

A Concept of Weather Window (WW) in Managing the Rain Risks in Construction Projects of Sri Lanka

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ABSTRACT

Different weather conditions such as rain, wind and snow would directly impact on the performance of any construction project. Being a tropical country, the effect from rain would be experienced mostly in Sri Lanka. Within this context, risks caused from rain can be defined in financial terms as a loss or gain due to a change in weather conditions over a period of time.

Weather records available in the Meteorological Department of previous years are analysed to establish the different rain risk categories based on dry spell, rain spell, and wet spell which are derived from a "wet day" as defined by the Meteorological Department. In this research, the value used to define the wet day is modified to establish the "weather windows (WWs)," under above rain risk categories, namely as major weather window, moderate weather window and minor weather window.

These established WWs are applied to a completed project and analyzed at different risk conditions. It was identified that the concept could be used effectively to manage the rain risks. The results showed that 3.5% of the total project cost would have been saved, if the weather sensitive items such as excavation and earth works, landscaping and external works, etc., of the project were scheduled by analysing the WWs, during the planning stage, even though the rain is considered as an Act of God and a totally uncertain event..

Keywords: *Weather risk, weather sensitivity, weather windows, uncertainty, act of god*