

Classification of Software Frameworks Utilised in Water Resource Management Modelling

RMM Pradeep^{1#} and A Edirisuriya²

¹*Department of Information Technology, Faculty of Computing, General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka*

²*Department of Computer Engineering, Faculty of Computing, General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka*

#pradeep@kdu.ac.lk

The framework of a particular unit or a system is the structure on which it is built or founded. There appears a conflict in the understanding of frameworks by water resource decision-making professionals and software development professionals. This contradiction affects the quality of the software systems developed for water resource management decision-making. Hence, the objective of the present work is to classify the available understanding of frameworks to contribute to a clear understanding to achieve better and sustainable framework classification to water resource management software system. The present work carried out a systematic review and conceptualised the principle of the framework through an evaluation of interdependencies between presently available understandings. The reviewed environmental modelling frameworks revealed the availability of four different categories such as, Software language foundation, Software on platforms, Techno-business platforms, and Building blocks frameworks. This classification allows the environmental system modellers to understand which framework they will develop and decide in which depth they need to explore technology and business domains.

Keywords: *software, system, framework, water resource management, environmental modelling, empirical literature review*