Appendix 4

Comments on the TANGPATH Model

The TANGPATH model was tested and reviewed by O. Drieu, A. Mills and G. Patterson of LTBP. Their comments are listed below. Details of the model are given in Appendix 3 above.

The model allows for flow animations to be run based on the current patterns for the periods 2-8 April 1997 and 22-28 August 1997 (wet and dry season periods respectively). The user can input location, animation speed, the number of particles to track as the horizontal diffusion coefficient. The model will then show particle tracks for either of the above two periods.

Some comments on the model by the reviewers:

- In summary they found that the model is of some academic interest but has little practical application since there is no way of putting new information into the system (new data on winds etc.) to allow for extended simulations (of pollution events for example). The model was developed with data over a short period of time of observations and could lead to misinterpretation (limits of a mathematical model). At least some discussion of the practical applications of the model (or indeed even a comment that the model does not have practical applications) would be welcome.

- The model does not fit in with any other information provision system for the LTBP nor does the co-ordinate system they use does not conform with any map system used in the region.

- There is not guidance on what are sensible parameters to enter (for horizontal diffusion coefficient for example) or how the outputs of the model may be interpreted.

- There is no way of extracting the lines or diffusion points from the resulting map to any other system.

- The model is not in general terms "user friendly": for example it is difficult to zoom and save graphics to compare with another assumption (the user has to re-enter the data), the grid reference for the location of point of discharge could be improved or better defined.

- The model does not allow for the addition of different data than that from the two periods studied - some discussion of what data inputs would be required to make the model more universally applicable would be welcome. It may be that tracing the fate of pollutants using a model of this kind in Lake Tanganyika will not be

possible without huge investment in hydrological and meteorological measurement in the region. This needs to be clarified.