

## Construction Sector And Environment

Sidharth Prakash and P. S. Charpe

Department of Civil Enggeeneering  
Kalinga University, Raipur, Chhattisgarh

### ABSTRACT

There is increasing appreciation that regular world systems can't uncertainly supervise display headings of human activity. For this unsustainable operation, the accountability for the generated situation & development activity is liberal with it being battled for, for example, the: dedication to an extraordinary element of the ecological harm that occurs today in the destruction of forest areas & lakes, air & water tainting, environment destabilization has a position firmly at the doorsteps of momentum building. These tests also suggested knowledge obtained through an analysis & interpretation of the findings. More fundamental effort is required to expose levels of issues that remember the genuine objective of promoting the development, get-together, and execution of considerations of green building in Bengaluru. Thusly, the review occurs as expected discovered that the utilization of green enhancement systems is limited, and that requirements and regulations are needed as guidelines to look out for the needs of both humanity and environment.

**Keywords:** Construction Sector, Environment, Sustainable, Natural Resources

### INTRODUCTION

Environmental degradation has caught the imagination of the world and has become one of the most debated issues at the state, regional & global levels (Bentivegna et al., 2002). Langston & Ding (2001) believed the planet is in a serious environmental crisis. The population increase and the search for progress including the built environment has been culminated in depletion of the ozone layer, global warming, depletion of resources and destruction of ecosystems (ibid.). It has put the urban environment & the building industry under the microscope as their operations have substantial environmental effects. Construction behaviors influence the community during the developmental life-cycle. These impacts occur from earlier on-site work thru the construction period, operating period and to final demolition when a building ends its life. Given the fact that the development cycle is relatively reduced in comparison to the other phases of the life of a house, it has many important environmental consequences. Within this context, questions regarding the effect of building activities on human and environmental safety are slowly increasing.

While the creation of construction projects may contribute to economic and social growth and improve both living standards and quality of life, it is often correlated with environmental degradation (Azqueta, 1992).

### LITERATURE REVIEW

Fiona Murie (2007) indicates that International health and safety standards to protect construction workers are already in effect but are often ignored by managements. Conforming to these standards and implementing other measures described by the author could substantially reduce the high incidences of injuries, illnesses, and fatalities arising from work in this industry Sustainable development in construction includes a clear and strong component prevention of risks to the safety and health of the workforce. The recent ILO guidelines on Safety and Health Management Systems, as well as the Global Reporting Initiative and an ever growing number of voluntary corporate social responsibility systems are integrating management of occupational health into business management systems in all sectors. Health and safety at work is very clearly a development

issue, and there should be close cooperation between governments, employers and workers for prevention.

Dhas A.C & Helen M. (2008) pointed out that the unorganized workers account for about 93 per cent of the total workforce and there is a steady growth in it over the years in India. It is argued that India had a long tradition of informal social security and social assistance system directed particularly towards the more vulnerable sections of the society but underwent steady and inevitable erosion. The social security initiatives of the Centre, States and NGOs implemented during the past indicated that the needs are much more than the supports provided and the efforts must be targeted and vast enough to cover the growing unorganized workers. It is argued that the major security needs of the unorganized workers are food security, nutritional security, health security, housing security, employment security, income security, life and accident security, and old age security. India has a long tradition of social security and social assistance system directed particularly towards the more vulnerable sections of society.

Nazhat Parveen and Patil N.H. (2010) viewed that women are playing a dominant role in certain aspects in the informal sector such as agriculture, construction etc. Building employees are oppressed for being economically disadvantaged, unorganized, uninformed and weak. Women & children are paying incomes that are relatively poor compared with males. A slavery structure remains, which continues from generation to generation. A comprehensive law on construction companies is required and must include an appropriate regulatory authority for its compliance at the state and district level.

Anu Rai and Ashis Sankar (2012) suggest that the construction sector has the largest number of unorganized labors in India next only to the agricultural sector and women form almost half the workforce as unskilled labourers with no occupational mobility. Construction industry attracts female workers. Poverty being the main cause, the worst affected are single and destitute women, with

children to support. Men who come in as small boys, assist the masons for some years as helpers, finally, graduate as masons, some of whom later become contractors and move up the social ladder. It is also suggested that 20% of jobs on government construction sites should be reserved for women.

### OBJECTIVES OF THE STUDY

1. To identifying different obstacles posed to effective practices in environmental sustainability.
2. To research the essence and extent the use of natural resource consumption & damage.

### HYPOTHESIS

Ho1: There would be no significant different between Gender & Construction Activities Factors

Ho2: There would be no significant different between Age & Construction Activities Factors

### RESEARCH METHODOLOGY

Methodology for research presents design, theoretical purpose, & hypothesis testing, sampling process, research tool, reliability test, analysis techniques, & questionnaire. The research argues that work ethical be studied in construction activities in Bangalore, Karnataka.

### RESEARCH DESIGN

This design of assessments is an edge function that defines data collection & investigation. It deals the technique required to perform the analysis & characterizes the concept of the data to be obtained (birks & malhotra & in 2003). The research is of a simple nature & scientist used a structured sample to obtain important facts. The researcher used proper quantitative methods & processes to analyze & interpret the data and to conclude.

### DATA COLLECTION

#### Primary Data

Original data collected from teacher education relating to the period & days of choice of the

respondents were requested to fill out the questionnaire and share their views. To achieve the goals a survey analysis was performed utilizing a well-framed & organized questionnaire, appropriately by the respondents.

**Secondary Data**

These subordinate estimates included within this analysis remained comprised of National & Foreign Newspapers, Publications, Journals & other Documentation. The new study-related knowledge was obtained from the IIM Bangalore libraries.

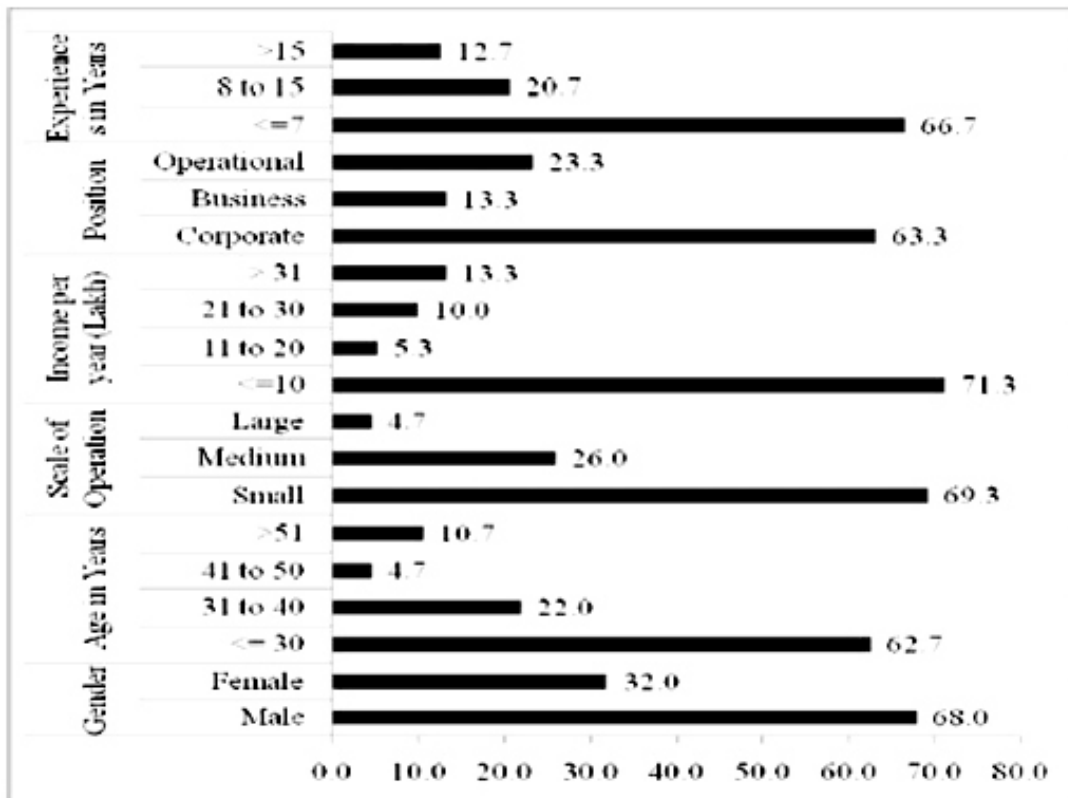
**Statistical Tools Used**

Appropriate researches tools have been utilized regarding examine these statistics. The data was checked first validity and reliability and arithmetical apparatuses utilized regarding examination are,

standard deviation and mean , descriptive statistics, Chi-square, Reliability Test, Correlation Method, Regression

**DATA ANALYSIS, RESULT AND DISCUSSION**

The word 'analysis' applies to the measurement of such measurements along with the quest for interaction correlations that occur between various data classes (Kothari, C.R., 2010). The focus throughout the analyses is on finding trends & trends in the results. This section deals with the study & review of the knowledge obtained from 150 respondents in Whitefield, Bengaluru who belonged to building activities. Utilizing informative & inferential measures, the data obtained were tabulated, evaluated & analyzed. Data processing & evaluation is grouped as per the study objective.



The demographic study in Figure 1 indicates that 68 % of respondents are male, & 32% are female. The female proportion indicates decrease. It indicates that 62.7 per cent of respondents are in the age category of < = 30 years, 22 per cent are 31-40 years old & 4.7 per cent are 41-50 years old & 10.7 per cent are > 51 age group. And it could be considered that the largest number were < = 30-year age range, since it is the typical era of operating in the area of building, fresher & early years of their profession.

**Level of agreement with demographic variables & factors relating to Construction practices among construction specialists.**

Separate sample t-test & one-way ANOVA experiments were performed to analyze the importance of the ties among them. 6 theories to be tested proceed as follows:

**Ho 1: There would be no significant difference between Gender & construction activities Factor Scores.**

**Table 1: T Test for Gender Vs. construction activities Scores**

		N	Mean	SD	t	Sig
Construction Promotion	Male	106	3.48	1.28	.059	.008
	Female	44	3.34	1.22		
	Total	150	3.38	1.26		
Construction Management	Male	106	3.45	1.22	.247	.002
	Female	44	3.41	1.24		
	Total	150	3.41	1.23		
Construction damage	Male	106	3.88	1.31	.745	.006
	Female	44	3.70	1.00		
	Total	150	3.76	1.24		
Problems in Promotional	Male	106	3.44	1.26	.376	.000
	Female	44	3.43	1.19		
	Total	150	3.43	1.23		

		N	Mean	SD	t	Sig
Construction Waste	Male	106	3.48	1.20	.419	.005
	Female	44	3.34	1.23		
	Total	150	3.43	1.21		
Air Pollution	Male	106	3.73	1.27	.257	.007
	Female	44	3.37	1.02		
	Total	150	3.47	1.21		
Source of Air pollution	Male	106	3.58	1.19	.415	.005
	Female	44	3.50	1.23		
	Total	150	3.56	1.20		
Impact of pollution	Male	106	3.54	1.16	.247	.002
	Female	44	3.41	1.32		
	Total	150	3.50	1.21		
Performance	Female	44	3.34	1.33		
	Total	150	3.50	1.19		
Builders CSR	Male	106	3.69	1.05	.422	.001
	Female	44	3.30	1.37		
	Total	150	3.57	1.16		

Source: Primary Data

Table 1 is the independent, gender-based, t-test analysis of respondents' perceptions. Construction variables & practitioner mean, SD & importance of value may be found in the graph. Important association between gender and factors of building activities is developed from independent t-test analyses. There is a correlation between influences related to gender & building activities. In the field of gender there is a divergence in opinion about all issues relevant to construction activities. The findings reveal that the gender wise, mean & SD meaning vary. In addition, as per the t-test, there were substantial variations among the influences of gender & construction activities.

**Ho 2: There would be no significant difference between Age & Construction activities Factor Scores.**

**Table 2: F Test for Age vs. Construction activities Factor Scores**

		N	Mean	SD	F	Sig
Construction Promotion	<= 30	94	3.30	1.25	.059	.002
	31 to 40	33	3.42	1.32		
	41 to 50	7	4.57	0.53		
	>51	16	3.25	1.18		
	Total	150	3.38	1.26		
Construction Management	<= 30	94	3.39	1.24	.745	.000
	31 to 40	33	3.42	1.23		
	41 to 50	7	3.86	1.35		
	>51	16	3.25	1.18		
	Total	150	3.41	1.23		
Problems in Promotional	<= 30	94	3.39	1.22	.415	.007
	31 to 40	33	3.45	1.25		
	41 to 50	7	3.86	1.07		
	>51	16	3.44	1.41		
	Total	150	3.43	1.23		
Construction Waste	<= 30	94	3.43	1.22	.711	.009
	31 to 40	33	3.48	1.28		
	41 to 50	7	3.71	0.95		

		N	Mean	SD	F	Sig
	>51	16	3.25	1.18		
	Total	150	3.43	1.21		
Air Pollution	<= 30	94	3.45	1.18	.376	.003
	31 to 40	33	3.42	1.25		
	41 to 50	7	3.43	1.40		
	>51	16	3.75	1.29		
	Total	150	3.47	1.21		
Source of Air pollution	<= 30	94	3.55	1.19	.236	.002
	31 to 40	33	3.58	1.20		
	41 to 50	7	3.86	1.07		
	>51	16	3.44	1.41		
	Total	150	3.56	1.20		
Impact of pollution	<= 30	94	3.49	1.24	.059	.008
	31 to 40	33	3.58	1.12		
	41 to 50	7	3.86	1.35		
	>51	16	3.25	1.18		
	Total	150	3.50	1.21		
Living space	<= 30	94	3.54	1.11	.247	.002
	31 to 40	33	3.48	1.20		
	41 to 50	7	4.00	1.15		
	>51	16	3.94	0.85		
	Total	150	3.59	1.11		
	<= 30	94	3.53	1.21		

		N	Mean	SD	F	Sig
Nature/Biodiversity	<= 30	94	3.53	1.21	.376	.006
	31 to 40	33	3.79	0.82		
	41 to 50	7	3.00	1.29		
	>51	16	3.31	1.20		
	Total	150	3.54	1.14		
Construction/constructing competency	<= 30	94	3.47	1.22	.227	.007
	31 to 40	33	3.67	1.05		
	41 to 50	7	4.00	0.82		
	>51	16	3.13	1.36		
	Total	150	3.50	1.19		
LED/CFL Bulbs Performance	<= 30	94	3.44	1.20	.415	.005
	31 to 40	33	3.55	1.15		
	41 to 50	7	4.43	0.53		
	>51	16	3.38	1.36		
	Total	150	3.50	1.19		
Builders CSR	<= 30	94	3.51	1.17	.247	.002
	31 to 40	33	3.64	1.17		
	41 to 50	7	3.86	0.90		
	>51	16	3.69	1.25		
	Total	150	3.57	1.16		

Source: Primary Data

Table 2 is the autonomous, age-based, t-test study of respondent expectations. Construction activities & practitioner say SD and importance of meaning may be found in the graph. Important association

between age & factors of building activities is developed from the F test studies. There is a correlation between influences of age & Construction activities. There is a divergence in opinion in age group on those aspects in Construction activities. The findings indicate a wise age gap, mean & SD meaning. In addition, there were substantial variations between age & Construction activities according to the F-test, significant value are < .04.

### CONCLUSION

Environmental concerns are a big problem in today's environment and sustainable structures are more to be embraced by the architectural design community and other architects. Sustainable building systems can help maintain the combination of economic, social & environmental efficiency during construction implementation. The planning, development, service, reconstruction and demolition processes of a building take into account all core components like content, architecture, etc. The findings showed that the overall degree of concern for green building contemplations is poor. More work is required to uncover levels of issues that remember the true aim of breathing life into the development, social case, and execution of green building musings in Bengaluru.

### REFERENCES

- Saad Sarhan, Christine Pasquire, Emmanuel Manu and Andrew King, 2017. "Contractual governance as a source of institutionalized waste in construction: A review, implications, and road map for future research directions", International Journal of Managing Projects in Business, Vol. 10 Issue: 3, pp.550-577.
- Sabarirajan A.Meharajan and Arun, 2010. 'A study on the various welfare measures and their impact on QWL provided by the Textile mills with reference to Salem District', Tamil Nadu, Asian journal of management research.
- Saheed O Ajayi, Lukumon O. Oyedele, Kabir O Kadiri,

- Olugbenga O Akinade, Muhammad Bilal, Hakeem A Owolabi and Hafiz A Alaka, 2016. "Competency based measures for designing out construction waste: task and contextual attributes", *Engineering, Construction and Architectural Management*, Vol. 23 Issue: 4, pp.464-490.
- Sakthivel S, Pinaki Joddar, 2006. 'Unorganised Sector Workforce in India Trends, Patterns and Social Security Coverage'; *Economic and Political Weekly* May 27.
- Salwa Hanim Abdul-Rashid, Novita Sakundarini, Raja Ariffin Raja Ghazilla and Ramayah Thurasamy, 2017. "The impact of sustainable manufacturing practices on sustainability performance: Empirical evidence from Malaysia", *International Journal of Operations & Production Management*, Vol. 37 Issue: 2, pp.182-204.
- Samira Omar Asem and Waleed Y. Roy, 2010. "Biodiversity and climate change in Kuwait", *International Journal of Climate Change Strategies and Management*, Vol. 2 Issue: 1, pp.68-83.
- Anu Rai and Prof. Ashis Sankar, 2012. 'Workplace Culture & Status of Women Construction Labourers: A case study in Kolkata, West Bengal', *Indian Journal of Spatial Science*, Vol-3, IJSS, pp44.
- Anupa Manewa, Mohan Siriwardena, Andrew Ross, Upeksha Madanayake, 2016. "Adaptable constructing for sustainable built environment", *Built Environment Project and Asset Management*, Vol. 6 Issue: 2, pp.139-158.