Conclusions and recommendations

The conclusions and recommendations come from the members of the TB subgroup (except M Good) plus the external experts invited by the Commission (D Abernathy, S Rolfe and A Fediaevsky).
The Commission asked the group to provide an assessment of the progress since 2009, and to comment on movement restrictions.

The overall impression is positive.
The Irish programme has an evidence-informed approach and commitment to risk-based management. Epidemiological data shows a progress in the eradication of TB with regard to the indicators that were presented to us at the last visit of the task force group. This does indicate a stability in the programme and is to be commended. However, some caution is necessary at this early stage and a continual decline in bovine infection will need to be confirmed over the following years.
The data collection and continuous use of data to improve the programme, the quality controls and continuous refinement of these, the comprehensive wildlife programme and the lifelong restriction of IR's are all important components of the Irish TB eradication programme that are to be commended and encouraged. The group also noted the commitment to the end goal and the dedication of key persons in carrying out and continuously improving the programme.

Progress assessment
As regards progress of the programme, the situation appears consistent. The progress is steady but slow. This meeting took place before the 5-year plan presented last time has been given a chance to give results, which makes the numbers difficult to assess but the results are according to the predictions given in the plan, or better.
There has been a decrease in herd incidence over the past six years (5.88% in 2008 reduced to 3.88% in 2013).

Out of the total of around 5 000 positive herds, some 1 000 herds have only one animal with PM lesions and no further reactors in the herd and in about 1000 herds TB cannot be confirmed and is not suspected from any epidemiological evidence. The Irish programme has concluded that the latter herds are most likely to be exposed to environmental mycobacteria and a consequence of imperfect specificity of the SICTT and that the herds with one animal with lesion at PME and no further reactors over 2 successive tests on the herd are not infectious but "old lesions". This will require further research and epidemiological evidence before conclusions can be drawn.

Animal movements
There is a very high number of animal movements. These include various types of movements, some via markets will be registered as 2 movements but the figure is still very high and many animals move 2-3 times during their lifetime.
Movements appear to contribute in some degree to the number of outbreaks at the time, according to data presented around 7% of all outbreaks are attributed to animal movements. Animal movements represent a risk of disease movement and this should be continuously emphasised to farmers by all parties involved in advising them on various issues. The risk presented by animal movements should be regarded as a part of biosecurity that all farmers must be aware of.

A general use of pre-movement testing is not recommended as it may provide a false sense of security without giving enough additional reduction of the risk. Instead, targeted herd level pre-movement tests in high risk situations are identified and enhancement of restrictions on high-risk movements is recommended. For H herds and contiguous herds, a shortening of the 6-month movement window before retesting is suggested. Thus, only allowing movement of animals out of such herds for a couple of months after the last clear herd test is recommended, and then re-restricting it again before the 6-month retest. An optimal time window should be decided based on

further analyses of the 2011-2013 data presented at the meeting.

The licensing of movements into restricted herds should be revised to ensure that this is only allowed for herds where all animals are destined for slaughter. Movements out of restricted herds must only be allowed directly to slaughter. For herds with separate units/farms for e.g. rearing and milking, where movements must be allowed for animal welfare reasons (no milking facility in replacement unit, no room for rearing calves in milking unit etc.), such movements must lead to restrictions on all epidemiologically linked units/farms.

Diagnostic testing

There are some concerns about the sensitivity of the skin test and a focus on increasing sensitivity and bearing in mind the possibility of herd misclassification due to this is important. Severe interpretation of SICTT and ancillary testing with GIF in parallel in H herds and contiguous herds is already in place. In addition, the group suggests that all testing data be reassessed using criteria so as to mimic a SIT (preferably analysed stratified by reason for test/risk group). In this way conclusions about false positives, old lesions versus active infection etc. can be evaluated and any misinterpretations or overestimations of SICTT sensitivity be discovered. In addition to this, the use of GIF in all herds where TB is confirmed could be introduced, in line with SANCO 10067/2013. However, the group could not reach a common conclusion on whether such a general recommendation of additional GIF should be made at this point or at a later stage when more progress has been made and the effects of wildlife control are more evident.
The risk of reduced sensitivity due to repeat testing should also be considered. This might be assessed by analysing individual test data from e.g. non-reactors with confirmed infection.

There is a good programme in place for the quality control of tuberculin testing of cattle. This may be further improved to ensure that testing is always conducted to the required standard. Unannounced spot-checks are already done in the field, random as well as by inspections of already tested animals and in follow-up of positive herds. The group agreed that Ireland should continue to conduct analyses of data on testing results of individual vets to reassess if there is a hitherto undetected problem with individual private vets performing routine testing of herds. In particular, data from herds given OTF status may need to be scrutinized so as to ensure that they have been properly tested. Further analyses should also focus on breakdown herds where cases are detected at slaughter, in animals that have tested negative, to see if they can be associated with a certain category of vet, geographic locality or other factors.

The group also recommends greater use of culture and molecular subtyping. For example, some of the conclusions that have been made based on epidemiological investigations need to be substantiated by molecular epidemiology. Therefore, at least one sample from each breakdown herd should be cultured and subtyped. In case of herds with animas introduced from other herds, this number needs to be increased. Moreover, subtyping should be used to substantiate assumptions about badgers as a source of outbreaks in individual herds.

Other aspects

A further assessment of the zone where contiguous herds are controlled around infected farms is recommended. More investigations in a larger area will make it possible to determine if the current size is sufficient. The meeting did not cover all details around the contiguous testing and therefore the group cannot give detailed recommendations but there may be an opportunity for improvement of the detection capability by including more herds as contiguous.

The conclusions drawn from epidemiological investigations in breakdown herds were not discussed in detail, but there is a need to substantiate the conclusions about source of the infection and a thorough scientific evaluation should be made of these. This applies also to herds detected by slaughterhouse surveillance, a thorough evaluation of all data from such herds needs to be done in order to substantiate the assumption that these herds reflect a sensitive surveillance system in slaughterhouses and not a suboptimal testing in the field. Moreover, an analysis of the association between number of reactors in a herd and means of detection would be useful, if not already done.

The criteria for depopulation should be considered, so as to ensure that this tool is used to its full potential, whenever a control benefit could be derived from it.

Biosecurity measures should be advised based on the research performed on the risk of transmission from wildlife and how this varies in time and space. Although there was no time to discuss this research in detail during the meeting, the group wants to encourage the incorporation of the results from it in future policy and advice.

Finally, the group noted that some of the recommendations from the last visit had been implemented, while there was no time to discuss others. Therefore, if some recommendations since the last meeting are still not addressed we would recommend that this be done. In particular, the recommendation to apply the same testing strategy, epidemiological investigation, restrictions etc in the entire epidemiological unit until there is solid evidence for a difference in risk for different subsets of the epidemiological unit.

A warm thank you is extended to the Irish hosts for their great hospitality and willingness to share information about the details of the programme. The effort of arranging this meeting is greatly appreciated.