

6. SUMMARY AND CONCLUSION

With the successful creation of AMAQUM, it has bridge or integrates the disparate entity of air quality modelling and environmental monitoring reporting under a common geographical information system (GIS) platform i.e. ArcView. The graphical user interface (GUI) provides a user-friendly application for the end-user. The application had enabled the analysis and interpretation of the monitored and predicted result with ease, accurate and more efficient.

With the successful creation of AMAQUM, future research work could be emphasized on validating and calibrating the ISCST3 model for Malaysia environment. Findings from this future research work could be used to improvise the ISCST3 model by manipulating the model options and the value of the parameters found such as the dry deposition rate, wet depletion rate and also the half-life of certain pollutants.

In this research work, it was observed that the contribution of TSP towards the surrounding environment was low with a maximum of $20 \mu\text{g}/\text{m}^3$. While the sulphur dioxide was suspected to undergone chemical transformation with the non-detection of sulphur dioxide concentration at the monitoring station during the 24-hours averaging time for a particular period. However, no chemical transformation of nitrogen monoxide to nitrogen dioxide during the 1-hour averaging time with the non-detection of nitrogen dioxide at the monitoring station. It was also observed that the contribution of VOCs from the plant emission was low from the predicted MAICs.

In conclusion, AMAQUM had met its aim of being an environmental monitoring tool in particular for ambient air quality for improved decision making and planning purposes.