

# Risk Management in Residential Construction Project in PCMC Area

1Santosh KisanChoudhari ,2Sneha Sawant , 3Mrs AshwiniPatil.

<sup>1</sup>( PG Scholars ,Civil Department (C & M ), D.Y. Patil College of Engineering , Pune , India )

<sup>2</sup> (Assistant Professor, Civil Department, D.Y Patil College of engineering , Pune ,India )

<sup>3</sup>(Assistant Professor, Civil Department, D.Y Patil College of engineering,Pune,India )

**Abstract :** The development business is one of the biggest area on the planet and assumes a crucial job in spending plan and at last financial aspects development . Execution tightening of Residential tasks has most complex conduct consequently inclined to the disappointment of undertaking .These Failure legitimately influence the economy of the country just as establishment .Risks being looked during lifecycle of the private venture , because of their inborn complex nature , many-sided connection between the partners , easygoing methodology towards the distinguishing proof and control of the Uncertainties prompts the disappointment of the tasks. Along these lines , steady disappointment of the private ventures stands out towards concentrate on logical way to deal with distinguish , examine , plan and control of the hazard as often as possible experienced during the lifecycle , especially at development phase of the task .This exploration mean to manages the different dangers experienced in private activities during development through utilization of logical way to deal with achieve fruitful culmination of the undertakings , in time with guaranteed quality with no effect on condition , social of the task .This examination focus on recognizable proof , appraisal , reaction , plan and relief however meets just as poll study directed however proficient specialists , venture the executives advisor at all levels .

**Keywords:** Infrastructure, Risk Management, Scientific Approach, Quantitative Analysis.

## 1. INTRODUCTION

### 1 General

So as to satisfy the undertakings better, the venture the executives was made and its overall idea is the utilization of information, aptitudes, apparatuses and procedures important to address the issues and xpectations of partners . Postponement and absence of progress in the usage of urban development ventures which causes the absence of economical urban administration is characteristic of the principal issues and deterrents in the execution of important urban undertakings and the remaking and improvement of urban space is truly undermined and it very well may be named as an emergency of development ventures (Vatankhah, 2003). The Definition of Risk and the Risk Management Risk is the possibility which can mess up the execution of undertakings and furthermore accomplishing the foreordained objectives. As indicated by the American task the board standard "PMBOK", chance in ventures is the inescapable obscure occasions or conditions which impacts

contrarily or decidedly the goals of the undertaking . Classification of Risks In the writing on chance, the different classifications of dangers were introduced. - Risks identified with Performance, Purpose, Quality and Technical Issues of the Project: In this classification of hazard, the execution and culmination of the tasks are influenced. At the point when specialized issues increment the expense and the hour of finishing the task, operational dangers lead to the hazard in cost and time. - Time Risk: This hazard would defer the cutoff time of the fulfillment of the task. This class of hazard influences legitimately the danger of the expense and the operational hazard. - Cost Risk: This sort of hazard would go astray the task cost from the affirmed financial plan for the venture. Absolutely, the cost hazard is firmly connected with the time chance. This hazard can prompt operational hazard. - Increasing Risk: The dangers themselves are less significant, yet their aggregation makes a significant hazard. For instance, a little increment in the expense of a contractual worker's work doesn't influence the assets. At the point when the venture has a wide organize of temporary

workers, the ultimate result of these increments is a significant hazard. - Catastrophic Risk: This hazard incorporates all dangers that separately have critical impacts and influences different dangers. For instance, the basic innovation for the removal of waste needs uncommon gear. - Environmental, Safety, and Health Risk: These dangers incorporate those hurtful impacts which the undertaking has on the earth. Genuine episodes of this sort of hazard sway the financial plan truly. Clarification of the procedure of hazard investigation and its factors In this procedure, the unsafe potential occasion dependent on the possible impacts of every one of them on the targets of the venture is organized. The probability and outcomes of the acknowledgment of the foreseen dangers is subjective as opposed to quantitative and in the wake of making a hazard network dependent on two factors referenced, the need dangers is resolved. These two factors for each hazard as per "PMBOK Guide" are recognized and evaluated as follow: - Probability: The likelihood of distinguished dangers is reflected later on while executing the task. The chance of hazard with words and etymological factors are shown. At that point, these words are appeared in a quantitative scale.

## 1.2 PROBLEM STATEMENT

The development conditions will vary from undertaking to extend, district to locale and time to time. Certain undertaking are muddled and can experience more risk's. Not many hazard's can happen nearby and few can happen during the arranging stage. Subsequently contracts are marked between the gatherings , were in all the gatherings have a consent to the condition in the agreements. Because of specific snags and issues happening during the task life cycle a progressing work may confront certain unpredictable hazard's consequently to deal with these hazard's 'chance administration' process is presented . The hazard's may happen in contract conditions during the venture life cycle , association ought to be well prepared to deal with them .

Associations with huge tasks and high store contributed are facing the challenge now and again. Subsequently to stay aware of market and contenders they should know to recognize, design and investigate the different dangers happening.

Hazard recognizable proof and arranging assists with improving benefit of undertaking. Development divisions have numerous handy risk's. Thus associations need to anticipate dangers happening during development stage, contingent on the past experience security and ecological hazard's must be arranged in starting phases of undertakings as a pre-preventative advance. Dangers are vulnerabilities, which can possibly upset the entire task or only a piece of it. Dangers, as most different components in a task, changes alongside its encouraging. Since they are simply vulnerabilities, the more you think about their effects, the better you can deal with its outcomes. Be that as it may, it is a substantial arranging process which talks about various components in the task before gazing the undertaking. This may make a few partners uncomfortable and questionable of the venture. Henceforth, an agreeable equalization must be made at the hour of arranging the task itself, which can show the useful dangers which will happen at a later stage.

## 2. AIM AND OBJECTIVE

The principle point is build up a technique to deal with different dangers experienced during the venture life cycle in urban zone and to improve gainfulness keeping up the calendar of the task in urban zone .

In spite of the fact that this work is in its in beginning phases, it is foreseen that it will cover a few or the entirety of the accompanying targets.

- Risk Identification with meetings to generate new ideas, master counsel, past experience, interviews.

- Group the different dangers caused during the pre-execution, execution and post execution stages and hazard proprietors answerable for them.
- Prioritization of dangers by quantitative method.(analysis)
- Handling hazard by Avoidance, Transfer, Mitigation, Accept.
- Rank the dangers experienced by normal hazard factor.
- Perform HIRA (Hazard recognizable proof and hazard evaluation) to know outline of different dangers and hazard dependable proprietors.

### 3. METHODOLOGY

#### 3.1 Methodology:

Below shown models for various stages of research are carried out.

FLOW CHART:



### DATA COLLECTION AND INTERPRETATION

#### Risk Probability Rating

Table 1: Probability rating

Probability	Probability Rating Scale
Below 20%	Minor
20% to 40 %	Low
40% to 60%	Moderate
60% to 80%	High
80% to 100%	Extreme

#### Risk Impact Rating

Table 2: Impact rating

Impact	Impact Rating
Small changes in planning / Methodology	Minor (<20% )
Deployment of additional resources	Low (20% to 40% )
Time to Complete	Moderate (40% to 60% )
Cost & Loss of Project	High (60% to 80% )
Probability of Non Completion / Closure of project	Extreme (80% to 100 %)

**Table 3 : Response recommendation**

Recommended for Control	Method	Response Scale	Rating
Avoid		Avoid	
Subcontracting / Insurance		Transfer	
Remedial measures with proper planning		Mitigate	
Accept since it can be controlled without affecting the objective of project .		Accept	

### 3.2 Questionnaire Design

In Risk Management to the non availability of collecting information related to the occurrence of risk & management in residential Projects, questionnaire survey conducted & using response from related professionals working with the residential project.

In the questionnaire simple and straight forward question were used to easy understanding without any ambiguity.

The responses collected from 51 professionals through the questionnaire survey

A very much simple questionnaire is as follows.

**Table 4: Questionnaire**

1	Partner's in financial problem
2	Cash flow problem of client.
3	Inconsistency in policies, laws and regulation.
4	Employees from each partner distrust each other
5	Incompetence of sub-contractors/ suppliers.
6	Economy fluctuation.
7	Excessive demands and variations by client
8	Partner's parent company in financial problem
9	Disagreement on accounting of profit and loss
10	Poor project relationship.
11	Partner's lack of management competence and resourcefulness
12	Disagree some conditions of contract
13	Technology transfer dispute
14	Pollution.
15	Project Location
16	Project DP Road
17	.Land Clearance By Landowner
18	Language barrier

19	Delay in approval of design by Architect , Structural Engineer & Consultant.
20	Uncertainty in geological Condition
21	Delay in Decision By client.
22	Delay in decision by land Owner
23	Abnormal increase in price of material
24	.Political influence .
25	Weather Condition
26	.Desease and Epidemic.

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