

CHAPTER 5 CONCLUSION

5.1 Conclusion

Gaps filling of monthly runoff data of 16 stations over Bang Pakong river basin using SSA is introduced in this study. The data is monthly runoff data (unit is million cubic meters) of each station in Bang Pakong station and data from the Hydrology Division of the Royal Irrigation Department of Thailand. In each station to use idea applied monthly runoff is raw data anomaly for estimates data, with filled-in data by using Singular Spectrum Analysis and choosing Kaeng Din So (KGT.15A) stations. The gap filling resulted by the SSA was compared with the complete data. This research uses Willmott's index of agreement to find the optimum window size and SSA component for filled-in monthly runoff data. Efficacy of filled data by SSA depends on data formats. The comparison between the first experiment and second experiment for choosing the optimum of a window size and SSA component filled-in data. We find that the experiment 1 and experiment 2 are optimal by Willmott's index of agreement in case 3 and case 9 respectively. These case studies of monthly runoff data have affected from distribution of data, deviation, choosing a window size and SSA component. The results show that the first experiment is better than the second experiment. So, the SSA in this research is not suitable for interval missing monthly runoff data.

5.2 Recommendation

In this study, Filled-in data of 16 stations for case study in Bang Pakong river basin by the SSA, the data may be error which is depend on:

1. Choosing a window size and SSA component: It cannot definitely of choosing a window size and SSA component but we can use Willmott's index of agreement efficiency test in SSA.
2. Format of the data affects the efficiency of the SSA.