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## Effects of rain on cricket and the counter measures required

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### ABSTRACT

*The purpose of this study was to examine the consequences of rain in a cricket match and examine the various methods that can be used to get a fair result in such a situation. This data includes a list of 200 matches that were affected by rain and the result shifted in favor of the losing team due to the unjust methods of resetting a target. It also includes information on how to prevent rain to influence a match and the pros and cons of the same. It suggests that interrupted matches a missing data problem the outcome of the complete match cannot be observed and the outcome of the interrupted match is observed. In particular, we consider the overall and conditional accuracy of a rain rule. Based on our study we come to know that the Duckworth lewis system, currently adopted by the ICC { International Cricket Council} is not as accurate and efficient as it doesn't include all the factors during a run chase. Therefore, through this research paper, we are going to give two alternate methods to the Duckworth-lewis method and also include various measures that can be taken to minimize the effect of rain.*

**Keywords:** Informative, Detailed, Innovative Ideas

### 1. INTRODUCTION

We are all aware of the many advantages of rain and how we, or as a matter of fact, any species cannot survive without it. But if we talk about its impact in cricket, it only has negatives and often causes an even game to result either in a no result or shortens the game to fewer overs and sucks all the fun out of it. Also, if the match restarts without any loss in overs, then also the conditions do not remain the same. No matter how good the drainage system of a field is, after rain the outfield as well as the pitch gets affected because by the time when the groundsmen come the field already gets affected by the rain. Through this research paper, we are planning to look at the negative impact of rain on cricket by giving various data and statistics and discuss the alternative methods that can be taken to counter it. Rain also plays a major role in mega tournaments like the world cup and champions trophy. Let us take a recent example of the 2019 cricket world cup played in England. In an event that happens once in 4 years, there were 4 abandoned games and 4 reduced games because of the rain due to which many teams could not make the cut. Eg- In the semi-final between India and New Zealand, India was on top and was likely to win the match, but due to rain the match was continued the next day resulting in a change in conditions and ultimately affecting the results. In the 2017 champions trophy, Australia could play only 1 match out of three because 2 of their matches were abandoned by rain resulting in their exit in the group stages itself. Some of the greatest matches have been given a helping hand towards immortality by the rain. Pakistan, the eventual winners of the 1992 world cup were able to achieve this feat only because of the rain. They were dismissed for a paltry 74 against England but rain saved them and they progressed to the semi-finals at the cost of a well-deserving Australian team.

Therefore, it is necessary to reduce the impact of rain by adopting some methods. But even though there is continuance hindrance by rain in the sport in recent times, no concentrated or concrete efforts which might be able to improve the game have been taken. Let us talk about Eden Garden which is one of the best grounds in India. In the outfield, there are plenty of grasses, so when the ball is hit by a batsman it goes to the outfield and becomes wet. It becomes a nightmare for the bowlers and fielders, as they are unable to grip the ball because it's wet and often leads to full tosses and misfields thus favouring the batsmen. It sometimes even becomes difficult for the batsmen as rain generally affects the outfield which slows the ball down and prevents boundaries since the grass is damp. The concept of sheltered roof should be introduced in the stadiums like the one at the Telstra Dome in Melbourne. Also, the DLS system has to be revised. It may have replaced a system that produced the farcical finish that saw South Africa needing to score 21 runs off one ball to beat England in a 1992 World Cup semi-final in Sydney, but the Duckworth-Lewis-Stern method has been involved in its fair share of controversy as well. Therefore a more suitable method " The VJD " method should be tried out.

In the 2015 World Cup, the Duckworth-Lewis-Stern method, a modification of the D/L system, came into play four times in 49 games. Among the games in which it was used was a low-scoring one between Pakistan and South Africa, in which Pakistan's score of 222 all out in 46.4 overs changed into a target of 232 for South Africa in 47. Three overs were lopped off due to rain during Pakistan's innings, and even though Pakistan was bowled out within 47, they still benefited by nine runs, as the loss of three overs might have affected the way they would have paced their innings. The earlier D/L method pegged the target at 231, while the V

Jayadevan method (VJD), which has generally received favourable reviews for its target-setting as well, pegged it at 226. In this case, the DLS and VJD targets were both pretty reasonable and similar to each other, but there are other instances when they aren't so close. For eg, in the cliffhanger semi-final, the DLS target was 298, while the VJD one was 300; New Zealand ended up scoring 299 and winning with a ball to spare.) The DLS system has undergone several modifications, and while there have been improvements - especially since the computerised system replaced the manual one - there continue to be areas of concern, especially in the sluggish manner of setting targets in higher scoring games, especially in the 50-over format. This research is important because we are living in denial that the game of cricket is as perfect as it gets but the reality as proven in the examples given above is that we are far from perfect and several strong and precise measures should be taken to make it a perfect game in the future. We are living in a world with a fast-growing technology and if the improvement is not brought in cricket, I am afraid that the sport will not continue for long.

## **2. MATERIAL AND METHOD**

**Matches:** The study included matches from both the international and domestic level along including teams of both the genders. The number of matches taken was 100. Before their inclusion, all the matches were carefully examined and made sure that they had a negative impact on the game. The data includes matches ranging from the 1992 world cup match between South Africa and England to the recently concluded 2019 Cricket world cup match between India and New Zealand

**History:** A detailed history of the measures to counter the effect of the rain was done. All the methods were taken into effect and various other substitutes for the same were analysed. The range goes on from the average run rate method used till 1990 to the DLS(Duckworth lewis stern) method which is currently adopted by the ICC for resetting targets in international matches. The list also includes various other methods used for a short period like the most productive overs method used from 1992 to 1998

**Alternative method:** The paper also includes detailed research on the various alternatives that can be used to counter the effect of rain. The range starts from the VJD method which can be used as a substitute to the DLS method and has proved its worth in the domestic tournaments in India to the system of automatic roofing which can be used in stadiums if rain plays a hindrance in the sport

## **3. CONCLUSION**

A game of cricket loses its charm as soon as the rain sets foot in the arena. The increase in rain interruptions has led to a decrease in closely contested matches and an increase in the number of abandoned matches. With the increase in the number of abandoned matches, many bilateral series and most importantly crucial ICC tournaments are largely affected not only impacting the teams but also leading to a financial loss.

Many measures are taken to reduce the impact of rain in cricket but their effectiveness remains a mystery. In the future, we hope that new, more effective measures will be taken, some of which have been suggested throughout this research paper. If we are not able to reduce the negative impact of rain on cricket, then surely the game will not survive. More research and alternative measures are required to make cricket an ideal sport.

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