's existing programme would deliver what was required through to 2020. We did, however, make a few recommendations on matters of detail.

- Continue to a proactive approach to MRG extension and the use of remote participation to the AGM.
- Carry out a review of web analytics to understand the pattern and extent of use of the new website.
- Resolve the outstanding COI statements.

134. Looking to the future, we recommended that TB MAC considers its potential role in respect of economic modelling and capacity building along the lines discussed in the report.

**Recommendations from 2019**

135. Generally, we thought TB MAC's existing RFA approach would continue to deliver what was required. We did, however, make a few (mainly procedural) recommendations.

- We suggest a longer and/or a more standardised RFA proposal form to ensure like is being compared with like.
- To improve consistency, we propose additional bullet point guidance to proposal reviewers.
- Guidance and Conflict of Interest statements should be updated and reconfirmed for Committee and Advisory Panel members after grant renewal.
- We suggest a clearer six-monthly RFA reporting cycle based on a concise standard form and a scheduled progress call, to better reflect good project management practice.

136. We have also passed on some observations on more detailed matters

- The discrepancy between the CoI policy and the Standard Operating Procedures (SOPs) on website posting of COI forms should be resolved,
- The eligibility of non-quorate Advisory Panel participants for RFA grants should be clarified in the SOPs.
- RFA updates linked to Committee agendas should cover progress on Interim milestones and % spend and/or progress status, not just final deliverables.
- Website links need adding for RFA outputs.
- TB MAC should consider including the current newsletter as a website front-page news item.
- More achievements and events should be added to the website news page.

## **Appendix A: Evaluation Activities & Terms of Reference**

### **Evaluation Reports**

1. The following evaluation reports have been issued during this investment period.
  - TB MAC 3 Evaluation: 2017 Interim Report. December 2017.
  - TB MAC 3 Evaluation: Interim Report Covering 2018. February 2019.
  - TB MAC 3 Evaluation: RFA 2020 Interim Evaluation. May 2020.
  
2. We also provided some non-evaluation input via 'Advice notes' in response to requests from the Committee.
  - Proposed TB MAC Terms of Reference and SOPs. February 2017.
  - Proposed TB MAC Utility Metrics. May 2017.
  - Mailing list analysis. Email collier/White 31/7/2017.
  - Emerging evaluation themes. September 2017.
  - Modelling validation and verification. February 2018.
  - Engagement strategies, February 2018.
  - TB MAC AP Terms of Reference. November 2017.
  - The use and design of case studies. March 2018.
  - COI options. Glion workshop, April 2018 and associated emails.
  - Social Network Analysis of TB MAC mailing lists and literature database authors. Hoi Ki Cheung, September 2018.
  - RFA review process. Email collier/White 1/11/2018.
  - TB MAC's internal evaluation of benchmarking, reporting, and external review (BRR) project (December 2018).
  - BBR evaluation and piloting. January 2019.
  - Alternative visions for TB MAC. April 2019.
  - Themes arising from the annual meeting. September 2019.

### **Evaluation Activities**

3. The main evaluation activities over this three-year period were:
  - Audits of TB MAC's progress reports and interviews on progress and current programme with the Secretariat.
  - Interviews with the Secretariat and a most Steering Committee (SC) and Advisory Panel (AP) members, other modellers, and external stakeholders.
  - Observation of TB MAC's annual meetings in Washington and Istanbul, plus review of feedback and interviews with participants.
  - Observation and assessment of the three annual RFA cycles, including theme selection, proposal assessment and grant award, and project management.

- Review of TB MAC's Modelling Research Group's (MRG) approach to extending its network, including to High-Burden Countries (HBCs).
  - Observation of a sample of SC and AP meetings and a TB MAC session with the WHO Global Task Force on TB Impact Measurement.
  - Governance reviews, including: Committee membership and decision making; engagement with the WHO Taskforce; management of conflicts of interest; and transparency (focussed on web site content).
  - Follow-up of specific issues raised in previous evaluation reports or by interviewees.
4. The summary of the interviews conducted is given below.
- 2017 report: 20 baseline interviews
  - 2018 report: 19 programme interviews
  - 2019 report: 14 RFA-related interviews
  - Additional evaluation meetings with TB MAC team: several with PIs and secretariat each year
  - Additional forums for informal discussion: including TB MAC and Union annual meetings
5. The main audit trail documents mentioned in this report are listed below. Full references are given in the endnotes (a, b, c ...) and they are all available from the Secretariat.
- The 2016 Grant Proposal Narrative Application<sup>a</sup>, Investment Results Framework (IRF)<sup>b</sup> and Budget<sup>c</sup>.
  - The 2019 Reports to the Foundation: narrative<sup>d</sup>, financial<sup>e</sup> and results<sup>f</sup>.
  - Internal project management and budgetary control spreadsheets.
  - TB MAC website pages relevant to the RFA process.
  - RFA progress reports and deliverables.

## Terms of Reference

### Year 1 activities

6. Evaluation activities will include:
- Review proposed programme and terms of reference and advise PIs
  - Participate in one first and final TB MAC Committee meetings in Y1
  - Attend (preferred) or review output of initial stakeholder meeting
  - Issue outline evaluation plan (this document)
  - Conduct baseline modelling group interaction survey
  - Attend (preferred) or review output of Y1 annual TB MAC / WHO workshop
  - Review routine progress reports and advise PIs
  - Conduct Y1 RFA review and issue report to Committee via PIs
  - Review progress, stakeholder interviews towards end Y1, Interim Report 1 to PIs
  - Ad hoc discussions with PIs and support team as appropriate (but min 3 per year)

### Year 2 activities

#### 7. Evaluation activities will include:

- Participate in final TB MAC Committee meeting in Y2
- Attend (preferred) or review output of Y2 TB MAC / WHO workshop
- Review routine progress reports and advise PIs
- Conduct Y2 RFA review and issue report to Committee via PIs
- Review progress, stakeholder interviews towards end Y2, Interim Report 2 to PIs
- Ad hoc discussions with PIs and support team as appropriate (but min 3 per year)

### Year 3 activities

#### 8. Evaluation activities will include:

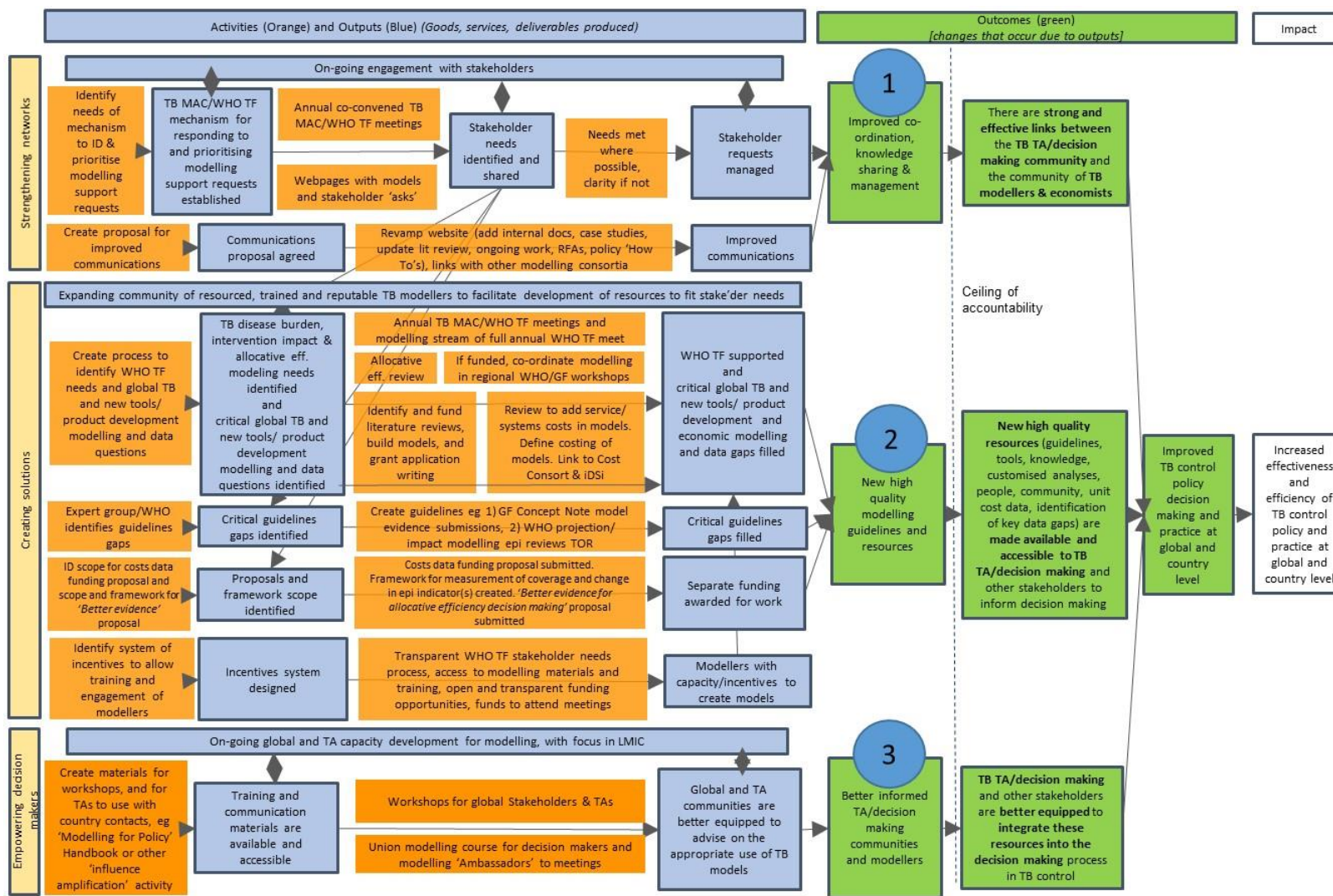
- Participate in final TB MAC Committee meeting in Y3
- Attend (preferred) or review output of Y3 TB MAC / WHO workshop
- Review routine progress reports and advise PIs
- Conduct Y3 RFA review and issue report to Committee via PIs
- Update baseline modelling group interaction survey
- Review progress, stakeholder interviews towards end Y3, Final Report to PIs
- Ad hoc discussions with PIs and support team as appropriate (but min 3 per year)

### Independence and conflicts of interest

9. As a matter of course, our customary practice is to submit all deliverables in draft form first to the Client's Project PI. Comments and clarifications are incorporated at our discretion. We offer clients this opportunity to allow any misunderstandings to be corrected, to enable the client to offer additional insights, and to give an early indication of the balance of comment. However, our evaluations are independent, so we must reserve the right to include client comments or not as we judge appropriate.
10. The lead evaluator for this project has previously undertaken the same role for other TB projects involving the LSHTM, including the South Africa Think Tank initiative, and capacity building and awareness-raising funded by USAID.
11. We are not aware that we have any conflicts of interest as an organisation or as individuals on this project.

## Appendix B: TB MAC Theory of Change

This ToC is as included in the 2016 Proposal and Budget Narrative.



## Appendix C: Output Assessment Summary Tables

- The programme and deliverables have evolved over the investment period. Changes were agreed with the funder's project manager at the time and will be consolidated into formal update at the end of the year. We confirmed in interim reports that this was acceptable providing that there was an audit trail. The lists below include these updates as we understand them.

### Outcome 1: Strengthening Networks

- The current status of the outcomes / outputs identified on the IRF for this outcome by end of the investment period is shown below. They cover setting up the mechanisms for linking TB MAC and WHO and associated activities, including improving the website.

Ref.	Outcomes / Outputs	Status	Comment
1.1.2	Prioritisation process	Complete	Now in operation
1.1.3	WHO TF Input	Complete	Delivered through AP meetings
1.1.4	List of modellers tools on website	Complete	Links now on website
1.1.5	List of WHO TF 'asks'	Complete	Mechanism available if needed
1.1.6	Information to Roadmap Committee	Complete	Coordination role
1.1.8	Revamped website	Complete	New web site online
1.1.9	Case studies	Delayed	Rescheduled for Q2/Q3 2020
1.1.10	Modelling literature review updated	Complete	Available on website.
1.1.11	List ongoing country level modelling	Complete	Available on website.
1.1.12	Add jobs, RFAs etc. to website	Complete	Available on website.
1.1.13	Policy making / modelling booklet	Complete	Available on website.
1.1.14	Refresh website annually	Complete	Improvements made as needed
1.1.15	Shared learnings list	Delayed	Rescheduled for Q2/Q3 2020
1.1.16	Create Standard Operating Procedures	Complete	Available on website

### Commentary

- Our interim reports covered most of these outcomes / outputs and they have almost all been delivered as agreed, though some needed to be refocused in the light of experience.
  - 1.1.5: We agree this deliverable is complete. We note that TB MAC is not in practice operating as a clearing house in the way originally envisaged but remains willing to do so through its website if funders wish to use it.
  - 1.1.9: one-paragraph case studies were published on the website but did not fulfil the original purpose. Case studies produced under the RFA programme will be more substantial and will be used proactively. We have seen some draft copies for publication in Q2/Q3 which look appropriate.

**Outcome 2: Creating Solutions**

4. The current status of the outcomes / outputs identified on the IRF for this outcome by end of the investment period is shown below. These tasks cover TB MAC's core business, addressing gaps in modelling capability and capacity and improving the impact of country level modelling. One task, 1.2.8 (regional WHO/GF workshops) was dependent on additional external funding, which was not awarded. 1.2.19 (costs data collection) was funded separately.

Ref.	Result	Status	Comment
1.2.2	ToRs for task Force support	Complete	In SOPs
1.2.3	Establish MRG	Complete	MRG operational
1.2.4	Annual TB MAC / WHO TF mtgs.	Complete	Annual TB MAC meetings
1.2.5	Annual presentations to WHO TF	Complete	TB MAC, AP, and TF meetings
1.2.6	Country model guidance	Complete	Guidance published 2018
1.2.7	Epi indicators framework	Complete	Framework submitted
1.2.8	Regional WHO/GF workshops	Cancelled	Not funded
1.2.9	MRG sub-grants to address gaps	Complete	6 RFAs awarded, 4 complete
1.2.10	MRG tools development	Complete	Delivered through RFAs
1.2.11	MRG Key themes identification	Complete	Annual meetings and RFA themes
1.2.12	Econ - model implementation issues	Delayed	Paper for submission in Q2 2020
1.2.13	Econ - Costing model definitions.	Complete	Session at annual meeting
1.2.14	Econ - Support to links with iDSi	Delayed	Paper for submission in Q2 2020
1.2.15	Econ - coordinate with GHCC pilots	Delayed	Tools trialled and feedback given
1.2.17	Modelling checklist for GFATM	Complete	Superseded by BRR project
1.2.18	Guideline for WHO	Complete	Guideline provided
1.2.20	Input into cost data proposal	Complete	Input provided
1.2.21	Input into resource allocation proposal	Complete	Input provided
1.2.23	Modellers linked to policy makers.	Complete	Engagement at TB MAC meetings
1.2.24	Union Course online	Complete	On website
1.2.25	Modellers access online training	Complete	Web site stats show downloads.
1.2.26	Modellers at TB MAC / WHO TF	Complete	Modellers funded for meetings

5. A series of sub-tasks were defined to develop a structured database collating the evidence (published and unpublished) for direct epidemiology impact for interventions. They are essentially complete.



AI.1	Develop draft database	Complete	Database complete
AI.2	Input data from lit review	Complete	Review complete and data inputted
AI.3	Ensure accessibility	Complete	Access provided
AI.4	Engage stakeholders for feedback	Complete	Feedback invited and provided
AI.5	Publish framework paper	Delayed	Publication in Q1 2020

6. A series of sub-tasks to deliver the TB MAC Benchmark, Reporting and Review (BRR) initiative were to scheduled deliver the funders' benchmarking outcomes under TB MAC Outcome 2. They are essentially complete, though BRR work continues.

TM2.1	Create benchmarks	Complete	Presented at 2019 annual meeting
TM2.2	Create standard reporting format	Complete	Presented at 2019 annual meeting
TM2.3	Develop review mechanism	Complete	Presented at 2019 annual meeting
TM2.4	Undertake consultation	Complete	Presented at 2019 annual meeting
TM2.5	Pilot with real modelling applications	Complete	Presented at 2019 annual meeting

### Commentary

Commentary on the core tasks against this outcome are in the main text of this report.

### **Outcome 3: Empowering Decision-Makers**

7. The current status of the outputs identified on the IRF for this outcome in 2017 is shown below. The funding for 1.3.4 (modelling ambassadors and materials) was reallocated after agreement alternative approaches would work better than a formal ambassador role. These tasks cover TB MAC's work to improve understanding between modellers, funders and decision-makers.

Ref.	Result	Status	Comment
1.3.2	Introduction to modelling courses	Complete	2017/18/19 Union mtg. courses
1.3.3	Newsletters sent	Complete	Newsletters ~bi-monthly
1.3.5	Benchmarking training materials	Complete	Complete and tested
1.3.6	Decision maker / TA training	Complete	Now with 1.3.5
1.3.7	Share modelling expertise with TAs	Complete	Part of 1.1.6

8. A series of sub-tasks were defined to improve engagement with key TB modelling groups not directly engaged with TB MAC.

ES.1	Engage key groups	Complete	List generated.
ES.2	Case study slides	Delayed	Rescheduled for Q2/Q3 2020
ES.3	Collated lectures etc.	Complete	In resources section of website

Commentary

9. The 'ES' sub-tasks are notionally complete or nearly so, but not yet as thoroughly as originally envisaged. We share responsibility for this, because our potential contribution to key group lists depended on analysis that we have not yet completed.

**Outcome 4: Governance and Evaluation**

10. The current status of the outputs identified on the IRF for this outcome in 2017 is shown below.

<b>Ref.</b>	<b>Result</b>	<b>Status</b>	<b>Comment</b>
1.4.1	Annual audit of RFA / direct spend	Complete	RFA evaluation report
1.4.2	Increase transparency / inclusivity	Complete	Wide range of actions contribute
1.4.3	Improve project management	Complete	Updated processes and training
1.4.4	Utility metric for evaluation use	Complete	Metrics included in this report
1.4.5	Improved committee structure	Complete	Committee membership revised
1.4.6	External and internal evaluation.	Complete	This report, SC/ AP reflection
1.4.7	Sustainability review	Delayed	Rescheduled for Q4 2020 or 2021

Commentary

11. These tasks cover TB MAC's work to improve its governance and project management. Some depend on a combination of new activities and improved performance. Progress has generally been as expected.

## Endnotes

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<sup>a</sup> OPP1135288 Grant Proposal Narrative. TB MAC, dated 15/9/2016.

<sup>b</sup> OPP1135288 Investment Results Framework spreadsheet. TB MAC, dated 15/9/2016.

<sup>c</sup> OPP1135288 Results Grant Budget spreadsheet. TB MAC, dated 16/9/2016.

<sup>d</sup> OPP1135288 Progress Narrative - Year 3

<sup>e</sup> EPIDZJ62 - Fin Rep 01 Jan 19 to 31 Dec 19

<sup>f</sup> OPP1135288\_Results\_Framework\_Tracker 2019 Report