

School Rationalization Study in Sabaragamuwa Province Using Spatial Data Model with Special Reference to Dehiovita and Deraniyagala Divisions

M.T.M. Ansaf^{1*}, A.M. Rajah¹, K.L.E. Kumara¹, S.T.S. Wijerathne¹,
K.P.A.R. Pathirana¹ and H.M.A.S. Herath²

¹*Provincial Department of Education, Sabaragamuwa,
Ratnapura 70000, Sri Lanka*

²*Department of English Language Teaching, University of Peradeniya,
Peradeniya 20400, Sri Lanka*

**ansafichem@gmail.com*

The Sri Lankan education system manages 10,165 government schools and 246,592 government teachers with more than 4 million students. Schools with less than 50 students are 1468 (14.4%) and less than 100 are 2966 (29.1%). The total numbers of schools, teachers and students in the Sabaragamuwa Province are 1124, 25,335 and 387,844 respectively. 227 (20.2%) and 392 (34.9 %) schools serve below 50 and 100 students respectively. Challenges faced in ensuring equity in education are a result of the high economic burden and other factors. School rationalization has been debated among educational administrators and policy makers in Sri Lanka for a long period and is echoed in the political sphere too. The rationalization of schools is a task of national importance in this context. This study focused on schools below 50 students in the respective divisions and rationalizes focused schools. The purposive sampling method was used. Data was collected from published reports of the Ministry of Education, Department of Education and the data management system of the department, including respective divisional reports. A spatial data model was developed using GIS technology to locate the catchment area of the schools. The road vector network was used to find alternative schools to the focused schools and efficiency was calculated using student movement data. Factors such as transportation-access facility and cost-benefit analysis were considered in the study. Data validation was done through discussions with divisional and zonal directors. This study finally derives decisions regarding the existence of focused schools. The conclusion ensures that the spatial data model used in this study is highly beneficial as a tool in micro-planning studies. Further, this model and methodology can be extended to be used in the Sabaragamuwa and other provinces too.

Keywords: School rationalization, Micro planning, Geographic Information System, Education policy