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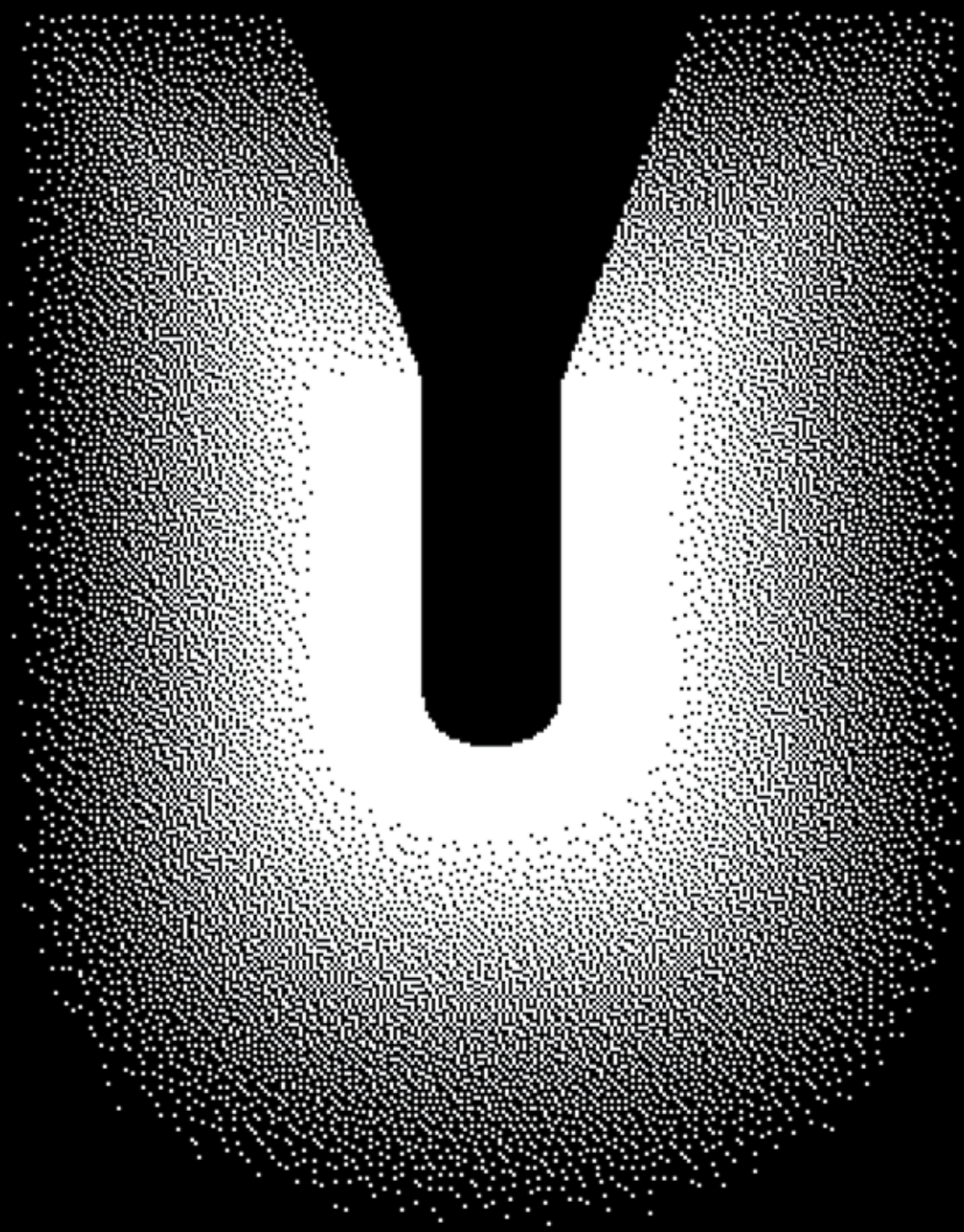

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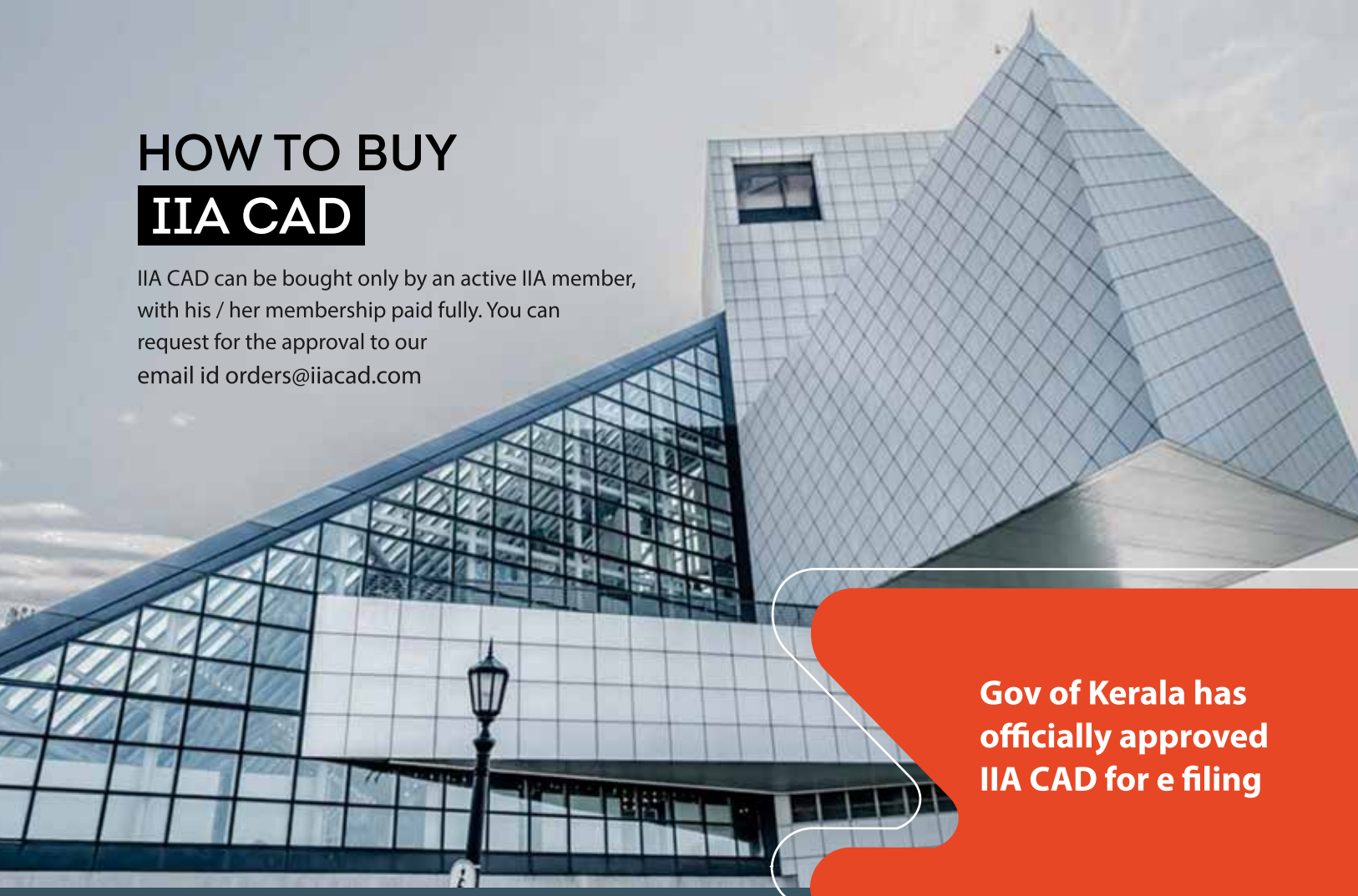

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EDITOR'S NOTE

Universality is defined as the quality of involving or being shared by all people or things in the world, or in a particular group and the quality of being true in, or appropriate, for all situations.

The theme for the November issue of JIIA is *Universal.*

When it comes to architecture, universality can be achieved across time, place, culture, gender, age, physical and mental abilities and a lot more. Universal Design promotes the idea that a building or space can be built and designed in a way that makes it accessible for all people and to the fullest extent possible. Architects need to develop a general intent in this direction in their design approach. Universal Design practice engages more with questions relating to the social and political role of architects.

Architect Ronald L. Mace has coined the term Universal Design (UD). UD has been incorporated into declarations of the United Nations and national policy statements of many nations. The built fabric of cities is experienced by many as hostile to their bodies, mobility and understanding of space. Better design with smarter and more sensitive solutions can remedy this situation.

The *Opinion* Section of the December issue discusses the green rating systems and their relevance. Prof. Dr. Aradhana Jindal is in Dialogue with renowned architect from Chandigarh, Ar. Namita Singh.

We thank you for your encouraging responses and wish to receive more inputs from the members towards the various columns.

Design has become a universal medium for expressing ideas, raising fundamental questions, and addressing social challenges.
Jens Martin Skibsted

Ar. Lalichan Zacharias
Editor

EDITORIAL TEAM

PRESIDENT'S MESSAGE

Dear Members,

Season's greetings for the new year 2022. Wish you all good health and an adaptive approach to the emerging uncertainty from time to time.

We have just crossed the 25000 mark in membership which includes the inactive members also. It is imperative that all become active for the better progress and participation in the affairs of the Institute.

Recently I had the opportunity to participate in a programme organized at Vishakhapatnam by the IIA Andhra Pradesh Chapter. The Chief guest, the Vice Chancellor of Andhra University, spoke at length about the necessity for an exclusive University for Architecture on the lines of the Jawaharlal Nehru University of Architecture and Fine Arts at Telangana. He was keen on establishing this, in the near future, which is a step in the right direction. We can put forward a proposal to the respective state governments and make a beginning. It may take some time but can ultimately happen.

The online plan approval process is implemented by many states but it has to become more effective to achieve its stated purpose. Even though the online approval process is completed there is a considerable delay thereafter causing immense loss of time and effort. So it has to be insisted that once the plans are approved online, all the documents and certification are in place and verified, the next step is that the system should be enabled to generate the required form for the fee to be paid under various heads. Once the payment is made online and confirmed, the approved plans should be downloadable by the applicant/architect. This has to be discussed with the authorities concerned, at both, the Chapter and Centre levels by the respective Chairmen to make it happen for the benefit of all.

The IIA CAD has gained acceptance and is implemented into the Auto DCR in some states. We appreciate the concerned for this effort. I request the other Chapters also to follow upon this with the authorities, with the requisite support from the Committee Chairs. Our members, whenever they purchase new or additional software should opt for IIA CAD as it is exclusive to IIA members.

Best Wishes for the New Year

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COMMENTS

A journal plays an integral role in the communication between the institute and its members. If we want to strengthen our communication, then it's necessary to have clarity of thoughts, which should be presented in an optimistic approach. JIIA has been a knowledge-sharing platform for the members since its inception. JIIA communicates the best practices and research activities undertaken by the members to the audience. The success of JIIA ensures that all the members are up-to-date with the evolving architectural styles and ideas. I firmly believe in this, that the content, the knowledge, and research presented in the Journal are being worked out appropriately in cohesion. For the same, I would like to applaud the efforts put in for the successful publication of each issue.

Ar. Varun Saini
EC Member
IIA Northern Chapter

Was catching up on the IIA Journal. Kudos, you really raised it to a new level Great pics, sketches and site sections plus design drawings. Nice to see the Myanmar trip.

Ar. Rana Bhattacharya

We welcome your comments and suggestions.

Please write to us at **jiiaeditorial@gmail.com**

THEME

WHAT IS 'UNIVERSAL' IN ARCHITECTURE?
THE LARGER CONTEXT

One may inquisitively wonder, if the praxis of 'Architecture' has lost itself in an identity crisis today? If one has to introspect and reflect on the built environment we are a part of today, we realise that various decision-makers with diverse views have come and gone, new construction techniques and trendy architectural vocabularies have emerged, there has been an ever-evolving opinion on aesthetics, shifting societal beliefs, a dead end of promising paths and a number of environmental and economic challenges, leaving us where we are today- in a plurality of live architectural traditions.

What then, is the true meaning of 'Universality' of architectural design?
When the very definitions of design within a complex plural cultural matrix and highly technologically connected human civilization is constantly changing, what is the significance of universality, heterogeneity, contextualism, rootedness, regionalism and identity in architecture?

Do we call this the age of universal design, one size fits all, within architecture?
We have identical buildings emerging irrespective of climate, context, and culture.

Is this what we call 'universality' of architectural design?
In a country like India, where syncretic view is common, where pluralism is embedded in the very social fabric, the separation of building design from thinking has set in. Architectural practice tends towards an increased generic notion and standardization but has this led to a widening of the perceptual gap in our understanding of the real needs of societal infrastructure.

Even architectural education across several institutions seems to have adopted a tangential trajectory to escape from the rigours of real-world problems of degenerating human habitats, economics and environmental challenges. Has this led to the younger generation of architects to being singularly inspired by the global lens of architecture alone with its generic perceptions of aesthetics and function?

Are they forsaking their legendary ancestral heritage of symbolic wealth and ethical responsibility? Are they losing the sensitivity or sensibility to the needs of Indian society?

Definitely there are extraordinary opportunities for the architectural profession today. Rather than competing with the so called industrially developed societies, maybe what India needs is the validity of 'universal' ancient truths embedded in the inherited codes which shall allow the blossoming of the arts in a time not yet forgotten. It is then interesting to note that even being universal in design, could have a certain degree of contextualism to it. Yes, there is a global perception of design being accessible, user-friendly and functional irrespective of age, gender and ability especially at a time when we are all so connected, thanks to technology, and the blurred geographical and cultural boundaries. You could end up with a well-functioning building alone that works irrespective of the context it stands on, but is that architecture? That approach alone could lead to a homogenous sterile built environment, causing a loss of identity by disregarding the belongingness to the place.

Could one endeavor for universal vision in design for the challenges we face, but at the same time develop solutions that are truly local and contextual? To find clues inherent in the diversity of our environmental and social conditions, in the lineage of ideas embodied in architectural testaments across time and in the storehouse of knowledge which have shaped our world view, but also help carve an identity for ourselves in the world.

The drought of present-day architectural movements indicates the profession is no longer questioning itself—and that's a

problem. If most architects in India today were asked to name their theory, describe their design philosophy, or narrate what design principles motivate their work, it could yield confused responses. As Laurie Baker once said, "Gulf houses have started mushrooming in the paddy fields of Kerala". Is this what we call a global perception of architecture? The takeaway is that today's architects have little to say about what they design and why.

The issue isn't with the aesthetics of buildings, for many are striking. Nor is the problem with function for most of them work as intended. But most of them seem random and impulsive, as if no guiding value rooted them into existence. Some of the designs even Googled, Pinterested or Instagrammed into creation only to reappear on Google, Pinterest and Instagram, because the more sensational the better today, isn't it? Even when there is specified rationale, it is often facile, or invisible in the work, or based on a theoretical position that time has invalidated.

More than a mere ingredient in a building's conception, a SITE is both its physical and metaphysical foundation. How then do you define design to be universal on such a site?

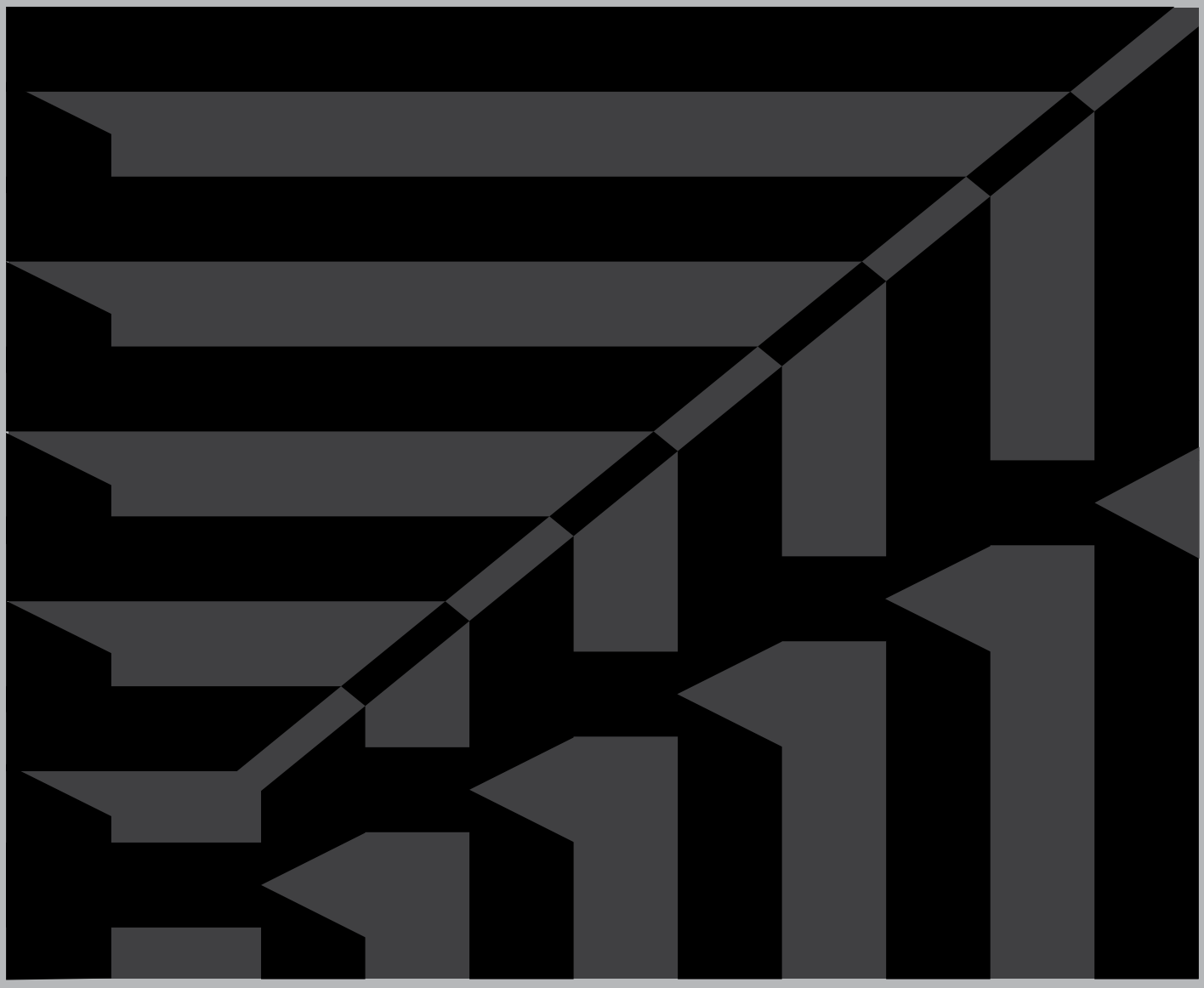
Could universal approaches to architecture shape and reinforce positive behaviour in its users and be persuasive, rather than be voiceless aesthetic gestures or inconsiderate form making and unintelligible architectural gymnastics? Could universal built environment provide solutions to anthropogenic fallouts of calamities such as war, poverty, pandemics, hunger, preventable diseases and death, intolerance, illiteracy, and climate change.

What if the purpose of universal architecture is to improve human life? Create timeless, free, joyous spaces for all activities in life. The infinite variety of these spaces can be as diverse as life itself and they must be as sensible as nature in deriving from a main idea and flowering into a beautiful entity. What if the universality of architecture is not in the tangibles of form and function, but in the overriding essence found in the intangibles, life–heart–soul–spirit–freedom–enduring within the structure.

The collective needs of the human being and the subtle variations of the individual are the source for real universal architecture as well as, of course, the natural environment and the natural use of materials. Thus creating – new- changing- to infinity yet timeless 'Universal' architecture.

So my dear readers, read on, engage in deliberations, articulations, dialogue and discovery in architecture through the Journal of the Indian Institute of Architects !

Dr Pratheek Sudhakaran



RESEARCH

Exploration of Human-Nature-Connectedness in Residential Environments
Vishakha Khandve, Dr. Vasudha Gokhale

STUDENT WORK

Centre For Relief, Rescue And Recuperation
Sneha Kripa T.S., Dr. Gayathri Aaditya, Ar. Prashansha Srivastava

•

Arshi Nagar, A Cultural Tourism Hub: Case Application in Katwa, West Bengal
Saoni Sanyal, Prof. Sanghamitra Sarkar, Prof. Sanjib Nag

EXPLORATION OF HUMAN-NATURE-CONNECTEDNESS IN RESIDENTIAL ENVIRONMENTS

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ABSTRACT

Globalization and urbanization have disconnected societies from nature -physically, materially, and psychologically, discounting human's inherent affinity and desire to live in natural surroundings. Residential facilities need a comfortable living environment that call for connectedness with nature. In high-density urban areas, the biodiversity of surroundings is declining due to increasing construction activities encroaching on the natural surroundings. This aspect is adversely affecting the people living in high-rise apartments by disconnecting them from nature. This research investigates the relationship with nature that affects urban dwellers' residential satisfaction. It presents a study comparing residential satisfaction between occupants residing in bungalows and apartments concerning the presence of the natural environment. Human-nature connectedness, people's perception and aspirations about availability of nature at their residences is examined. The analysis revealed that residents try to satisfy their inherent desire for living with nature as far as possible irrespective of building typology. Analysis unfolded that provision of various spaces facilitating connectedness dictates people's satisfaction regarding their residence. It is stressed that availability of spatial features providing connectivity with nature provides comfort, tranquillity, mental peace, and enriched experience of life.

Keywords: *Nature, Residential Satisfaction, Green Environment, Bungalows, Apartments, Human Well-Being.*

1. INTRODUCTION

From historic times nature is an indispensable part of residential spaces. People's needs always dictate the spatial character including a small space like a room, a residence, or the whole landscape. It is stated that people's well-being considerably influenced by location, site conditions, adequate ventilation, and presence of services, infrastructural facilities, and green spaces. (Associations between Dwelling Type, Environmental Aspects of Housing Welfare, and Residents' Sense of Insecurity in Bandar-Abbas, Iran., 2015). (Moradi, et al., 2015). People possess an inherent aspiration to spend their life in natural surroundings, where they find mental peace. House is an entity where a person resides and spends considerable time where the importance of natural surroundings is established in research scholarship. The relation of nature with the built mass and living spaces, are of paramount importance, as living in green surroundings is human's psychological need. However, as cities become large, humans' natural tendency and aspirations for association with nature remain dissatisfied. (Burchett, et al., 2008) Ever-increasing urbanization and consequent growth in urban footprints, people are compelled to reside in high-rise apartments; disconnecting them with nature. However, bungalows or detached houses are equipped with natural ventilation and light, green spaces facilitating the dwellers to enjoy natural surroundings that provide them increased contentment with the living spaces they occupy. (A Comparative Study on the Effect of Nature on Satisfaction with Residence at Detached Houses (Single Unit) and Residential Building Complexes (Apartment), 2015 a). (Kooshali, et al., 2015 a). Humans are constantly attempting to bridge this void by bringing nature into their day-to-day life in various possible ways.

Biodiversity is declining worldwide in many high-density urban areas as a consequence of the conversion of nature to the constructed environment disconnecting the urban populations from nature (Larcombe, et al., 2018). Based on biophilia theory (Chen, 2012), this research assumes that a robust human-nature connection improves the people's wellbeing, besides it raises their awareness about nature's importance in their life-space. It is primarily aimed to look into the interrelationship between occupants and nature, enriching the conceptual realization of the biophilic approach. The objectives are threefold first, to elucidate how various spatial elements facilitate users with nature's association, actively and passively in different building typologies. Secondly to delve into dwellers' views regarding connectivity to nature offered by their living space. The third is to delineate the residential satisfaction of occupants of two different building typologies from nature connectedness point of view. It presents responses of occupants of apartments and bungalows, regarding the proximity of natural surroundings in their residences and subsequent satisfaction offered by their living places.

1.2 Biophilia: Man, and Nature Interrelationship.

House was the very first architectural structure made by man for himself for providing comfort and safety. The house design has a bearing on environmental conditions, lifestyle of inhabitants, socio-economic and cultural aspects . (Relation of cultural and social attributes in dwelling, responding to privacy in Iranian traditional house, 2011) (Shabani, et al., 2011). A residence's spatial environment invariably addresses the inhabitant's everyday needs, where an individualistic meaning is attached to it. (Schneider, et al., 2005)An adequately designed residence promotes health of inhabitant's psychologically (Housing, social capital and stronger communities, 2001) (Hugman & Sotiri, 2001). The presence of landscaping elements like greenery, water-body, good air quality, accessibility increases the built environment's quality and affects the residence's real estate value (Value of scenic views: Hedonic assessment of private housing in Hong Kong, 2009). (Jim & Chen, 2009). It is appreciated that prolonged occupancy in natural surroundings enhances people's mental health creating a positive sensation leading to contentment and well-being. However, unprecedented increased population and urban expansion in cities force people to opt for multi-storied apartments offering less access to nature. This phenomenon adversely affects urban dweller's residential satisfaction, where they spend their precious time, and they feel disconnected with nature (Effect of Green Space on Resident`s Place Attachment in Residential Spaces (Case Study: Villa and Apartment Dwellers in Shiraz), 2020) (Moztarzadeh & Mohajer, 2020).

The term Biophilia, was coined in 1984, by E.O. Wilson that indicate human inherent inclination towards nature where the biophilic approach to design represent architecture that incorporate living organisms, plants, natural light, air and organic features. The biophilia theory postulates that a healthy and good connection established with the nature is essential at the places

where people live and perform day-to day activities. (Chen, 2012) Green spaces promote physical well-being, interpersonal interactions, and mental peace, affecting an individual's life. Using landscaped spaces for interaction with others results in enhanced social connectivity and relationship and subsequent happiness and vitality. (The Role of Nature (Green Space) in Parallel with Promotion of Relaxation and Satisfaction of Residents of Residential Complexes, 2015 b). (Kooshali, et al., 2015 b). An individual's environmental attachment stimulates positive attitudes towards environmental conservation. (Sense of place amongst adolescents and adults in two rural Australian towns: The discriminating features of place attachment, sense of community and place dependence in relation to place identity, 2003). (Pretty, et al., 2003). The advantage of man–nature attachment is reciprocal as it exhibits a two-way relationship. The environment's ability to evoke different personal memories defines the sense of belonging. (Place and Identity Processes, 1996) (Twigger-Ross & Uzzell, 1996). Research on human-nature connection is performed at cognitive and emotional levels where the physical component of this relationship is not much explored. Nevertheless, that is essential in explaining an individual's sense of association with nature (The Nature Relatedness Scale, Linking Individuals' Connection With Nature to Environmental Concern and Behavior, 2009).(Nisbet, et al., 2009).

1.3 Identity and Place Attachment

The spatial design of residence dictates the human and place interrelationship, beside it also affects human behaviour. (Sense of Place as an attitude: Lakeshore owners attitudes toward their properties, 2001) (Jorgensen & Stedman, 2001). Environmental attachment has a positively association with a notion of ownership that an individual possesses regarding their home environment. People often feel good and comfortable in green outdoor spaces where they stay longer than others . (The measurement of place attachment: Personal, community, and environmental connections, 2010) (Raymond, et al., 2010). Place attachment exemplifies places and people's interrelationship, developed through love, friendship, affection, kindness, and tendency (Defining place attachment: A tripartite organizing framework, 2010). (Scanell & Gifford, 2010). People are emotionally attached with their home environment that satisfies their intangible and tangible needs as per their lifestyle. Place attachment is comprised of physical characteristics, activities, and psychological aspects that equip it with a desirable and unique sensory and behavioural character (Place Attachment: Conceptual and Empirical Questions, 2001) (Hidalgo & Hernandez, 2001). An adequately designed residential facility with landscaping features emotionally bound an individual with the place. (Williams, et al., 1989) Besides, it represents the principal link connecting the human and living environment catering to humans' inherent desire for sense and belonging. Many a times a green outdoor space within a residence provides it a unique character and identity (Evaluation of Place Attachment Rate in Home, Neighborhood and Urban (Case Study: Shiraz City, Iran), 2016) (Heidari, et al., 2016). People's emotional bonds with the outdoor features are recognized as significant aspects that define connection with nature. Moreover, the man-nature connection represents a value-based attitude. (Meta-analysis of human connection to nature and proenvironmental behavior, 2019) (Whitburn, et al., 2019).

1.4 Resident's Perception and preferences

The need to address resident's tangible and intangible needs to attain the optimum level of liveability is evident in research scholarship. Although efficient spatial design and privacy affect liveability from the resident's perspective, design facilitating outside view and natural light's entry is desirable for sociological and psychological benefits. (Residents' Satisfaction of Indoor Environmental Quality in their Old Apartment Homes, 2011) (Cho, Lee & Kim, 2011). Comfort in a residential facility depends on tangible aspects like air quality, thermal comfort, illumination, and acoustics and intangible aspects like personal space and privacy. A residential unit's performance governs how the occupants use various designed spaces. (Design Quality Indicator as a tool for thinking, 2003) (Gann, et al., 2003). Physical characteristics, activity patterns, and user perception conceptualize an open space . (Perception and Value of Nature in Urban Landscapes: a Comparative Analysis of Cities in Germany, Chile and Spain, 2008). (Priego, et al., 2008). The presence of adequately designed space is a crucial requirement that dictates people's choice of residential facility. A domestic garden, a private open space, affects residential environment's efficiency, offering greater versatility to an apartment. (The Nature of the View from Home: Psychological Benefits, 2001) (Kaplan, r., 2001). The private open spaces facilitating comfortable living environment include a private garden for flats located at ground level, adjoining balconies, terraces and terraces on the roof. Such space's presence increases the apartment's spatial quality offering high comfort levels. Moreover, visually linked outdoor and indoor spaces provide natural surveillance and ensure occupant's safety, particularly children, and older people. (Influence of Private Open Spaces on the Quality of Living In Low-Rise High Density Housing, 2018) (Milanovic & Vasilevska, 2018).

Balconies and terraces are frequently used and important open spaces at the disposal of an apartment owner creating a comfortable living environment. Such spaces also check noise penetration, exposure to excessive heat, and wind. These spaces are widely used to perform various household activities, hobbies, spaces to study or relax. Moreover, they often provide opportunities to communicate with the neighbours and others. Such private functional spaces become significant as they offer space for urban cultivation, growing vegetables, and other plant material; however, this is a luxury in densely populated urban areas. Windows in apartments are used for purpose of providing adequate light, ventilation, and view to outside connect occupants with nature. The type, view quality, size, shape and position of window govern spatial quality of a space. (Freeman, et al., 2015) The built environment is comprised of

living spaces, flora, and fauna, where spaces without air, noise pollution, excessive humidity, and uncomfortable temperature make it healthy. (Risteski, 2017) The influence of green spaces on a resident's mood is realised by an enhanced feeling of an individual's experience of be with nature. It has a bearing with the presence of nature within their residences. (The connectedness to nature scale: A measure of individuals' feeling in community with nature, 2004) (Mayer & Frantz, 2004).

The literature review suggested that users' experiences regarding spaces and surrounding environment provide a contextual understanding of human-nature connectedness. For analysis of this aspect the place experience, representing a person's association with nature are to be studied. (The Distinction between Humans and Nature: Human Perceptions of Connectedness to Nature and Elements of the Natural and Unnatural, 2008) (Vining, et al., 2008). The research established that people have an evident affinity with green spaces. It is stated that enhancing their living spaces by providing facilities to improve their connection with nature could impart a quality life. This research endeavours to figure out the man and nature interrelationship. Next section presents the findings of the same.

2. METHODOLOGY

The methodology includes a questionnaire survey performed online, aimed to demystify the influence of the natural environment present in vicinity, on people residing in two different housing typologies, bungalows, and apartments. The online survey forms were delivered to 160 people, while valid responses obtained were 150 that made the final sample. These included both males and females of various age groups. The human-nature connectedness examined with the activity of using windows to take fresh air throughout the day and looking to the natural surroundings. Besides, the activity performed in the available open spaces providing a link with nature is analysed. People's aspirations and perceptions about the very presence of green, open spaces were examined. This was followed by investigating the user's satisfaction with living spaces regarding the natural element present in their dwellings. The questionnaire included 27 questions with a 5-point Likert scale. The data is graphically and statistically analyzed with SPSS software. The next section presents the findings obtained from the data analysis.

3. ANALYSIS AND FINDINGS

The final sample was 150 respondents that were considered for analysis including 69 males and 81 females belonging to different age and income groups, as presented in fig. 1 and 2 respectively.

The usage pattern of various architectural components and spaces examined. Analysis indicated that people seek to enjoy nature with operating windows available in their residences to take fresh air or look outside. People's desire to take advantage of natural surroundings is reflected by the frequency of various activities during the day. The usage pattern of windows in apartments and bungalows was investigated; the findings are shown in fig.3.

Frequent use of the window was noticed in bungalows. However, the use of windows was also significant in apartments. In both, apartments and bungalows- the windows connected the occupants to the outdoor spaces. The bungalow dwellers enjoy the outdoor view from a window more than an apartment dweller. However, apartment dwellers frequently open windows for a distant view of the landscaped surroundings. A larger number of occupants using windows occasionally was noticed in apartments than bungalow owners. Surprisingly, some bungalow dwellers rarely or never use windows for the view than the apartments, as per respondents, due to safety reasons. Devoting time in spaces like gardens, balconies, terraces for various activities like performing household work, hobbies, gardening, or relaxation is another way to be associated with nature. The respondent's way of using such spaces is illustrated in fig 4 as per the survey responses.

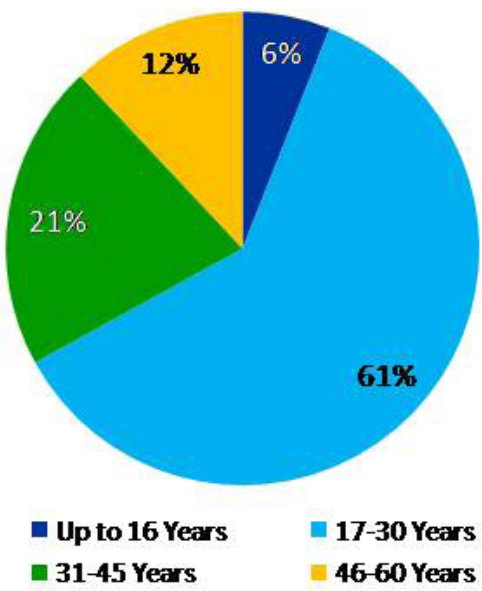

Figure 1: Age of Respondents
(Source: Compiled by Author)

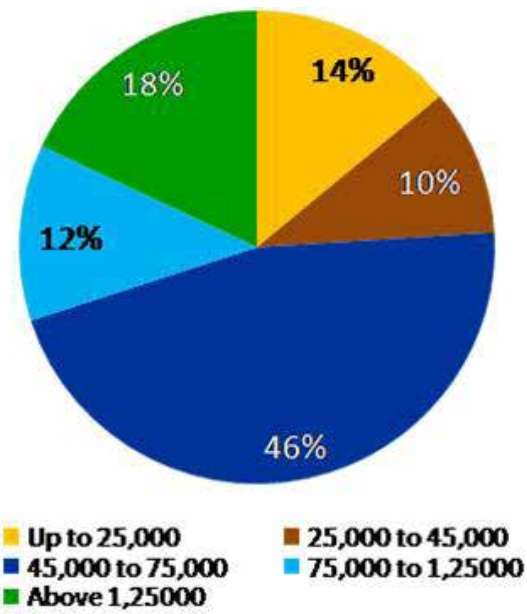

Figure 2: Income
(Source: Compiled by Author)

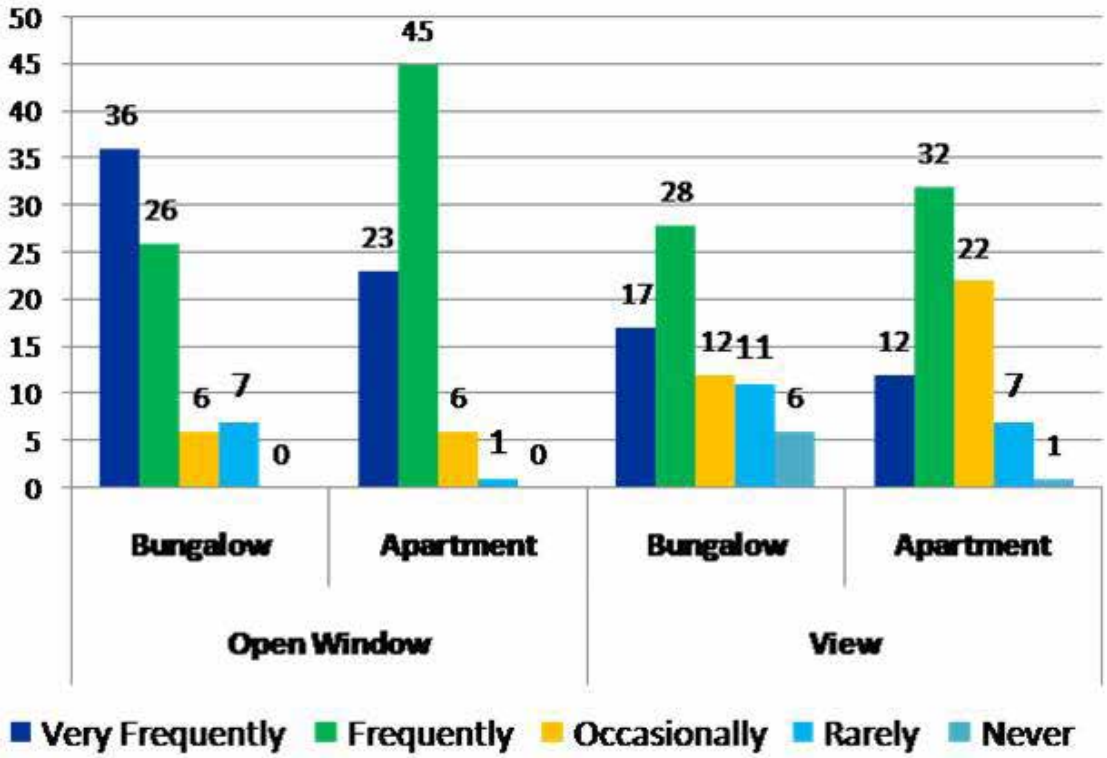

Figure 3: Connecting with nature through windows
(Source: Compiled by Author)

Analysis indicated that apartment owners devote minimal time in leisure activities in available landscaping features spaces in comparison with the bungalow owners. A marginal difference was noticed for performing household work in verandas, balconies and terraces between bungalow and apartment dwellers. This aspect indicates the lesser exposure of other spaces to the outside world in apartments. Besides, there is less space for many activities within the floor plate of the residence. Moreover, spaces like gardens, terraces, balconies in bungalows were more frequently used for exercise and gardening. Those aspects are governed by the individuals' lifestyle and space constraints. The next section includes the findings of statistical analysis using SPSS software.

Null Hypothesis 01: Residential typology has no relationship with the variables representing connectedness to nature. The hypothesis testing is done with Pearson Chi-Square test. For results refer Table 1. Since the p-value is less than significance level (α = 0.05), for variable use of window to have connectivity with nature, the null hypothesis is rejected. However, for other variables: spending leisure time, take view, and perform household activities the p-value is more than significance level (α = 0.05), hence the null hypothesis is accepted. It is statistically established that residents of bungalows and apartments use window to get connected with nature differently. However, the other variables viz. time spent in balconies, terraces, performing household activities and enjoying view are interrelated to a certain extent but the relationship is not statistically significant.

Null Hypothesis 02: Residential typology has no relationship with variables representing people's desire for connectedness with nature. The result of the Chi-square test is presented in Table 2.

Since the p-value is less than significance level (α = 0.05), for the four variables, the null hypothesis is rejected. It is statistically established that apartment owners noticeably miss greenery, outdoor connectivity, availability of fresh air and gardening activity than bungalow dwellers.

Null Hypothesis 03: Variables representing the activities to get connected with nature have no association with gender. The output of the chi-square test is presented in Table 3. Since the p-value is less than significance level (α = 0.05), for the variable "opening windows" hence for this the null hypothesis is rejected. It is statistically established that pattern of opening windows to get connected with the nature is different for different gender. However, the other variable's influence that include spending time and enjoying view of outside environment, performing various activities, gardening, missing greenery and outdoor connectivity is not statistically significant for different genders.

Null Hypothesis 04: Residential satisfaction is not different for apartments and bungalow dwellers. The chi-square test result is shown in Table 4. Since the p-value is less than significance level (α = 0.05), hence the null hypothesis "Residential satisfaction is not different for apartment and bungalow

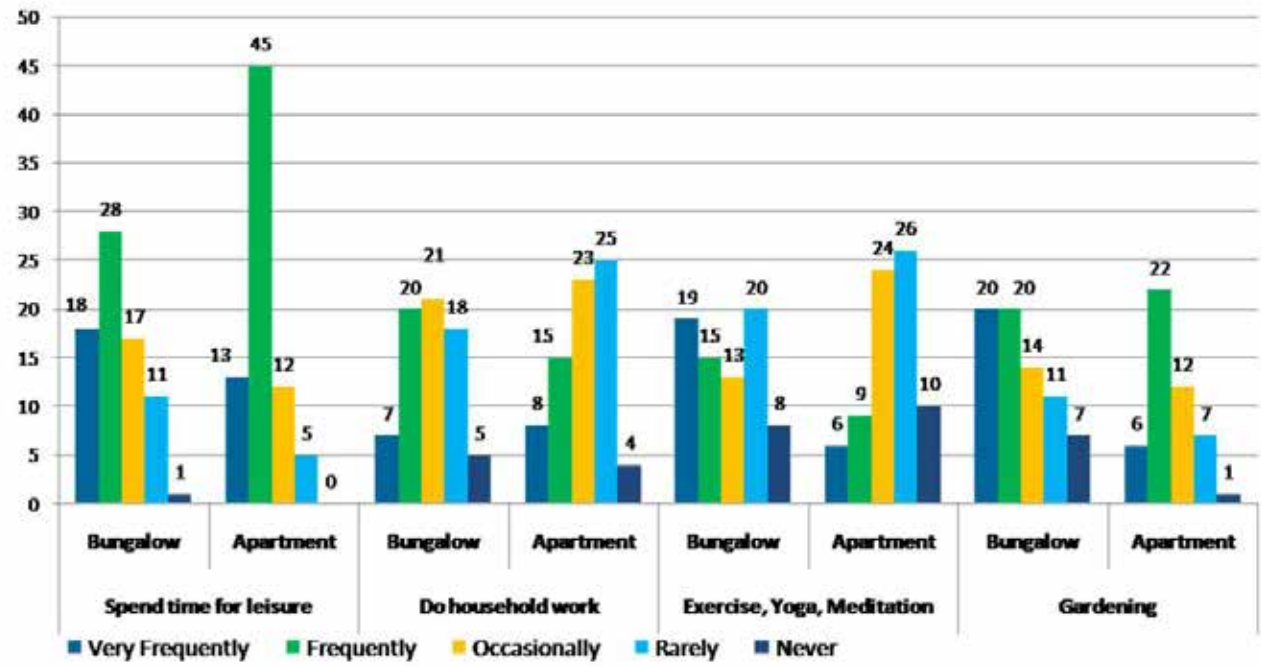

Figure 4: Usage pattern of spaces.
(Source: Compiled by Author)

dwellers" is rejected. It is statistically established that bungalow dwellers are more satisfied than those living in apartments, given the more opportunity available to enjoy nature in day-to-day living.

The study provided evidence about how dwellers of the different building typologies seek connectedness to nature. The variables included active measures such as performing various leisure and household activities while passive measures were just to connect visually with outdoors through windows. Availability of a refreshing view of the natural environment acts as a catalyst for operating windows and this phenomenon is found different in the two typologies. However, the usage pattern was found predominantly similar for different genders. It is noticed that the safety of outdoor spaces is a matter of concern that affects the use of the spaces and elements. It is seen that presence of spaces like balconies, terraces having landscaping elements motivate people to spend more time with nature. Such spaces are readily available in bungalows. However, their absence is primarily realized by apartment dwellers. The aspiration of the urban population to connect with nature is surfaced as the apartment residents found missing greenery, availability of outdoor spaces for performing various activities and views. Data analysis exhibited that people's satisfaction with a building typology influenced by spatial design offering association with nature significantly.

4. DISCUSSION

Connecting with nature directly or just looking from the window reduces stress and anxiety. It has become probably more important in urban areas where people are quite clustered up in high-rise residential apartments. In such circumstances windows are recognized as a crucial feature of a residence for wellbeing and health. People often like to sit on a balcony or closer to a window to enjoy or look outside to get connected with nature. In many apartments, the balconies and terraces are not available- in such cases, windows allow entry of natural light to the indoor spaces, facilitating cross-ventilation and enjoy the neighbourhood or locality's view. Housing units with smaller window areas often look gloomy; besides, they cause a claustrophobic feeling representing a situational phobia triggered by tight, stuffy spaces. A good view encourages occupants to open them frequently to connect with the outdoors and relieve stress. Bungalow typologies often provide more opportunity to the occupants for experiencing natural surroundings and frequently viewing nature that makes them happy and has more place attachment. Analysis indicated that people need landscaping in whatever possible form as nurturing and cherishing plants is an enjoyable experience that enhances their quality of life. Many respondents like to devote time in gardening to build quiet respite amidst their hectic life and alleviate anxiety. Bungalow owners and many apartment residents use balconies, terraces gardens for exercise where the presence of nature positively supports the activity rendering it enjoyable. The apartment residents are not much satisfied as far as their housing facility is concerned, because their urge to connect with nature remained unfulfilled due to the lack of spaces like balconies, terraces, gardens, and ample windows.

5. CONCLUSION

This research established that devoting time in nature helps relieve anxiety and stress, enhancing happiness and wellbeing. People often tend to stare out from windows to associate themselves with the outside world. The analysis indicated that a well-designed window facilitates the penetration of light and sight for views and by and large affects the occupants' wellbeing. The windows in an apartment are invariably associated with several visual and thermal liabilities. People's preference for open green spaces depends on: spatial quality, function, light, ventilation, view and sound. Such spaces offer numerous psychological and health related benefits and add to the economic value to some extent. The existence of the greenery and other natural elements within the residence or in vicinity enhances the perceptual performance of a building. Balconies, terraces and windows facilitate the hearing and seeing experiences that change the occupant's mood as their endocrine, nervous, and immune systems start working. The research established that use of spaces for various home-bound and leisure activities, having a natural environment connects users and the larger world. The residents of buildings with ample greenery and open spaces tend to socialize more and inculcate a stronger bond with neighbours. Such residential facilities create a deeper sense of brotherhood, subsequently reducing crime due to passive surveillance. Gardens, whether big, small, or even a small bush, serve as a stress-buster in a busy daily life. This research supports the applicability of the theory of biophilia that represents the innate need of human beings to connect with nature. It is argued that environmental biodiversity is desirable for human health; however, this aspect is not adequately addressed in urban design, planning and developmental policies in India. The analysis warrants interdisciplinary efforts from architects, planners, and policymakers at top priority, considering the alarming increase in high-rise development in Indian cities. It was revealed that despite evidence of numerous advantages offered by nature, urban dwellers are spending less time interacting with the natural environment. It is stated that the alarming decline in human-nature interactions is likely to affect people's health and their satisfaction with life. Therefore, architects need to follow the biophilic design approach in residential development that ensures the sociological and psychological wellbeing of humankind.

Acknowledgement

The Authors are thankful to Dr. Deepa Joshi for her help in data processing for this work.

Table 1: **Test Results**
(Source: Author)

Variable		Value	df	Asymp. Sig. (2-sided)	Decision
Open window	P	11.243a	3	.010	Null hypothesis rejected
Spend time	P	7.224a	3	.065	Null hypothesis accepted
View	P	8.056a	4	.090	Null hypothesis accepted
Activity	P	3.991a	4	.407	Null hypothesis accepted

Table 2: **Test Results**
(Source: Author)

Variable		Value	df	Asymp. Sig. (2-sided)	Decision
Miss greenery	P	54.714a	4	.000	Null hypothesis rejected
Miss outdoor connectivity	P	42.693a	4	.000	Null hypothesis rejected
Miss gardening	P	46.996a	4	.000	Null hypothesis rejected
Miss fresh air	P	17.855a	4	.001	Null hypothesis rejected

Table 3: **Test Results**
(Source: Author)

Variable		Value	df	Asymp. Sig. (2-sided)	Decision
Gender and open window	P	19.707a	3	.000	Null hypothesis rejected
Gender and spend time	P	4.393a	3	.222	Null hypothesis accepted
Gender and view	P	5.926a	4	.205	Null hypothesis accepted
Gender and activity	P	5.660a	4	.226	Null hypothesis accepted
Gender and missing greenery	P	3.312a	4	.507	Null hypothesis accepted
Gender and outdoor connectivity	P	9.159a	4	.057	Null hypothesis accepted
Gender and gardening	P	8.827a	4	.066	Null hypothesis accepted

Table 4: **Test Results**
(Source: Author)

Variable		Value	df	Asymp. Sig. (2-sided)	Decision
Residential satisfaction	P	24.851a	4	.000	Null hypothesis rejected

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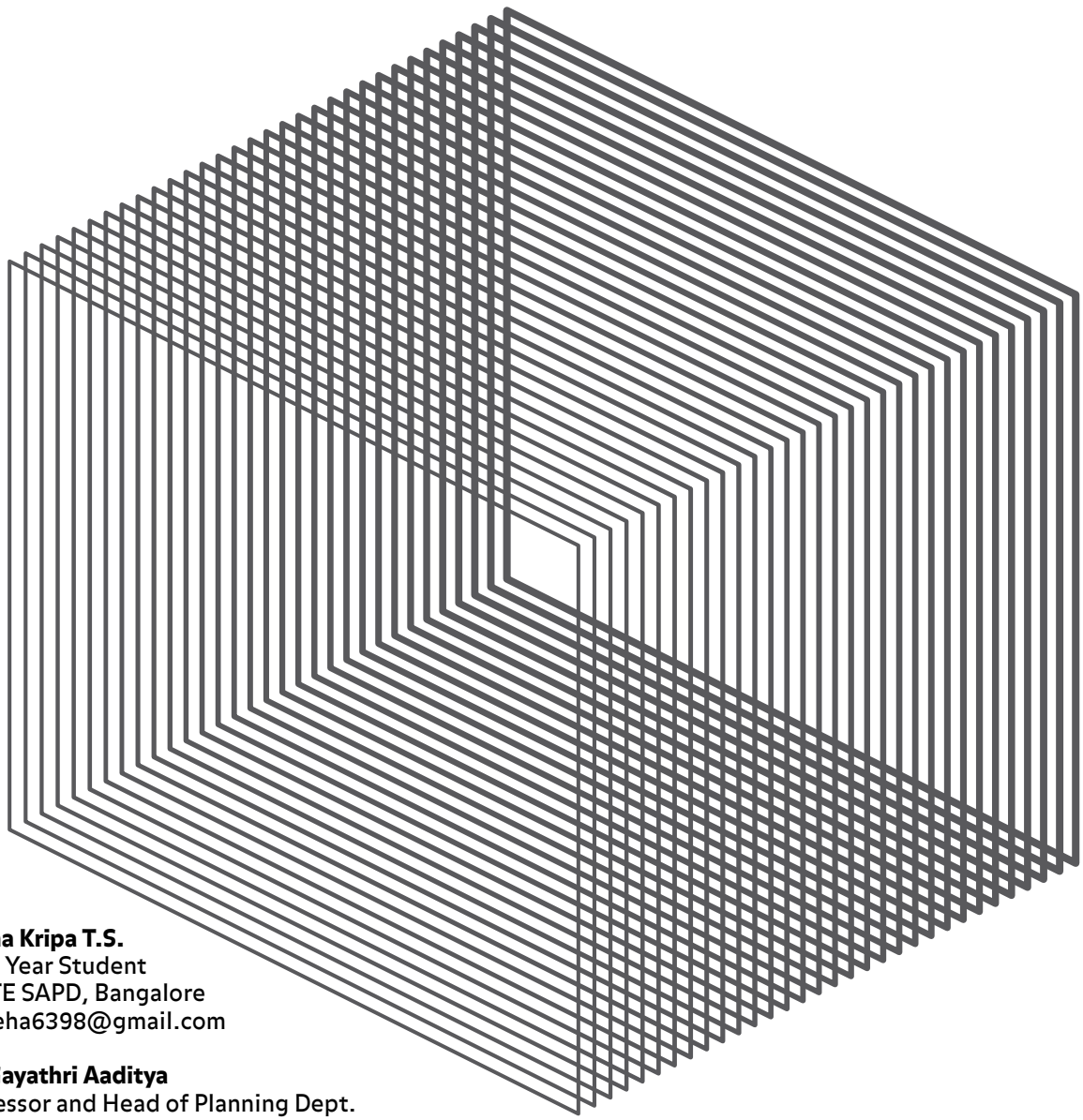
CENTRE FOR RELIEF
RESCUE AND RECUPERATION



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ABSTRACT

To create a better Disaster Management programme that involves effective ways to mitigate disasters, keep up to the principles of preparedness, recovery and to accommodate geographical aspects for a multi-hazard prone disaster country like India. When disaster strikes, three facilities are in need of the hour that goes hand-in-hand: rescue, refuge and recuperation. By studying disaster maps, disaster management hierarchy, case studies related to modularity in structures like Able Nook and Dymaxion, helps understand the efforts required for disaster management. The possibility of having multiple disasters at the same time along with different development and population index, indicate we need to analyze more parameters for disaster relief. In conclusion, with design sustainability and innovation, resilience and mitigation towards disaster can be faster. Disaster management is beyond providing shelter and distributing relief materials - it must be implemented in urban planning, architecture, civil and structural engineering.

INTRODUCTION

Disaster management is compromised as there is no proper consideration with regard to climatic conditions, local materials, skills, cultural, social issues, delay, cost constraints and poor location selection of shelters which leads to poor performance and standard of living and makes it inaccessible for future use.

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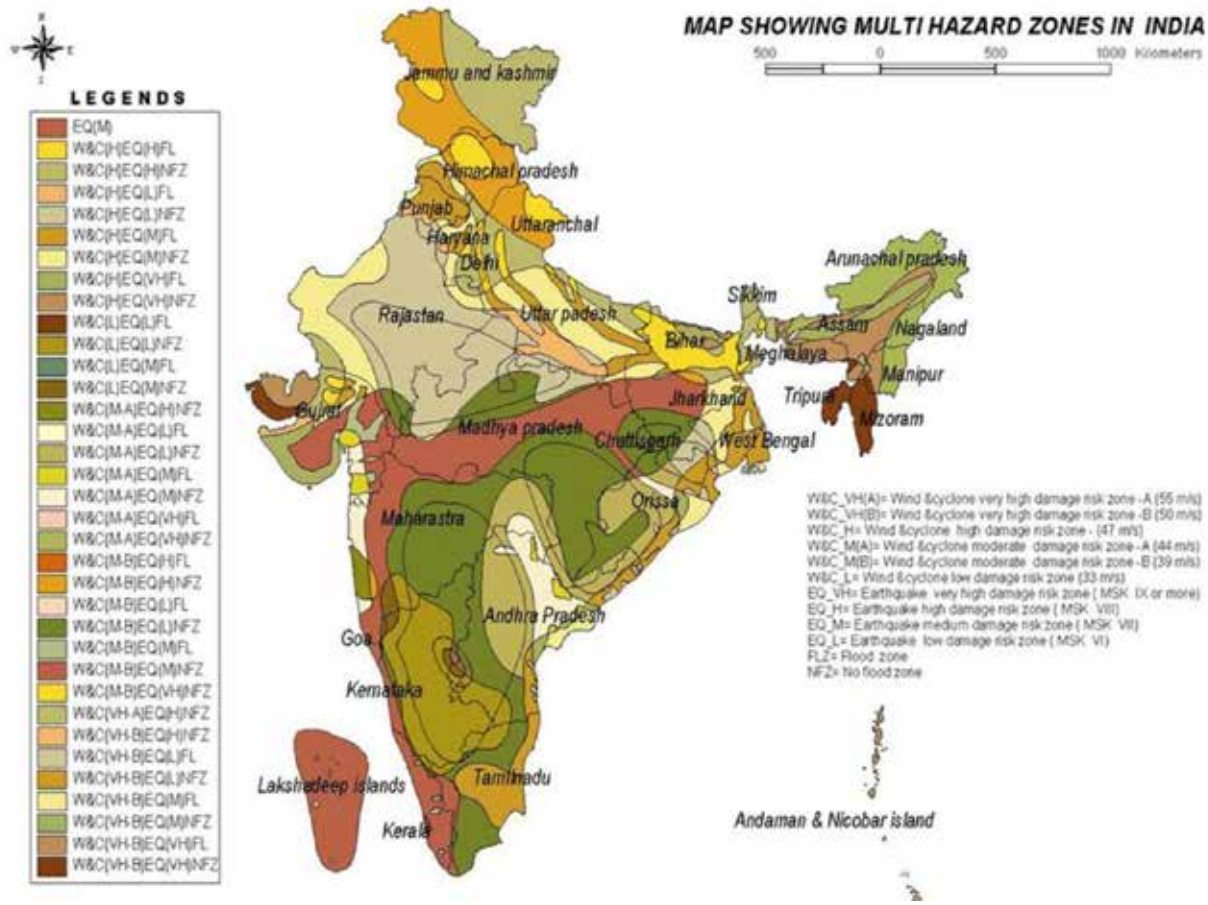
As architects, we have space construction and definition for almost everything. Therefore, even an exclusive space is required for disaster management in order to be prepared for multiple disasters happening simultaneously. Therefore, disaster management needs to be managed without contradiction. With this in mind, this study attempts to fill the gaps that were compromised, especially in such times. Disaster management requires a well-formed chain of action or activities along with responsive infrastructure. Hence, the creation of a design solution was sought, that incorporated: administrative, healthcare and recuperation in one place with climate responsive materials according to the place constraints. It is the need of the hour especially, for a country like India which is a multi-hazard disaster-prone country in both natural and man-made disasters.

PROBLEM STATEMENT : DESIGN IDEOLOGY FOR A RESCUE, REFUGE AND RECUPERATION CENTRE

A rescue, refuge and recuperation District Disaster Management Authority (DDMA) Centre, that is resilient and can act as a training centre to help specialize in disaster situations is the objective of the study. Along with the centre being a refuge and recuperation place during disasters, an incentive that can be proposed to work in tandem with the national or state Disaster Relief Forces, which is relevant and adaptive architecture and inspired by the climate and geographical aspects for resilience and sustainability development in a multi-hazard environment. This prototype design program should ideally work for any given site with modifications relevant to the place, depending on its disaster analysis and vulnerability profile. This can be an example for future DDMAs in other parts of the country for effective disaster management in the future. This is



Multiple Hazard Map of India
(Source: https://nidm.gov.in/easindia2014/err/pdf/country_profile/India.pdf)

Disaster management cycle
(Source: slide share.net)

the overall idea, but to accommodate for mitigation and preparedness, temporary structures are also required. These temporary structures can be put up near the DDMA for effective relief with permanent structures constructed for the same cause.

DESIGN OF TEMPORARY STRUCTURE

- **Aim:** To create a collapsible and retractable disaster resistant structure during times of disaster. The structure will be easily constructed on site and can be carried around. The number of structures depends on the disaster hazard analysis of the vulnerability of the place.
- **Objective:** Disaster management requires efficiency and preparedness. An efficient disaster relief structure can help achieve that and mitigate losses. It can help with economic and social losses by offering more resilience during disasters.
- **Scope:** The structure can be moved around and can fit according to the changing situations. It is a temporary structure that can have multiple uses depending upon the need. It is also COVID-19 friendly.
- **Limitations:** It is a prototype design. The design needs to be reworked in scale and situation with also keeping in mind the availability of resources. Hazard analysis and vulnerability of the place should be done.

LITERATURE REVIEW

The literature review was conducted to understand the qualities required for designing a campsite for refugees:

1) Able Nook *(2 people,2 hours, no tools)*

A versatile shelter was designed by Jason Ross and Sean Verdecia, graduate students at the University of South Florida. It is a prefabricated living module that could be used for either housing, classrooms or even office space. The parts are flat-packed, shipped and can be assembled in about two hours. The design is based on identical and universal aluminum structural insulated panels (SIPS) that clip together without the use of any tools. The floor joists and the columns in the walls are also identical, with the ability to house electrical conduit. The plug-and-play assembly allows for economies of scale during fabrication, efficient shipping, and easy assembly. It can be deployed single or double-wide and can include multiple bedrooms, kitchen, work space, storage and bathroom.

2) Dymaxion

Dymaxion can be an inspiration for disaster shelters? 'Dy' means dynamic, 'max' means maximum and 'ion' means tension. Put forward by Buckminster Fuller who was known for his eccentric thoughts and ideas. His idea can be modified to work for disaster relief and recuperation, especially for a disaster-prone country like India. The materials also can be modified to context and availability depending on context.

The prototype building is made of corrugated steel which is ideal for disaster-resistant construction. The interior walls are made up of wallboards and portholes. The structure is collapsible and can be expanded both horizontally and vertically. This can be used for disaster prone places. An effective disaster relief shelter in comparison to the present ones.

Present day cost is estimated to be approximately 30 lakhs INR (40,000 USD).

IDENTIFIED APPROACH

Studying the disaster hazard chart of India along with the disaster management hierarchy to create an effective program of rescue, refuge and recuperation in India – this is the first thing that happens during disaster situations. Rescue missions are carried out by the National Disaster Relief Force (NDRF) and State Disaster Relief Force (SDRF) of the respective states. The rescued people are handed over to the District Magistrate for allotting a place for the victims. Hence, construction of a District Disaster Management Authority (DDMA) is justified. The next facility required during a disaster crisis is refuge- a place which the victims require for refuge until the disaster subsides. Construction of effective temporary and permanent structures are required. The next facility is the most important one required during disasters, is recuperation – that is, to provide first-aid, counselling and trauma related therapies to the victims. These are hospitals that do not have full-fledged medical facilities such as operation theatres and major scans. Keeping all of this in mind, the requirements, facilities and considerations are made.

Able Nook
(Source: www.ablenook.com)

Buckminster Fuller's Dymaxion
(Source: https://www.archdaily.com/401528/ad-classics-the-dymaxion-house-buckminster-fuller)

REQUIREMENTS AND FACILITIES

1. Administrative Building (staff accommodation and practices)
2. Training building (equipment's/workshop spaces)
3. Refuge Centre (open ground for refuge/ central building)
4. Recuperation Centre (clinic, testing labs, panic and emergency wards, first aid, spaces for therapy)
5. Deployment grounds (helipad, ground transport or water transport according to location)
6. Infirmary and storage for food and medicine
7. Generator and water tank facilities
8. Assembly zones /mess halls or canteens
9. Campsite Disaster relief shelter (Temporary structure)

CONSIDERATIONS FOR SITE SELECTION

The site should be a maximum of 10 km away from the disaster-prone zone. The zone of the site should be at least 4000 sq.m for each, depending on the density, risk and vulnerability. The site should be on the outskirts or within the 5 m radius and should have amenities of a full-fledged hospital and laboratory. The site should be preferably a public land-use site or a donor site. The presence of highways or good connectivity is a must. The attempt should tend towards environmental sustainability and should be at least 10 km away from the main or heart of the city area coverage. The centre should be capable to at least act for a whole zone.

IDENTIFIED PARAMETERS

Climate and location analysis are required, in terms of disaster such as earthquakes, cyclones, drought, landslides and floods. To understand the techniques and materials that can be used, depends on intensity, vulnerability and availability of resources. This way the location parameters are studied to create better preparedness, mitigation and recovery even in cases of multiple disasters.

INITIAL DESIGN

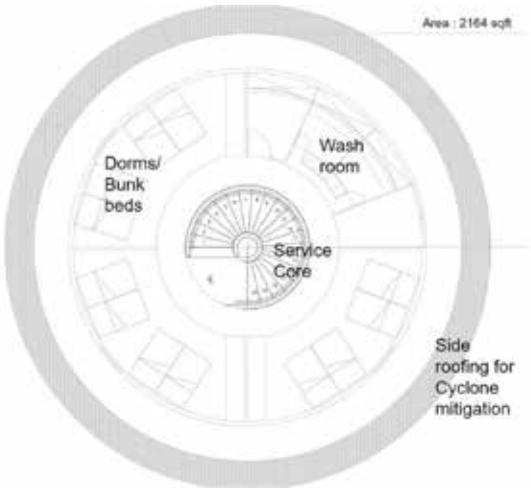
Basic required amenities to be provided are beds, washroom and storage spaces. Permutations and combinations of this can be created according to the requirements. Creative usage of furniture can also be explored for creating second or third spaces or to avoid space crunch. The Initial plan consists of a wide column housed by a spiral staircase within it. This acts as the service and structural core. Considering, breaking the quadrants into four, one quadrant is dedicated to the common kitchen and sanitary services. The other three quadrants have beds and storage facilities for the occupants. The outer circle consists of the passage-way. It also acts as the open common space or balconies that is specific to the occupants of the floor.

STRUCTURAL TECHNIQUES

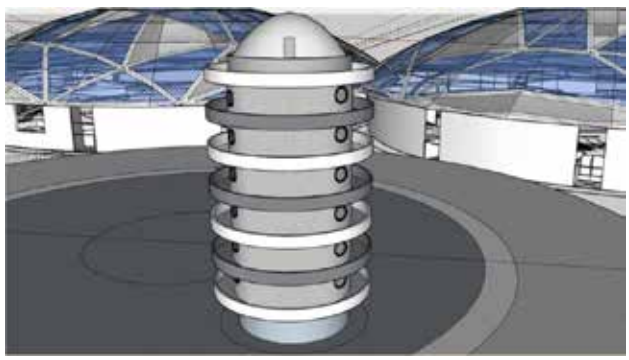
Structural evaluation of the structure looks into the effective techniques that can be used for the structure that is also cost effective or find alternatives that match the constraints. A few techniques to be considered:

-Parallel retractable walls
-Circular movement overlapping roof
-Pivoted system side roofs
-Tension ropes for extra support and durability

The architectural design analysis for structural systems is to determine the proper system for a retractable roof or structural system. Although there is no standard design process in place, multiple standards have been proposed.



Initial Design- Plan
(Source: Author)



Initial Design Elevation
(Source: Author)

In order to determine the most appropriate roof for a building, the following issues need to be addressed in the design :

- structural system
- degree of openness
- Retraction, deploying mechanism and constraints
- common malfunctions of respective roof types

The design should follow the evaluation criteria of the below mentioned considerations:

- Economic efficiency in the retractable roof systems
- Capability of retraction and deployment feature
- Condition of building in either mode
- Common malfunctions
- Safety considerations

CONCLUSION

Design sustainability and management is a very important aspect of design development. Especially with respect to disaster management, it can be safely concluded that it's more than just providing shelter for victims and more about the connectivity of relief impact through geography, climatic conditions, locally available materials, terrain, population awareness, etc. Keeping such parameters in mind will not only provide effective community sustenance but also an effective connotation to how things can be balanced with the right framework.

By doing this we can be more resilient during disasters and help mitigate losses faster. Effective management leads to better recovery too. Considering the present situations of a pandemic, it has made us understand how important disaster management is. It has been heavily compromised and reduced to being something minimal as to only provide shelter and distribute relief materials. Disaster management, though is beyond, which must be implemented in urban planning, architecture, civil, structural engineering, etc. A tough look at resource management - like managing supplies, officials and volunteers and infrastructure – is what is required for an effective future societal infrastructure.

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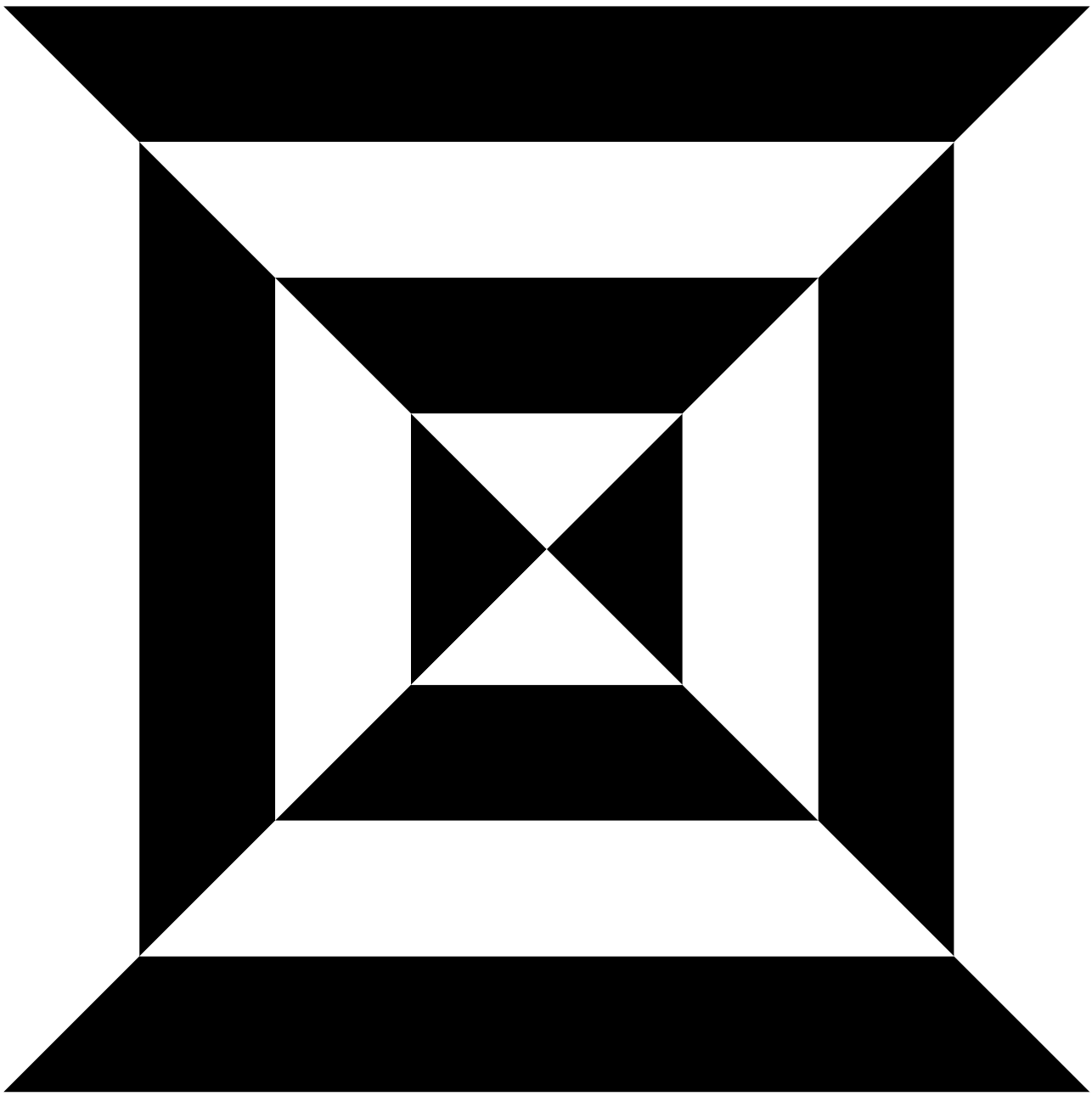
A CULTURAL TOURISM HUB: CASE APPLICATION IN KATWA, WEST BENGAL



ABSTRACT

Cultural tourism is one of the most important branches of tourism industries where tourists not only enjoy the panoramic view of heritage spots but also learn and discover the tangible and intangible local history. A Cultural Tourism Hub is the place to cultivate the history, heritage and create a mass awareness to the local people. In the era of Smart cities and digitalization, exploitation of old heritage properties are very common approaches. We prefer to demolish our inheritance instead of conserving properly and forget that showcasing the culture could be a new way to generate revenue and this paper is just a humble attempt in this concern. Various terminologies have been defined through this process and important heritage places are studied. Literature study, Site study, National and international case studies have been done to identify the major issues and solving those issues.

Keywords: *culture, tourism, cultural tourism, hub, tourism hub, katwa.*

1. INTRODUCTION

1.1. Introduction of Problem with the Background-

The cultural tourism hub project in Katwa demonstrated here is a small initiative to revitalize the glorious past of Raar Banga area. Katwa, West Bengal is an old heritage city of Bardhaman district in West Bengal, situated between the rivers Ajay and Hooghly and bounded by water on three sides. Katwa is connected by railway lines with the rest of India and locally by private and government buses, autos, rickshaws, etc. The entire area is rich with heritage buildings and historical locations dating back to the fourth century BCE. Unfortunately, there is a lack of awareness of the rich cultural heritage of this area among the people. There is an urgent need for creation of linkages between the heritage spots of Katwa and the surrounding areas of Bardhaman and Kalna. To address this issue, a proposal of Arshinagar as a cultural tourism hub at Katwa in West Bengal has been made and this project is a small attempt to discuss this. Also, in the Perspective Plan of Bardhaman- Vision 2025, there is a mention of the future scope of creating a tourist corridor to connect heritage places and resort areas on the banks of rivers Damodar and Ajay, making this project relevant. (Vision 2025).

1.2. Aims and Objectives

The aim is to design an ambience to raise awareness of cultural history and heritage of the local area among the general masses to revitalize the glorious past. Objectives of this project are three-fold:

(i) to provide a recreational environment with historical ambience and all basic amenities under one roof.
(ii) to nurture cultural, social, political, religious and architectural history of this area both in tangible and intangible forms.
(iii) to create a comfortable design which portrays an environment of culture and promotes interaction with nature.

2. LITERATURE STUDY

2.1 Important Historical Places in Katwa

Katwa, a historical town known as 'Kantak Nagari' previously, is one of the renowned trade centres of the 14th century. In the era of Nawab Murshid Quli Khan and Siraj-ud–Dullah (1717-1757) it was used as a military camp of Murshidabad, known as 'Gateway of Murshidabad'. Sri Chaitanya Mahaprabhu, pioneer of the Bhakti movement and founder of Gaudiya Vaishnavism started his journey towards the spiritual path here. He took diksha from Keshab Bharati in Katwa in 1510 CE.

In the following section, important sites related to cultural tourism found in Katwa are discussed (see Fig. 1). Structures found in Katwa belong to the 18th

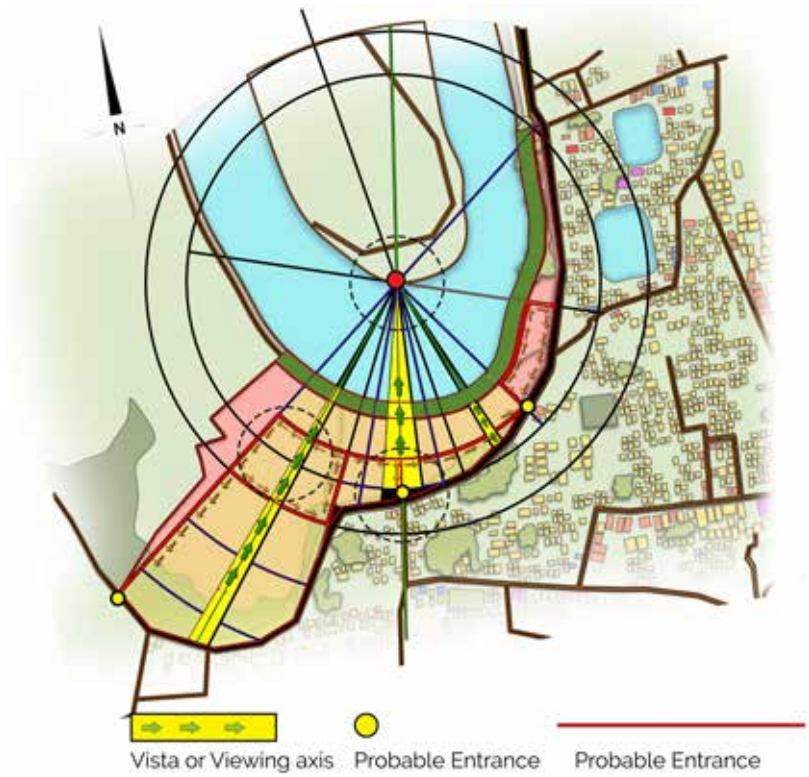


Figure-1: Site Geometry
(Source- Author, 2021)

century and some in Mongolkote to the 4th century BCE. Shah Alam Darga, Gauranga Temple, Madhaitola Ashram, Kashiram Das's House, Sribati, etc. are one of the important historical buildings which are observed in this area.

Architectural and Cultural Perspective

Shah Alam Darga is an 18th century structure built by Murshid Quil Khan. Elements of Islamic semicircular domes, minarets are seen. On the other hand, Gaurang temple, Madhaitola Ashram and Kashiram Das's house have their own historical importance (Pandit, 2016). Sribati is one of the finest examples of Bengal terracotta temple complexes. It consists of two rekha deul structures and one pancharatna temple structure where Shaivite, Vaishnavite and Tantric motifs are seen. Mongalkote is an ancient place mentioned in the Jataka tales around 4th century BCE as Jatuttara. It was mentioned by author Aswini Kumar Choudhury as being located at or near Mongalkote. Pandu Rajar Dhibi is another heritage spot located near Katwa associated with the ancient King Pandu mentioned in the Mahabharata. It was first discovered by B.B. Lal in 1954-57 and is the first Chalcolithic (Copper Age) site to be discovered in India (Mukherjee, S., 2012).

2.2 Important Historical Places around Katwa

Bardhaman has distinct features of Islamic architecture as observed in the old town. In the 18th century, various Hindu temples were found and in the 19th century the colonial architectural style was seen. Their architectural importance is seen in the structures found in Bardhaman region. These are mainly sub divided under three architectural styles, with examples:

a) Hindu – One Hundred and eight Shiva Temple, Kankaleswari Temple and Rajbari Temple
b) Islamic – Sher Afghan and Kutubuddin tomb and Nawab Bari
c) Colonial / Indo Saracenic – Bardhman Rajbari, Curzon Gate and Christian Church (Chattapadhyay, A., 2000).

Architectural and Cultural Perspective

Hindu temples show a prominent feature of Bengal athchala and terracotta pancharatna style. The Rajbari temple has a strong Indo-Saracenic style sculpted with Italian marble and stained Venetian glass. The tombs of Sher Afghan and Kutubuddin and Nawab bari are examples of Indo-Syrian architecture. There is a pond inside the building with a wind-hall or Hawa Ghar built in the 17th century (Ghosh, B.,1976. p. 103-104). Use of Corinthian capital is observed in Curzon gate, Rajbari and Christian churches built in the 19th century. Most of these heritage places have turned into ruins due to lack of conservation and awareness among local people.

3. METHODOLOGY

The whole procedure is divided in five different parts: Firstly, the background and history of this place was studied, and the architectural and cultural perspectives understood for each heritage spot. The site was studied according to the nine parameters in three categories of observations, analysis and conclusions. Some examples are studied as relevant for this project, divided into site level and building level studies. Two national and one international case studies were conducted with reference to the same nine parameters, zoning process, functionality of spaces for site Level study and analysis of elevational features in the building level study.

The West Bengal Municipality Building Rules, Architect's Data and NBC were studied to understand the laws and Floor Area Ratio (FAR) of the local area. Inferences drawn from these four studies helped decide the primary design guidelines and the scope of the project and develop the design concept and proposal.

4. RESULTS AND FINDINGS

4.1 Site Study

The site is situated just beside the River Ajay. The old Ajay ghat is situated beside the site. The site is divided in two parts, of which 3 acres belongs to PWD and the other 8 acres to Katwa Municipality for a special embankment and riverbank beautification project. Currently this site is used as an agricultural field and playground. The total site area was 50,585.7 sq.m.

Inferences from Site Study

1. Location- The river is one of the most important guiding factors in the design to locate the internal functions. Resorts and institutional areas were located near the river's bank.
2. Landform- Porous soil is good for drainage and the site is situated beside the river. Local vegetation was utilized for landscaping.
3. Orientation and Climate- Buildings should be designed in such a way that wind channels can be created inside the site ensuring comfort. Local materials can be used in construction, making it sustainable.
4. Visibility- Visibility of the site is important considering its entrance and exit points. It also helps in allotment of internal functions.
5. Movement- The untarred road helps merge the site with its rural cultural context. Chowks act as public places inspired from the surrounding locality.
6. Activity- The site depends on its surroundings for supply of local and fresh vegetables, dairy products and transportation, which helps in creation of a stronger economic background.
7. Forms and Spaces– The built form of the design should be maintained contextual to its surroundings.
8. Architectural Features- from previously mentioned heritage buildings can be used to revitalize the past.

4.2 Case Study

Three case studies were done with the parameters stated to understand the precautions or design strategies to be taken to create a comfortable and sustainable design:
Case Example 1: The Heritage Desert Resort, Mandwa, Rajasthan was selected because of its approach of using local materials in describing local heritage through built form and landscape.
Case Example 2: The Heritage Madurai, Tamilnadu is situated in a heritage town. The main objective was to study how traditional architecture was modified to accommodate modern design and amenities.
Case Example 3: Aman Kyoto Resort, Kyoto, Japan is a representation of old Royokan Interior and a Japanese

house structure with black wood and glass furnished structure is noticeable. Site context and location have similarities with case application.

Inferences from Case Studies at the Site Level

1. To enjoy nature and culture of any area, the outskirts location of the site is necessary but it should be well connected to the nearby town.
2. The site plan should be designed to utilize daylight and wind flow to create climate responsive design.
3. Trees can be used to avoid vehicular noise from the main road.

Inferences from Case Studies at the Building Level

1. An independent site can be created if the design integrates different kinds of necessary activities on site, making it self-sustainable.
2. Creation of enclosure with building forms make the spaces more welcoming.
3. Hand-made and local materials for construction are sustainable for this climate.
4. Natural vegetation of the site should be respected during design.
5. Sustainable design can be created by organizing free flowing spaces and increasing daylight and wind in interior space.

5. DISCUSSION

5.1 Scope and Area Programme

According to the background history, site study and case studies, eight different zones can be created in the site measuring 50,585.7 sq.m and having FAR of 2.5. Permissible ground coverage is 50 % according to the West Bengal Municipality Building Rules.

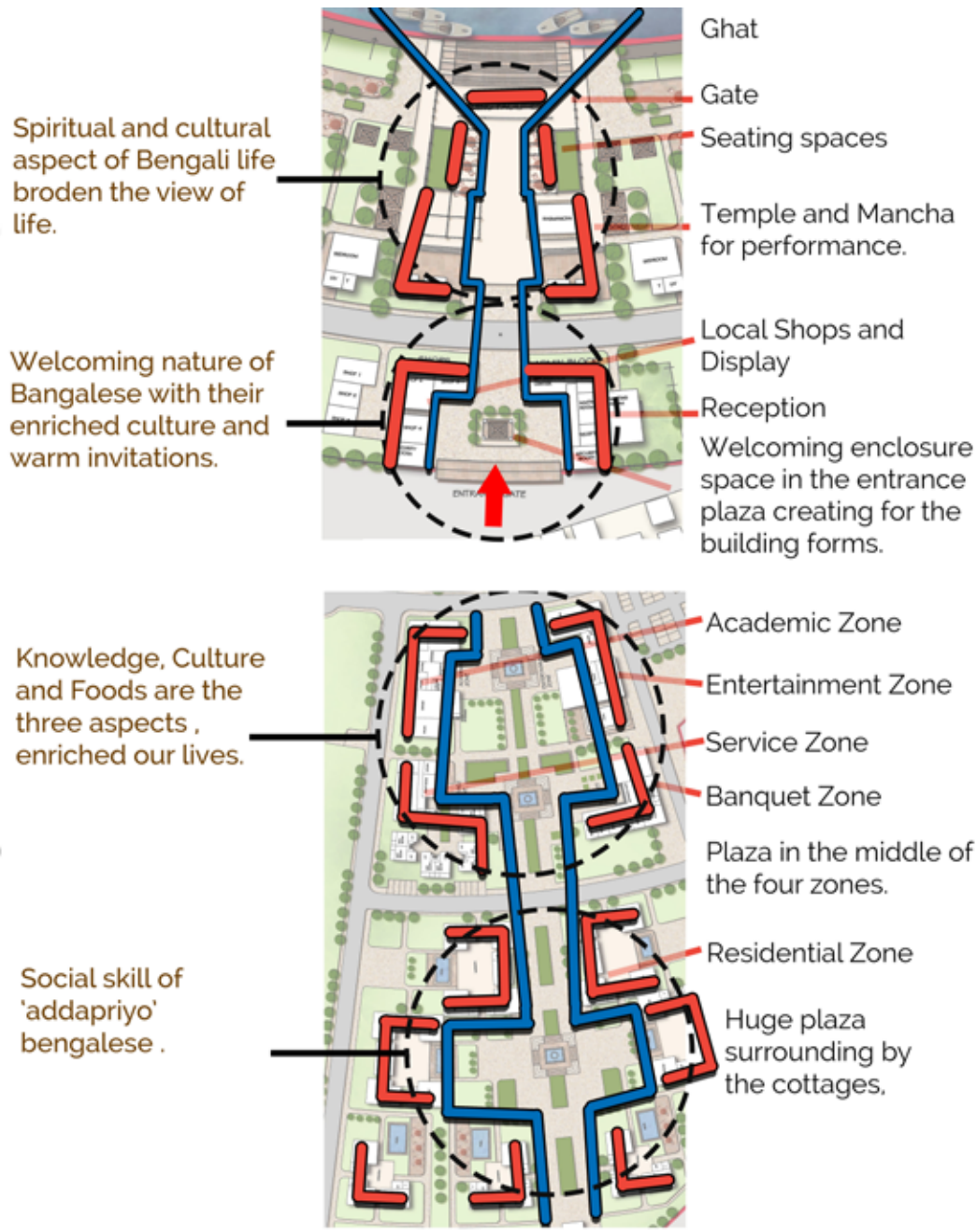


Figure-2: Space Form Analysis
(Source- Author, 2021)

1. Entrance Zone (328 sq.m) Entry to the site with a grand entrance gate with visual aesthetic features of Bengal architecture of terracotta tiles, to attract tourist information centre, display or shopping centre for local products and basic service amenities can be added.
2. Recreational Zone (330 sq.m) To highlight the culture and heritage of Bengal, specially the local context and history and enhance the river ghat area.
3. Residential Zone (1760 sq.m) A secured resort area for the visitors to enjoy the scenic beauty of River Ajay and local rural Bengal.
4. Institutional Zone (1635 sq.m) To cultivate and conserve the culture and archaeological artefacts excavated from this region.
5. Entertainment Zone (1439 sq.m) Serves different basic amenities with entertainment facilities like swimming pool, dining, cafeteria and gymnasium.
6. Banquet Zone (648 sq.m) For small functions, lecture sessions, conferences for local use and private use.
7. Parking Zone (460 sq.m) For parking HMV or LMV for public or private use.
8. Service Zone (815 sq.m) Electric room, laundry room, staff quarters and service amenities required to maintain the whole area.
Total built up area totals 8500 sq.m and the remaining area is used for landscaping and future expansion.

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5.2 Design Proposal

Guidelines have been evolved from above discussions :
1. To design in this suburban site, it should be well connected with the main town.
2. To maintain the local context, local trees and landscapes should be protected.
3. A plaza can be created to create an interactive space between different activities.
4. Hierarchy of courtyards can be created to showcase the interactive nature of Bengalis. According to Bengal architecture, buildings open into a courtyard area. This

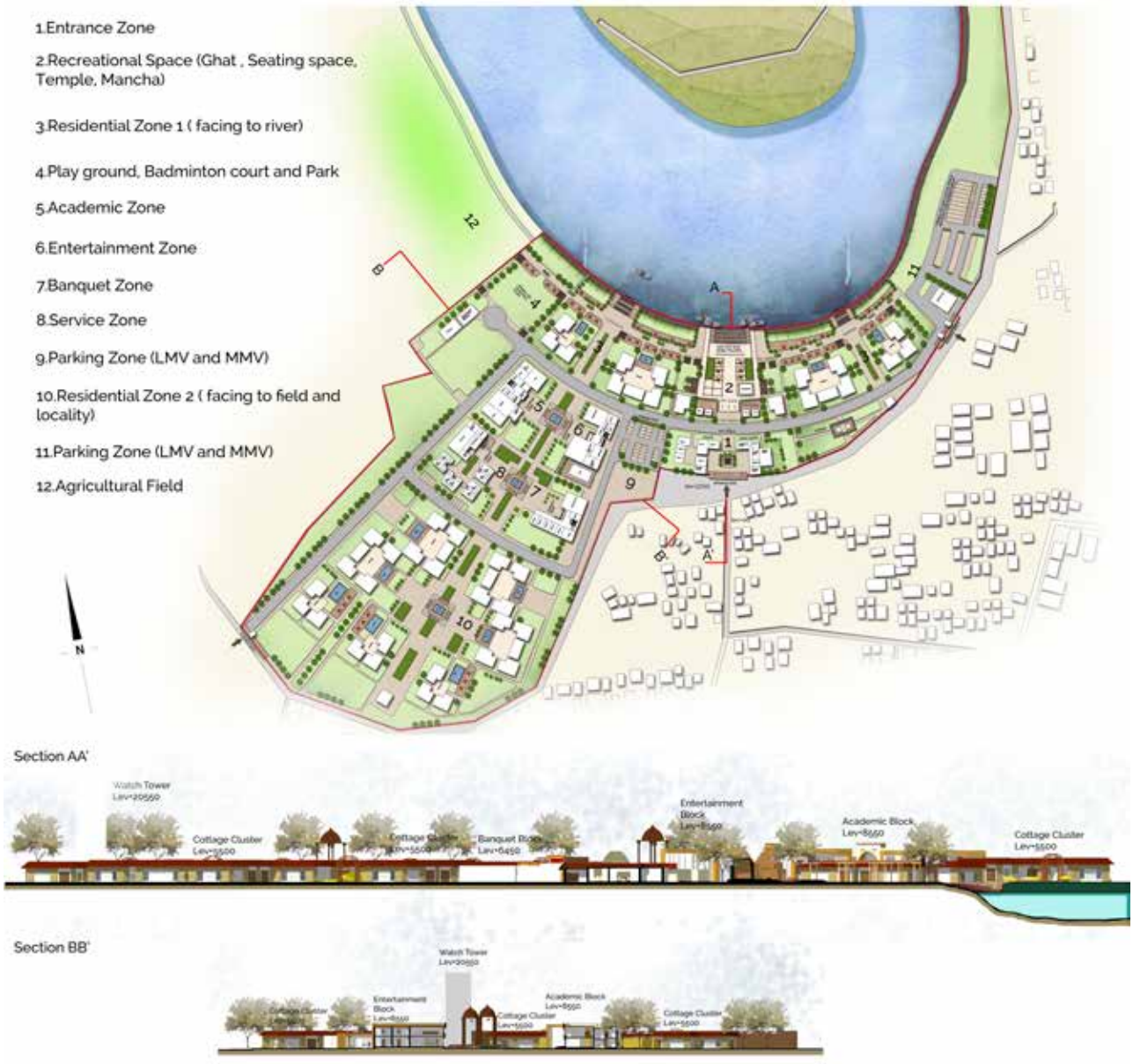

Figure-3: Site Plan and Sections
(Source -Author, 2021)

is an interaction place within one building or between three to four adjacent buildings.
5. To address the heritage context, Bengal kutir structure or duchala, charchala and athchala structures can be implemented in the resort. Cluster forms inspired from the 108 Shiva temple can be used for the resort structure.
6. To ensure the river's visibility, a visual axis can be created from the farthest point.
7. According to the West Bengal Municipality rules, maximum height of the building can be 18 m and setback from the riverbed is 20 m.

Design Concept: Plan Form

Site Geometry: The design approach was to derive the site geometry to distribute functions. One vantage point was created with respect to the opposite river bank which acts as a centre for creating guidelines to organize the built form and circulation paths. Three radial paths creating visual axes complete the geometry (Fig. 1) and for creation of plazas and built forms- conceptual ideas of Bengali culture are taken (Fig. 2).

Site Zoning: The entrance zone was placed near vantage point and consists of the entrance gate, administrative zone 1 and shops and display zone. Admin zone 1 has a reception and shopping area situated near the entrance gate to attract tourists. The recreational zone gives tourists a panoramic view of River Ajay (Fig. 3).

Residential zone 1 is created on both sides of the recreational zone, enabling a river view. Administrative zone 2 is situated in the west and the landscaped parking zone on the east of the residential zone.

The administrative zone consists of the entertainment zone with basic amenities like restaurants, gymnasium; academic zone with museum, service zone and banquet zone for conferences and ceremonies.

Figure-4: Site Context
(Source- Author, 2021)

Figure -5: Ground Floor Plan of Residential Zone
(Source- Author, 2021)

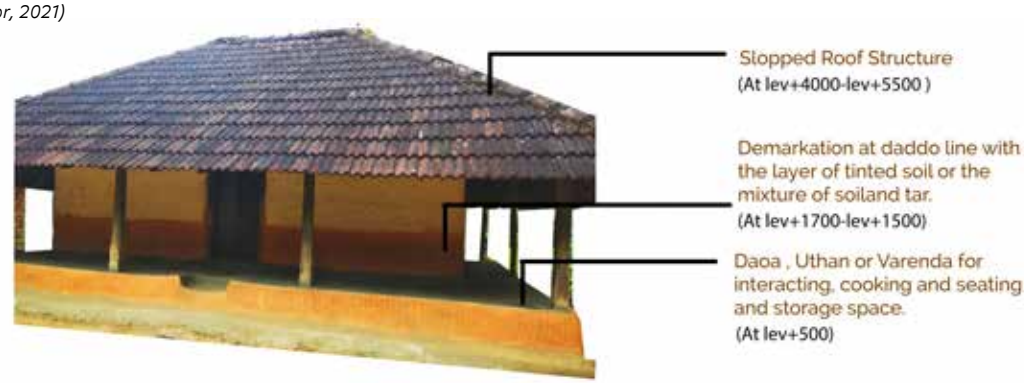

Figure-6: Study of Rural Hut
(Source -Author,2021)

Figure -7: Visualization of Residential Zone
(Source -Author,2021)

Figure -8: Ground Floor Plan of Academic Building
(Source- Author, 2021)

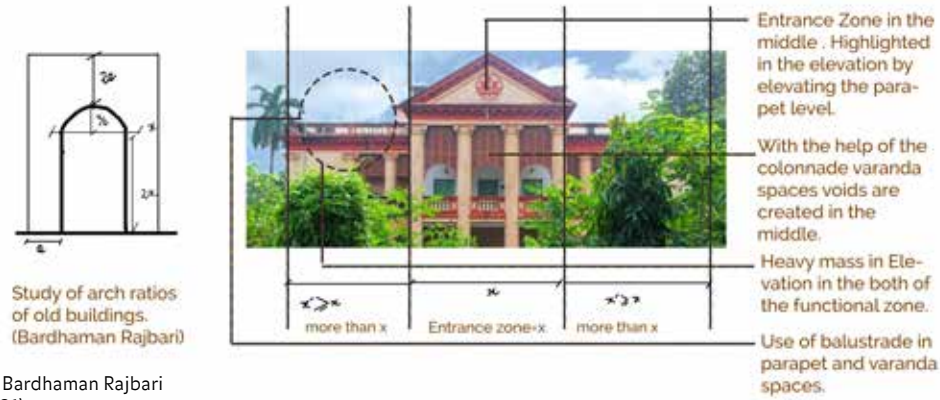

Figure-9: Study of Bardhaman Rajbari
(Source -Author,2021)

Residential zone 2 faces the agricultural fields and the village areas of the surroundings. The visual axis continues from Residential zone 2 to residential zone 1 in the west side and landscape zone to residential zone 1 in the east side. Entrance gate zone 2 is situated on the west side of the site connecting the service zone. Entrance gate zone 3 connects with the parking zone. The long narrow stretch in the east is used for plantation. The interconnection between the different zones and the plaza area create an interaction between them (Fig. 4).

Residential Building Design Concept and Form Analysis
Built form and architectural elements used are simplified and contemporary variations of traditional hut structure of rural Bengal. For planning tools, Veranda is the most vibrant multifunctional space and which is applied in residential cottage cluster design. As seen in Fig. 5, elements like kulungi, roof structures and heights of structures are adapted, maintaining similar proportions as studied in Fig. 6. Execution of those proportions and elements can be seen in Fig. 7.

Public Building Design Concept and Form Analysis
For public buildings, the administrative building of Jamindar Mahal or Women's College of Bardhaman University is studied. The main zoning includes an entrance through the middle and a linear arrangement with connectivity through corridors as can be seen in Fig. 8. For the elevation, noticeable features are the position of the entrance, symmetry, presence of verandas, column structure and elevated parapet in the entrance zone to highlight it from the rest of the elevation (Fig. 9). Murals and wall paintings help to differentiate public buildings from each other (Fig. 10).

6. CONCLUSION AND RECOMMENDATION

In order to create an awareness in the masses of their local heritage and growing demand of urbanization and process of destruction of heritage, this project is an attempt to raise awareness regarding heritage values of historical properties and appreciate them through new architectural projects. There is an urgent need to attract attention to restore the heritage properties of rural Bengal by concerned authorities which would not only celebrate it but also strengthen the economy through tourism.

Future directions of research point towards identifying such sites, both locally and nationally, and look towards large scale interventions to revitalize cities and revive old traditions. It is necessary to learn from the past and adapt with modern needs to build more sustainable and contextual buildings.

Figure-10: Visualization of Academic Building
(Source -Author,2021)

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DIALOGUE WITH AR. NAMITA SINGH

Prof. (Dr.) Aradhana Jindal

Ar. Namita Singh heads the firm Satnam Namita & Associates at Chandigarh. She won the prestigious project of Naval Academy in Ezhimala Kerala, Asia's largest Defense Academy through a nationwide open design competition in 1989. For her outstanding contribution in the field of architecture, she has been conferred with numerous awards like JIIA, Dharmasthala Manjunatheswara, Interiors Today, Kalpana Chawla Excellence, Lifetime Achievement by WADe Asia, Mahila Rattan and many more.

Ar. Namita Singh [NS], in conversation with Prof. (Dr.) Aradhana Jindal [AJ], walk down memory lane while tracing an illustrious career.

Prof. (Dr.) Aradhana Jindal [AJ]: What made you take up architecture in an era when very few people believed in its future prospects?

Ar. Namita Singh [NS]: I graduated from CCA Chandigarh. After I completed my pre-University, I considered taking up engineering as my father was a civil engineer. In those days most girls were married off after completing their graduation. My parents encouraged me to choose my own career and become financially independent. At that time I was not familiar with architecture as a career. It was in the year 1965 and Le Corbusier was designing Chandigarh. I became aware of architecture through my father who interacted with Le Corbusier and other architects while they were involved in designing some elements of Bhakhra Dam. After completing my pre-engineering I was eligible for admission in both engineering and architecture colleges. I chose architecture, it being a new profession was exciting and challenging.

AJ: Please brief us about your design philosophy.

I don't follow any 'isms'. My designs emerge from the functional requirements, context of the site in which it is located and climate of the region. I don't believe in form-driven architecture. My designs are site-specific. The design of a particular project would not be relevant in any other site. The client's functional requirements are organised in such a way that the design reveals itself to the users while they go about their everyday routine.

AJ: Frank Lloyd Wright was one of the pioneers of modern architecture who created his own style which inspired generations after him. Did you draw any inspiration from him and in what ways?

NS: Out of all the modern architects that we studied, I could relate to Frank Lloyed's work the most. It was organic and merged with the land it was built on. His works are site oriented in a way they cannot be plucked from their location and placed somewhere else. Same goes for my works, so you can conclude that I drew inspiration from Frank Lloyd Wright.

AJ: You said "I would be upset if I had to switch the lights on in a building I had designed during the day". How would you elaborate this saying of yours?

NS: I state this many times and I completely stand by it. There is abundance of sunlight in India so we should be able to incorporate it in our designs and every corner of the structures should have natural light. It upsets me a great deal if one has to turn on electric lights during the day. I have learnt to maximize the southern orientation which works in both summer and winter in our part of the world. In summers the sharp and hot sun can be kept out with small projections and these same projections allow the welcome winter sun to come in.

AJ: In media, you have been quoted as an architect who believes that the design must blend with the local climate, topography and availability of raw material. Please enlighten us how to achieve this in this era of ever expanding palette of construction material, construction technology and knowledge exchange.

NS: I have nothing against modern materials as long they are used judiciously. The glass curtain wall, for example, is being misused to a great extent. No matter what orientation, a glass curtain wall is installed in front, totally ignoring what is behind it. I would term this as laziness on part of the designers. We grew up with beliefs that only bricks and exposed concrete are the acceptable materials for the exteriors. Now, I don't see anything wrong in plastering and coloring the exteriors done aesthetically.

Sometime ago I designed a mall with an outdoor atrium instead of a multi-floor high air-conditioned indoor atrium which had become a norm in mall designs. On the façade, I used a stainless steel fabric which is a very modern material and that gave the mall a very distinctive look. There are a great number of materials that one can play with. There is no formula for it but one has to work on using them sensitively in appropriate locations.

AJ: What is your ultimate goal when it comes to your work? What do you think you want to be remembered for?

NS: I want to be remembered by my clients, the user, for whom I've designed. I want to continue to design till my last day. I would like to keep getting the opportunity to create architecture that is environment friendly and to design in such a way that the beauty of my designs reveal themselves to the users as they go about performing functions for which the structures were built.

AJ: What was your conceptual idea behind the design of Indian Naval Academy, your biggest achievement? What were the important issues and challenges felt by you while working on designing of Indian Naval Academy and what lessons you drew from them?

NS: The Indian Naval Academy was the biggest breakthrough in my life. At that time it was the national competition for which I worked for a whole year. I never thought I would get an opportunity to design such a large project. All the big architects in the architectural fraternity competed for the project. The project was built on 3500 acres having beautiful surroundings- beach front, mountain ranges, etc. I promised myself not to destroy natural beauty. I studied the local architecture and went to the site twice even before working on the designs for the competition. I used to stand there observing the site deeply.I set some objectives for the design:

- Not to ruin the nature
- Minimum felling of trees and plants
- Planting the same number of trees that will be rooted off
- Retaining the natural water course

I started working on the project from 1986 and till now I am designing some parts of the site.

AJ: Chandigarh was planned by Le Corbusier and has outgrown its original size due to unprecedented growth of population over the years. Being a resident of the city beautiful for the last 50 years, how do you critically analyze the original planning of the master architect?

NS: As an experiment in city design, which was built on a virgin site, the city was designed for 5 lakh people which was a very naive thought. It was difficult to accommodate all 5 lakh people within the green belt of the city. So, peripheral control didn't work at all and Panchkula and Mohali came about and Chandigarh became a part of a Tricity. To an extent, the planning of Chandigarh has worked but it has garnered much criticism too. Grid pattern has effectively worked till now and wide roads are very functional. The city is greener compared to many other cities but its socially isolated environment has been a bone of contention since long. So there is a need to make some modifications which encourage people to interact.

AJ: Madam, please let us know, apart from architecture what are the other fields that interest you, things and hobbies that you love to pursue in your free time?

NS: Beside architecture, I love travelling, watching movies, knitting, cooking and embroidery. I have a weekend home in Kasauli and I go there every weekend. I like growing my own flowers and organic vegetables in my garden in Kasauli and bringing them here to cook. I love watching movies. I don't have any misunderstanding about myself. I am an ordinary person passionate about architecture. And I love what I do. I live for myself.

AJ: What message or piece of advice you would like to give to the young and budding architects of the contemporary times?

NS: Architecture is a way of life, you have to enjoy it. One should always be aware of the surrounding built environment as one moves around and critically analyze the environment to understand the feeling it evokes. Design for yourself.

Architecture is a way of life, you can't escape it. You breathe it, live it.

Prof (Dr) Aradhana Jindal is a graduate of University of Roorkee, Roorkee and is currently heading MM School of Architecture, MM University, Ambala. She has 19 years of Professional and 13 years of experience in academics. She was awarded with 'Architectural Journalism Merit certificate' by A3 Foundation, Chandigarh in 2015. She has been awarded with First Friday Forum Award for creative excellence in recognition of her valuable services to Architectural Education and was felicitated by Times of India group, Udan media and IIA Punjab & Haryana Chapters for her valuable contribution in 'Architectural Education'. Her research papers are published in many national and international journals.
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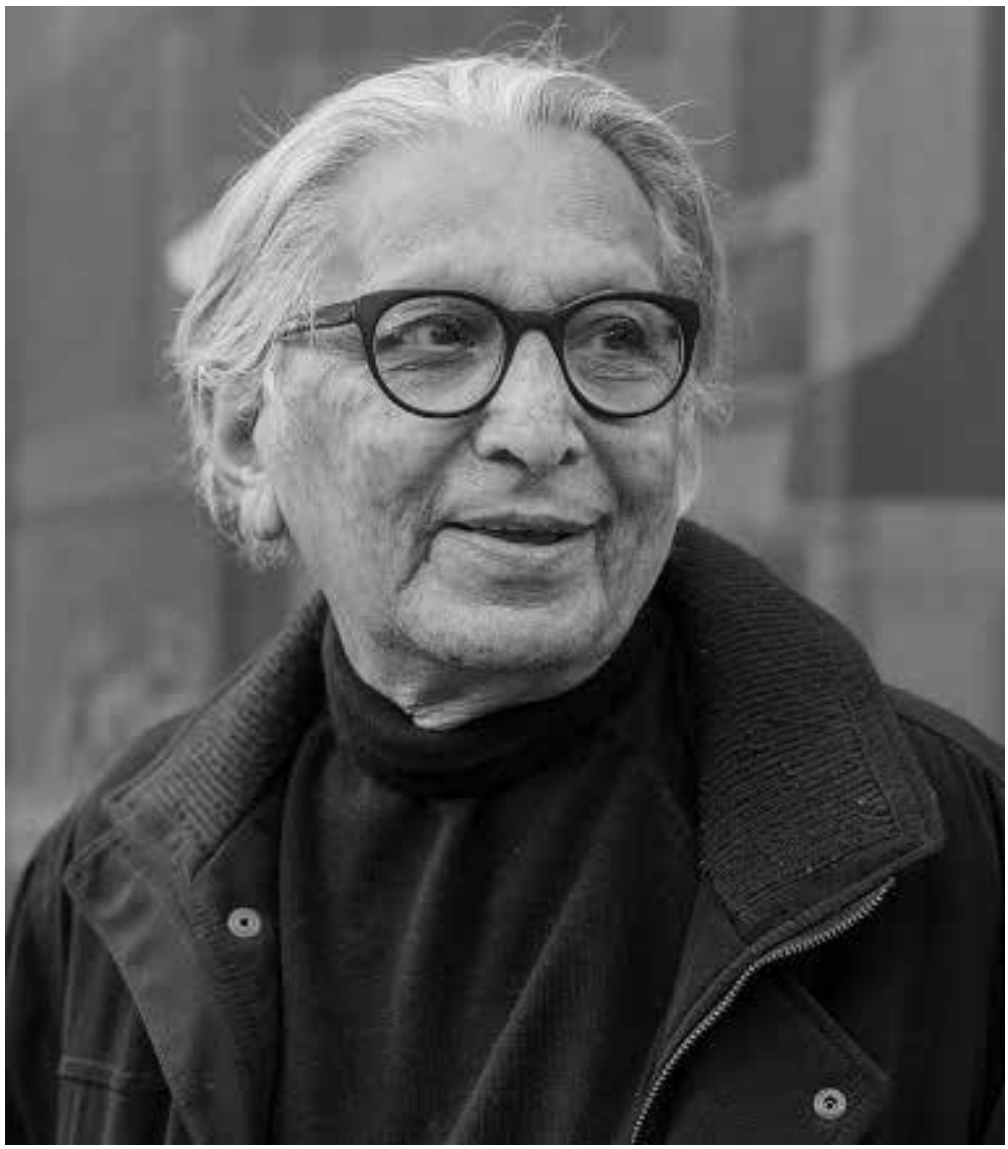
BALKRISHNA DOSHI

Ar. Snehal Shah



School of Architecture, CEPT University, Ahmedabad, India / Vastushilpa Foundation, *(Photo Credit: Vinay Panjwani)*

Balkrishna Doshi is a man of renaissance in the modern world. He paints, sculpts, writes both prose and poetry, and often describes his thoughts with deep philosophy. He is an educator, a teacher, a builder of institutions, an academic, a furniture designer, an urban designer, a planner, an architect, and above all, a highest pursuer of aesthetics, all of these he undertakes with pure passion for which he would spend a lot of time. I have known Doshi since 1970. First as a student, then as my thesis guide, then later as a senior fellow professional, but through all this, he has always been an advisor, a well-wisher, and someone who has been there for me and my family. In this, I have found him to be a true gentleman. He has a brilliant ability to relate to people and so he understands situations and behaviour patterns right away. I have always been amazed at how he has been able to do so much, achieve so much, and all of it done so well! He would, probably, very politely and humbly look up at the sky, as if all this was due to God's grace and he has just been a recipient of his wish and desires. He in fact once told me, there is strength in the prayer. Doshi is an architect who has achieved everything an architect can desire for - Pritzker (2018), Padma Bhushan (2020) and, now, RIBA Gold Medal (2022) amongst many others. The following is a selected list.

In recognition of his distinguished contribution as a professional and as an academician, Doshi was made Foreign Honorary Member of the American Academy of Arts and Letter in 2021. He is also the recipient of the Padma Bhushan, Government of India (2020); The Pritzker Architecture

Indian Institute of Management campus, Bangalore, India / Vastushilpa Foundation, *(Photo Credit: Vinay Panjwani)*

Prize (2018); The Officer of the Order of Arts and Letters of France (2011); Global Award for Lifetime Achievement for Sustainable Architecture, Institut Français d'Architecture, Paris (2007); Prime Minister's National Award for Excellence in Urban Planning and Design, India (2000); Aga Khan Award for Architecture (1993-1995); Gold Medal, Academy of Architecture of France (1988) to name a few.

In spite of such recognition and a person with such laurels in this country, Doshi has been incredibly grounded and humble to everyone that comes in his contact. When he received the RIBA award and I called him to congratulate, he was extremely

Amdavad Ni Gufa, Ahmedabad, India *(Photo Credit:Fabien Charuau)*

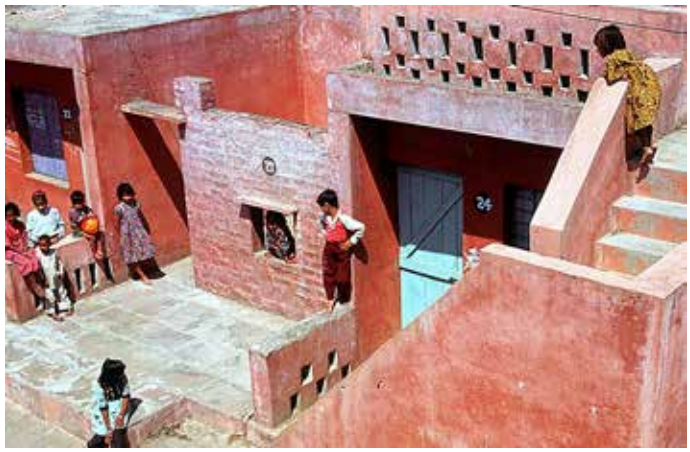
polite, very concerned and humble, rarely seen these days in the world. He once narrated a story – If a good and bad person both want to take shade under a tree in extreme heat, would the tree be different to any? No, as a tree has to remain in its own character and behave the best it should.

The readers of this journal can get a lot of facts and figures from the digital media or even numerous books published on him. One small article, which was edited by me "Architectural Models works of B V Doshi", was published back in October 2003 and the same will be referred to later in this article. However, what an architectural fraternity would like to know is about his contribution observed by a student and then, a fellow colleague, which would be more interesting and I would like to summarise the same briefly here.

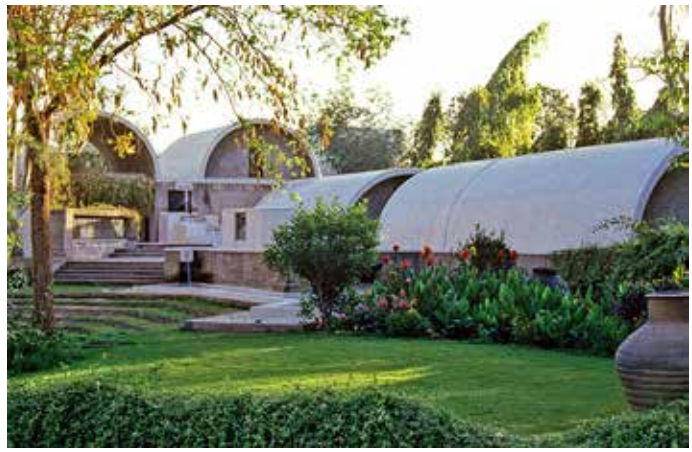
He has been a pioneer and path breaker in many ways and his even lesser-known projects portray these qualities perfectly well. I would like to list the aspects not known to the outside world. His well-known projects are well published. Others, which are also equally important and worthy, and yet not published, hence are lesser known or not much known. Though the list of these projects runs incredibly long, I would like to mention a few of them here, which are from the beginning of his career, and, of my choice and preference.

Doshi has worked on every type, category and economic criteria of the modern society of India. At the beginning of his career, he thought of the most appropriate technology and innovative plans for low-cost housing projects for ATIRA (1957-60) and PRL (1957 – 60); two well-known institutes in the Ahmedabad city, that followed a stream of housing projects that he has done since years. To name some of those, GSFC Township (1964-69) with its innovative water tank (structures which are always neglected and not given importance); ECIL Township (1968-71) with climate as the key element. Its response to the services was suitably resolved and paved the path for many projects for many later years. Even in these townships, the public buildings interwoven within the overall habitat fabric plan was a true answer to Indian society's psyche and changing needs. There are so many projects that can be mentioned, but these early housing projects lead the path for Doshi for years to come. He has also worked for Indore (1983-86), for Vidhyadhar nagar new town (1984-86), for IFFICO, (1973) and Aranya housing (1989). These are some of the most outstanding housing projects. It was also these housing projects that were mentioned as the greatest contribution to architecture during the Pritzker jury comments. Needless to say, no architect has done so many housing projects as Doshi, and it may not be possible to achieve such a feat for another century.

Coming to another type of architectural projects he has worked on, to name a few includes the ICRISAT (1974), a laboratory, which had the clarity of structure and configuration of movement within which, the natural light played an important role and contributed to the overall form. Another project is of the very bold and courageous modern



Aranya Low Cost Housing, Indore, India / Vastushilpa Foundation, *(Photo Credit: John Panicker)*



Sangath, Architects studio, Ahmedabad, India / *(Photo Credit: Vastushilpa Foundation)*

building with its façade, made for Central Bank (1975) in front of a masterpiece and over powering the 16th C Sidi Saiyad Mosque in the old city. One of his other projects also includes the innovative section and light source with an open plan for the School of Architecture, now known popularly as CEPT. Last but not certainly not the least, his own studio Sangath where the series of vaults created a space resembling the Indian street, something one would never imagine to create for an office!

His knowledge and then interpretation of both modern and historical architecture is very interesting, often he would see something one would have not thought of. He had the ability to see through these spaces, like that of Le Corbusier or Louis Kahn; both of whom he highly respected and are close to his heart even today. One's complexity and yet apparent simplicity and other's orderly symmetrical but intricate and saintly architecture is still prominent. Doshi compared their projects and gave an analogy to the architecture of Mughal and Hindu, both created by the same craftsman. Quoting the same by him "Mosques would be simple, clear and pure and their geometry would be very explicit. In the temple, on the other hand, things would twist and turn, go up and down, in apparent disorder".

Doshi's palette of architectural language is so vast and creative that he has touched upon perhaps every aspect of the physical environment and society, every need that an architect must contribute to. Of course, other aspects of the society were taken care of by his other pursuits which are also equally worth knowing. These include his several canvases and sculptures that he made during the pandemic, the ones he exhibited recently. He also wrote an article a long time ago – "Notion and Reality" - explaining his philosophy that he still lives by.

Lastly, coming to my one experience and story with him, amongst the many, is during the making of the book "Architectural Models – Works of Architect Balkrishna Doshi". I had to meet him often during that time. Once, I requested for a small piece to print in the beginning of the catalogue and he gave some writing which did not make sense to me. I said very humbly that I do not like it and he asked why and I said I need something that explains why you love working with models so much and since I am an editor, I would prefer to know this. He instantly, without any ego, accepted and wrote something as below, an excerpt to end this piece for the IIA journal readers:

"My search simultaneously starts with a doodle, a sketch, and conceptual models in clay, then Styrofoam, then in wood. It's here that my concepts, modifications emerge. In addition, the photographs of the models in a variety of light backgrounds give me a chance to verify what I really want to do. This participatory process of simultaneously working on drawings, models and mock ups has not only helped me improve my vision but has also encouraged me to explore new ideas put forward by my team. A process, I would call initial building at a miniature scale without the last-minute uncertainty and hassles at site.

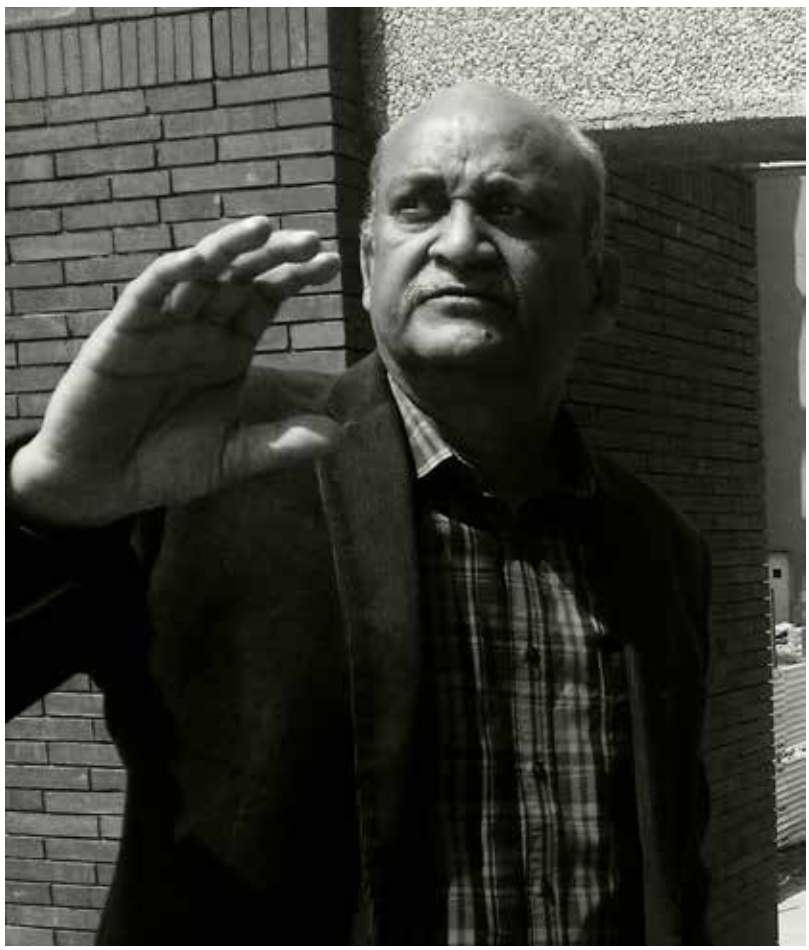
Hence the model room and the model makers (in my studio or at the construction site office) take centre stage and form an integral part of my professional practice. This space is my treasure chest. I see, feel, touch, move, rotate, lift, open, visualise and walk through with all my body, mind and soul. I belong to this space.

The origin of this personal need dates back to my childhood. My early childhood was spent in our joint family, above a large furniture workshop. It was here; I first breathed in the smell of sawdust and understood the relationships between the raw and the transformed assembled object. Often, while traveling, I recall those early experiences associated with the many isolated buildings built in the past that are today objects in space".

Ar. Snehal Shah studied at CEPT where Doshi was his guide for his final year thesis. After his Masters at the AA and working with Mario Botta in Switzerland for a few years, he returned to Ahmedabad and started his own practice in 1987. He is visiting professor at CEPT University and has lectured in India and abroad. He has written many books on the history of Indian architecture and a monograph titled 'Snehal Shah Architect' was published after 25 years of practice in 2014 by Mapin Publishing.

THE UNIVERSAL LEGACY OF MOHAMMAD SHAHEER (1948-2015)

Ar. Samir Mathur & Ar. Sunetra Surabhi



At NIIT Campus, Neemrana on a site visit on 22 November, 2013
(Photo Credit: Anweshak Saha)

At Soka Bodhi tree garden on 7 August, 2014
(Photo Credit: Anweshak Saha)

His life was gentle, and the elements
So mixed in him that Nature might stand up
And say to all the world, 'This was a man'.
William Shakespeare (1559). Julius Caesar

Mohammed Shaheer was arguably the most influential figure in the field of landscape architecture in India over the last three decades. His sudden death six years ago was shocking to all who knew him. A cultured, outstandingly versatile, well-rounded person, who performed brilliantly in many fields, Shaheer was an incurable romantic, superficially cynical; forever seeking the 'evocative' in his designs, sketches, cartoons, and art.

A Brief Timeline

In the mid-seventies, Shaheer returned from England after completing his postgraduate specialization in landscape design. The field of landscape architecture was in its infancy. There were less than a dozen professionals. In Delhi, the excitement of the Asia 72 exhibition was over. Pragati Maidan, Lodi Gardens, and Nehru Park were evolving into their current form. The city of Chandigarh was recently completed. Shaheer excelled in his early professional years with pen and ink drawings and perspectives, such as his perspective of the Sanjay Lake in South Delhi.

Earlier, in the late sixties at the School of Planning and Architecture, New Delhi (SPA), Shaheer had studied under Cyrus Jhabvala, Ram Sharma, and Ranjit Sabikhi. He had also trained with Charles Correa at his office at Fort in Bombay.

In the eighties, he collaborated with almost all of the noted architects - Raj Rewal, Jasbir Sawhney, Murad Chowdhury, Ranjit Sabikhi, and Ajoy Choudhury to name a few. He worked on the landscape design of the Asiad Village, Bhikaji Cama Place in Delhi and hotels in Iraq in that decade. He set up his professional office at Niti Bagh, and later in Zakir Bagh. He was also teaching full time in the landscape department at SPA.

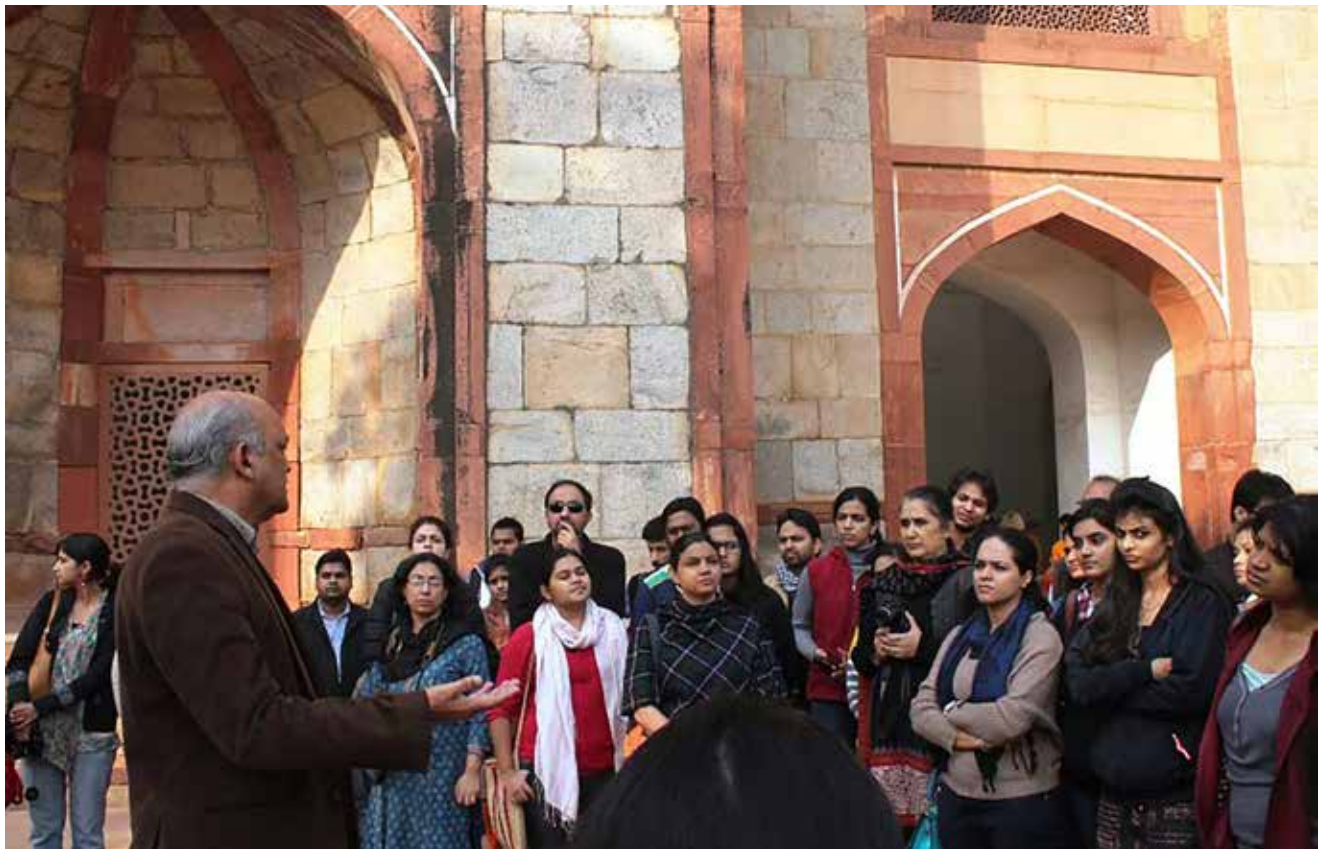
The nineties saw the coming of age of his many talents. He was appointed the Head of Department of Landscape Architecture at SPA. His firm Shaheer Associates won many commissions of national significance. He shifted his office to its current location in Sarai Julena. Rajiv Gandhi's memorial at Sriperumbudur, Rajiv Gandhi's Samadhi 'Vir Bhumi' in Delhi, the Sanskriti Kendra, Jaypee group's hotel at Mussoorie, Hudco Place and the Indira Gandhi National Center for the Arts (IGNCA) were a few of his notable commissions.

The first decade of this millennium saw a greater recognition and his involvement in many advisory roles. Shaheer took voluntary retirement from SPA in early 2003. He was appointed twice to the Delhi Urban Art Commission (DUAC); and wrote the landscape section of the National Building Code (NBC). He started working closely with the Aga Khan Trust for Culture (AKTC). His plans for Humayun's Tomb precincts and Bagh-e-Babur in Kabul were commended widely.

His last few years saw Shaheer working extensively on the redevelopment of the Sunder Nursery and a Memorial on the banks of the River Yamuna. He was also writing extensively for a variety of causes.

My Connections with Shaheer

In 1986, I interacted with Shaheer for the first time. This was in the first summer of my enrollment in the B.Arch. programme at School of Planning and Architecture, New Delhi. I was working as part of a team that listed the monuments of Delhi. We were working out of Shaheer's home/office in Niti Bagh. During the next few years, I took him on as a mentor and guide.



ISOLA Delhi Walk in Humayun's tomb 2014-2015
(Photo Credit: https://www.isola.org.in/)

At Soka Bodhi tree garden on 7 August, 2014
(Photo Credit: Anweshak Saha)

Back in India in late 1993 after graduating from the Master of Landscape Architecture program at the University of Massachusetts, Amherst, I collaborated on professional projects with Mohammed Shaheer for the next eight years. We worked on urban landscape projects around the country. This led to my practical understanding of the complexities of professional practice dealing with diverse contexts. We used to travel to sites around the country.

However, my own interest was overwhelmingly in academia and research. Therefore, in 2000, with encouragement from Shaheer, I joined as a tenured Assistant Professor at the Department of Landscape Architecture at School Of Planning and Architecture, New Delhi. We were colleagues there for three years or so. This was the most intellectually rewarding time for both of us, to be able to find time to debate the nuances of landscape urbanism and theory. I was privileged to attend the discussions that led to the formation of ISOLA in Pune, during the course of a joint studio program. Shaheer opined that the recognition of cultural landscapes India would frame the future of landscape urbanism. He was therefore supportive of the publication of the Landscape Architecture Journal that promoted these ideals. I became a contributor too.

With the idea of exploring new areas, I resigned from full time teaching in 2004. In subsequent years, I had remained associated with Shaheer very closely. We collaborated on editing "Instant Cities," the proceedings of a conference of ISOLA. While I was a member of the Delhi Urban Art Commission (DUAC), it was a surreal experience to have Shaheer presenting the case for Humayun's Tomb Interpretation Center. He was leading the planning and design for this, and was gracious to accept revisions in the landscape character for the betterment of the project. At the time of this passing, we were working together on updating the National Building Code for Landscape Architecture. The new NBC was completed with me as the Convenor of that section, and was dedicated to Shaheer's memory.

The Universality of Shaheer

Starting in the mid-eighties, Shaheer succeeded in teaching design theory and history of landscape architecture in a new light. Many of his early students are currently the leading lights in academia. Shaheer was an institution himself by the time he retired from SPA.

His firm Shaheer Associates, trained three generations of landscape architects over 30 years. A stream of bright individuals explored their strengths in a nurturing environment. The office had very high standards of design integrity that were creatively inspired by the man at the top.

He also led a vision for a landscape architecture community that culminated in the formation of the Indian Society of Landscape Architects (ISOLA). Isola has been successfully holding annual conferences over the past two decades Shaheer also provided intellectual impetus to the Landscape Architecture Journal (LAJ). He often pointed out the success of this publication.

As an individual, Shaheer could not tolerate fools, and thus had a few selected friends. He always recalled fondly the group of friends from SPA in the late sixties. He referred back to his time in Bombay while training in Charles Correa's office; and the trip to Europe he took after finishing his studies in Edinburgh. His favorite place for coffee was the lounge at the India International Center (IIC), though he was partial to the canteen at Triveni Kala Sangam too. Mostly a vegetarian, and a teetotaler, he was well informed about the culinary arts. He was surprisingly passionate about cricket too. His simplicity in living life; coupled with an intensity of creative and analytical thought made him a unique individual. Most of his free time was spent sketching on paper. These wonderful sketches are cherished by so many people who possess them.

He disliked giving interviews, preferring to write well thought out and reasoned arguments. He valued precise drawings over random sketches; historical veracity over superficiality; evocative forms over the mundane; abhorred jargon and loose talk.

Always practical, Shaheer strongly focused on testing his thought processes in projects that were feasible and viable. Not for him were the high theories of large scale regional landscape planning. There was a deep understanding of 'Life imitating Art' in his thinking. His own creativity and a deep understanding of landscape design as a continuum of history, urbanity and art shaped most of his work.

Shaheer excelled at teaching the history of landscape and urbanism. I strongly feel that much of his later professional work was based upon his own voyage of learning in the eighties. It also seems clear that he had created his own connection to history, by making historical precincts meaningful for the average citizen. The projects at Humayun's tomb and Bagh-e-Babur bear this out.

Mohammad Shaheer's courage, convictions, understanding, thoughtfulness and creativity are a true legacy for the future of the practice of Landscape Urbanism; the creation of a vibrant landscape philosophy; and for the innovation of thought in architectural academics in India.

Ar. Samir Mathur set up his landscape practice, *Integral Designs International Studio Pvt. Ltd.* in 2004. He is the Convener, Standing Committee on National Building Code 2016 on Landscape Development; a former Member of Delhi Urban Art Commission; a former member of Heritage Conservation Committee for Delhi; and a former Assistant Professor of Landscape Architecture, SPA, Delhi.
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Ar. Sunetra Surabhi, a Nuffic scholar, completed her Masters in Landscape Architecture from School of Planning and Architecture, New Delhi and Masters in Urban Management and Development from Institute of Housing and Urban Development Studies, Erasmus University. She is currently working at Integral Designs International Studio Pvt. Ltd.
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OPINIONS

is a section where we discuss the current issues relating to relating to architecture, profession, education or regulations. Experts will deliberate varying points of view, so that our readers get a holistic understanding topic at hand.

WHAT CAME FIRST?

GREEN BUILDINGS OR GREEN BUILDING RATING SYSTEMS

Ar. Anupam Mittal

Since industrialization began, rapid urbanization started across the globe. Construction picked up to accommodate the growing population in the city, but the cost of development was borne by the environment and the cities were gradually rendered into polluted dungeons. But, do we blame the development, stop the growth, or we decide what is required to be implemented to make our surroundings livable and sustainable?

It was only in the late 20th century that the awareness of the impact of technology and expanding human population on earth increased and few of us started identifying the issues which could be addressed in times to come. People began expanding their efforts to reduce their environment impact and buildings started to be recognized as major contributors to the world's energy usage, landfill waste and diminishing green space. The speed of development remained higher than the effort still, causing major environmental concerns.

In 1990, the Building Research Establishment LLC (BRE) started a voluntary environmental assessment method called *Building Research Establishment Environmental Assessment Method* (BREEAM) which may be called the first recognized step towards green buildings. The purpose of the assessment method was to objectively measure the environmental performance of new and existing buildings in the United Kingdom. Assessment, reports and findings suggested measures through design approach and other human interventions. As the system evolved, goals were set for buildings to have a better rating. Instead of buildings simply being designed to meet code requirements, designers strove to achieve improved building performance through various methods. In the following years, BREEAM was introduced to other countries, including Canada, Hong Kong and New Zealand (BREEAM 2009) while other countries started looking into their domains with respect to the green footprints. Over the years, many additional green rating systems have been created based on BREEAM, the GB Tool or research regarding the environmental needs of a county. Rating systems have evolved based both on user feedback and the development of new technology to improve the environmental performance of buildings.

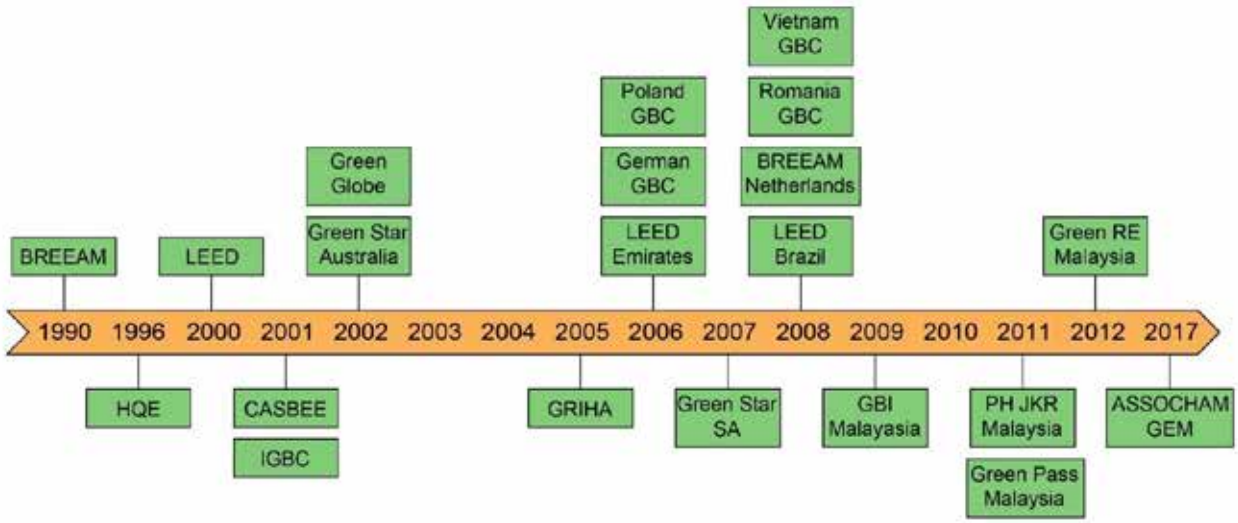


Figure 1: Green Building Rating System Timeline
(Source: https://www.researchgate.net/publication/260220038_Analysis_of_the_International_Sustainable_Building_Rating_Systems_SBRSs_for_Sustainable_Development_with_Special_Focused_on_Green_Building_Index_GBI_Malaysia)

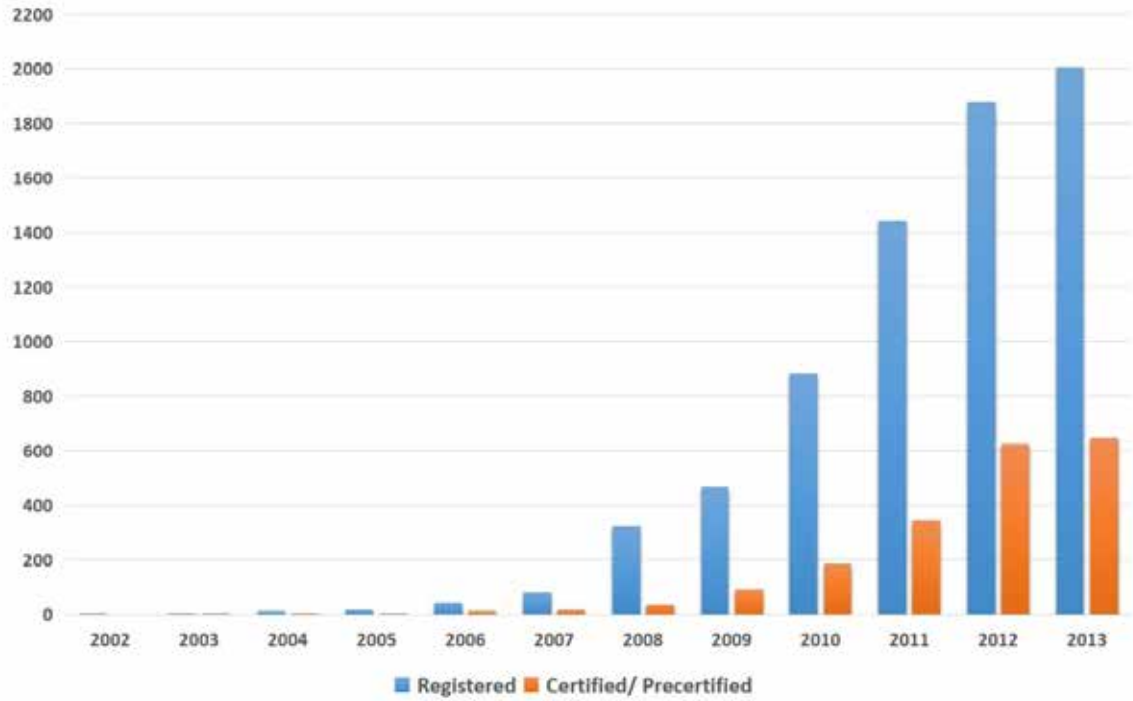


Figure 2: Green Building Projects : Timeline in India
(Source: https://en.wikipedia.org/wiki/File:Growth_of_green_buildings_in_India_since_2001.jpg)

Increasing awareness about green practices may have contributed to the spread of rating systems, which act like a reference handbook to guide users and help them achieve a green rating in the smoothest possible way. The goal of all certification rating systems is to provide tools and methods to assess the environmental and resource efficient performance of a building. The main objectives of such tools are:

- Optimize building performance and minimize environmental impacts.
- Provide a way to quantify a building's environmental effects.
- Set standards and benchmarks to assess buildings objectively.

Claims of sustainability ought to be substantiated with acceptable documentary evidence and 'what gets measured gets managed'. These are the two 'foundational mantras' for the development of a green rating. Green ratings assess a building based on its predicted performance over its entire life-cycle conception through operation. This results in the development of buildings that consume fewer natural resources without sacrificing the acoustics, thermal and visual comfort of its occupants. Governments across the world have been trying to promote green building rating systems by providing tax rebates, extra FSI and other such benefits. Since the rating system is still in a developmental stage, it is not necessary to hold to any one rating system and force implementing the same during design and development of any project. Rather a cautious design approach with knowledge of appropriate materials, technologies available and microclimate will lead to a green development which can fetch any rating post-construction.

Sections	LEED	GRIHA	IGBC	GEM
Integrated Process	1	-	3	2
Location and Transportation	16	1	3	6
Sustainable Sites	8	7	7	8
Construction Management	2	9	3	5
Water Efficiency	10	17	17	20
Energy and Atmosphere	32	20	26	25
Materials and Resources	13	14	14	24
Indoor Environment Quality	16	12	12	15
Solid Waste Management	Mandatory	6	2	8
Socio Economic Strategies	-	6	4	7
Performance Monitoring and Validation	2	8	3	10
Innovation	6	4	6	5
Regional Priority	4	-	-	-
Total Points	**110**	**104**	**100**	**135**

Figure 3: Comparative Analysis of Green Building Rating Systems
(Source: ARINEM Consultancy Services Pvt. Ltd.)

Overall approach to create a Green Building

- Reduce water usage upto 80 % of base case by using low flow fixtures and systems, using efficient irrigation system, by treating waste water following the CPCB norms, etc.
- Reduces the embodied energy of the project by at least 20 % by utilizing BIS recommended waste materials in building construction and using locally manufactured construction materials.
- Ensures segregation of waste at source, tie-ups with waste recyclers for safe recycling for recyclable wastes like metal, paper, plastic, glass, etc. and organic waste being treated on site to sustainably manage on-site solid waste during operation phase and to reduce the waste dumping on landfill sites.
- Promotes sustainable site planning by ensuring last mile connectivity, low impact design, reducing urban heat island effect and reducing overall site imperviousness factor.
- Provides measures to reduce the energy dependency on conventional sources upto 50 % by ensuring the installation of renewable energy sources on-site/ off-site and implementing techniques in building envelope designs and installation of Bureau of Energy Efficiency (BEE) star rated appliances.

So we can say that the rating system started encouraging designers and other stakeholders to achieve the best possible rating for their projects, by providing them an easy to follow tool-kit and standards practices, making the process more scientific and logical. But that doesn't in any way diminish or discredit the hard work done by a large number of designers, who used an integrated design approach, intelligent choice of materials and innovative use of technology as tools to design high-performance buildings, which may or may not get any green rating but were surely sustainable and environmentally conscious.

The rating system, despite ongoing research and perseverance of various agencies and individuals, has had its share of criticism too. It does have certain limitations, the biggest being escalation in the initial construction cost. There is also an element of unpredictability in the renewable energy resources which stay largely governed by local weather conditions. Also, as the green ratings get trendier, most developers tend to apply for pre-certification only as a part of their advertising strategy for their projects.

The author feels that these limitations may be overcome in time by developing mechanisms to ensure a more result-oriented approach.

We can say that we may design a project to GET a green building rating or to MAKE it green/ sustainable - eventually both paths will lead to creation of high-performance buildings and addition of more and more sustainable built environments. As conscious habitants of this earth invested with powers as stakeholders in the building industry, our ultimate goal should be to ensure reduced resource consumption, pollution, waste generation and reuse/ recycle of our precious renewable resources.

Ar. Anupam Mittal graduated from Government College of Architecture, Lucknow in 1994. A year later he started own design firm *Architects Plus"* and then established *ARINEM Consultancy Services* having setups in different locations providing comprehensive design services. He has shared his views on various national platforms regarding urbanization, green building, monolithic concrete construction technology and affordable housing. He has received many awards for sustainable and green building development. He is Co-Chairman, U.P. State Council, Assocham and Executive Member of IIA Uttar Pradesh Chapter.
anupam@arinem.com

GREEN BUILDING RATING SYSTEMS

FOR SUSTAINABLE PARAMETERS OF THE BUILT ENVIRONMENT- A HOAX OR THE NEED OF THE HOUR

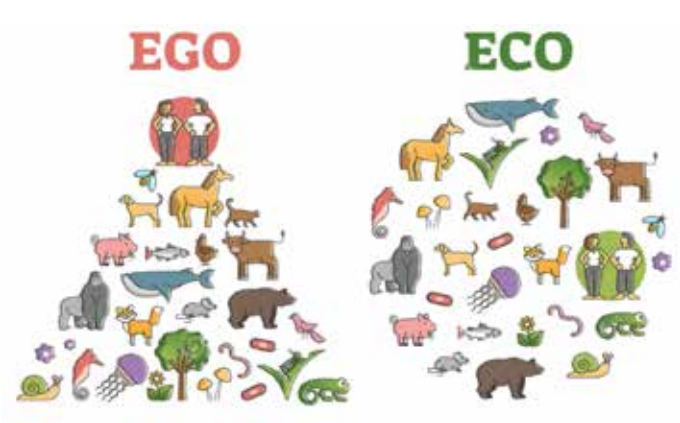
Ar. Sandeep Shikre

Whatever can be measured, can be improved and whatever can be measured and improved can be institutionalized.
Ar. Sandeep Shikre

The architecture of India dates to more than 7000 years that has deep roots in sustainable principles through its elements. Ancient India pioneered environment-friendly techniques and characteristics in its architecture. Well-articulated jalis for glare control, courtyards and roof gardens for reducing the heat island effect, cavity walls and verandahs for insulation, step-wells for evaporative cooling, microclimate responsive forms, vernacular materials, etc. have been proven as trendsetting approaches for sustainable architecture. To overcome today's challenges of rapid urbanisation with a 40 % annual growth rate, accommodating a burgeoning urban population with a growth rate of 2.32 % last year and adverse impacts on nature, we need to incorporate our legacy of these time-tested techniques with modern innovations and technologies. Along with this, the green building rating systems have set a very effective tool for implementation, measurement and motivation for society and all stakeholders.

Why and When were rating systems established?

Globally, green building is defined as "the practice of increasing the efficiency with which buildings and their sites use energy, water and materials, and reducing building impacts on human health and the environment, through better siting, design, construction, operation, maintenance, and removal — the complete building life cycle." And green building rating systems determine relative levels of compliance or performance with goals, standards and set parameters to develop environmentally friendly and efficient projects throughout the project life cycle.



Eco or Eco
(Source: https://www.123rf.com/photo_167233524_ego-eco-thinking-comparison-as-sustainable-human-living-model-outline-diagram.html?vti=mw0rnvgpwin-pcddh8u-1-48)

Challenges and problems of sustainable architecture
(Source: Shailee Gaoud @ www.re-thinkingthefuture.com)

In the early '80s, society realised that construction had both direct and indirect impacts on the environment that were negative. Therefore, conscious efforts were required to spread awareness on the necessity of using sustainable products and mindful designing of the built environment. However, only spreading awareness was not enough. Factual scientific results were required to be assessed to have achievable targets for reducing the negative impact on the environment and human well-being. From the 1970s to the 1980s, lifecycle assessments (LCAs) were gaining traction, and the word was first coined in 1991. With growing awareness of the environmental implications of human activities, a more comprehensive assessment of buildings based on LCA principles was in high demand.

Today the abuse of nature by the construction industry as one of the top runners is due to the non-judicious, rapid urbanisation and construction development across the globe. While these advancements have significantly improved the standard of living for a few, they have also resulted in overexploitation of our planet's resources, destruction of ecosystems, and climate change! According to the 2019 Global Status Report for Buildings and Construction,40 % of energy-related greenhouse gas emissions is from buildings and the construction sector, which is alarming. With this, climate change is posing an existential crisis for humanity. With rising global temperatures, melting ice caps, rising sea levels and man-induced natural calamities, the effects of climate change are now more evident than ever before.

The first green rating system globally, BREEAM, was introduced in the 1990s in the UK, followed by the United States' Leadership in Energy and Environmental Design (LEED) rating system in 2000. The nine categories of BREEAM are: "Management, health and wellbeing, energy, transport, water, materials, waste, land use and ecology, and pollution" and LEED addressed in seven categories: "Sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, innovation in design, and regional priority". There are now estimated to be over 600 green certification systems in use around the world.

Rating systems in India and Government advocacy

There are many leading organizations' rating systems in India to suit the Indian context: Leadership in Energy and Environmental Design (LEED- INDIA), Indian Green Building Council (IGBC), Green Rating for Integrated Habitat Assessment (GRIHA) and Green and Eco-Friendly Movement (ASSOCHAM-GEM). All these rating systems are voluntary based and strive to make India an environment-friendly country in the next few years. Today, within IGBC itself, there are 29 rating systems for various building typologies that address the most important national priorities, including water conservation, handling waste, energy efficiency, reduced use of fossil fuels, lesser dependence on usage of virgin materials and health and wellbeing of occupants. IGBC has contributed around 7.86 billion sq. ft of green footprints at no. 2 in the world. All rating systems are dynamic, and there are continuous upgrades as the industry has realised and accepted the overall benefits of going green.

Along with this, The Government of India, over the last two decades, has initiated several new missions and policies that support the path towards net-zero carbon buildings, cities and nations over the last two decades. To name a few missions and policies: Energy Conservation Act (2001), Energy Conservation Building Code (2007), National Action Plan on Climate Change (2008) –Perform Achieve Trade Scheme, National Solar Mission (2010), Swachh Bharat Mission (2014), Green India Mission (2015), Smart City Mission (2015), National Energy Policy (2018), and Sustainable Public Procurement (2018).

Various government regulatory bodies such as The Ministry of Environment and Forests (MoEF) and Development Control Regulatory of each town/ city, the National Building Code (NBC) have now mandated some of the sustainable principles to be incorporated in building design and ongoing construction to evaluate buildings with a holistic evaluation system through architecture design, materials and engineering.

Post Occupancy Evaluation

With government-supported policies and rating systems in place, one more factor plays an important role in assessing building LCA and performance, which is post occupancy evaluation (POE). This is the process of analysing how functional and comfortable a building is after users have been occupying it for some time, generally after six months.

The Earth
(Source: Age of Anthropocene @ https://theanthropocene.org/)

This method aids architects and other stakeholders to better understand the impact that spaces have on human behaviour by enabling them to see connections between environmental and human influences. POE involves objective measures such as environmental monitoring, space measurement and cost analysis, and feedback from the building occupants through questionnaires, interviews, and workshops, but may also involve more. In addition, it enables to constantly update and upgrade the rating systems as per the needs of today and tomorrow.

Today there is little development in this sector, but it is progressively growing with more people understanding the gravity of environmental impacts on Mother Earth and life. Many POE case studies are now available with green building organizations reflecting the benefits to the occupants and the positive impacts on built structures in the micro contexts.

Are Green Buildings expensive?

There is a notion that sustainable buildings are expensive and overshoot their budgets. Going sustainable encourages using materials, equipment, and systems with higher performance parameters and manufactured in environment-conscious factories that consider carbon footprints of all raw materials and processes. A few decades ago, there was a considerable cost difference between sustainable products and economical and quickly available ones. Today, the scenario has changed with like-minded manufacturers, material suppliers, technocrats, and end-users taking the route of making and using eco-products. The marketplace of the design and construction of high-performance buildings is dynamic and evolving. Professionals throughout the building industry use assessment rating systems to evaluate and differentiate their products or design. Due to this, the cost difference has been reduced to a meagre 2 to 3 % of the overall project cost, which also gets absolved in a few years of occupancy since the operating expenses (OPEX) cost reduces drastically.

What do we achieve?

Many yet are not convinced by the green building rating systems and consider the entire gamut superfluous. To this, I would like to give a simple inference. When one buys any packaged food product from the market, they are bound to see the ingredient list and nutritional value table given on the backside of the packaging. We are conscious of what we buy as per our set standards of healthy eating. Similarly, each built environment has its parameters that need to be set, assessed, and implemented for a healthy structure, the wellness of its occupants, and the protection of nature. There are tangible and intangible benefits of having rating systems like:

- Environmental goals can be set.
- It is possible to work towards certain objectives.
- The environmental performance of a product can be validated.
- Third parties can see your environmental performance.
- Improvement is measurable and demonstrable.
- Green education can be promoted and assisted.
- It is possible to create positive marketing.
- In the real estate market, it raises the monetary value of a structure or property.

Green buildings organizations have demonstrated tremendous benefits, both tangible and intangible, through these rating systems. The most tangible benefits are the reduction in water and energy consumption right from day one of occupancy. The energy savings could range from 20- 30 % and water savings around 30- 50%. The intangible benefits of green buildings include enhanced air quality, excellent daylighting, health and the wellbeing of the occupants, safety benefits and conservation of scarce national resources.

Today with the success of green building rating systems towards improvising the degenerating nature, government, semi-government, institutional, and big Fortune 500 companies have taken an oath to create every new square foot and refurbish their existing built environments into sustainable ones by putting them in the category of top rated green buildings.

To conclude,
As our collective commitment for
Better tomorrow
Go green,

start well…
grow well…
stay well…

Ar. Sandeep Shikre spearheads SSA Architects with a team of 275+ young dedicated, committed professionals that renders Architectural, Interior Design and Construction Management Consultancy Services. Sandeep is an USGBC LEED Accredited Professional and has a deep commitment towards sustainable development. He is the senior fellow, founding Member of CII - IGBC. He is also the Chairman of IGBC (Indian Green Building Council) Mumbai Chapter and net zero carbon rating systems. He is a patron of CTBUH (The Council for Tall Building in Urban Habitat), USA and is on advisory committees for several forums.
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CRITIQUING THE RATING SYSTEM

Prof. Sathya Prakash Varanashi

INTRODUCTION

With climate change hanging like a Damocles sword, suggesting the extinction of the human race, it is difficult to criticise Green Rating Systems. Until recently, the non-believers of global warming were rightfully targeted by believers, and likewise today's critics of the rating system would be equally targeted by the proponents of the system. Justifiably so, on a quick look, the benefits overrule the deficiencies of the system.

Many intellectuals, experienced seniors and subject experts have put together the dossier for ratings, a much appreciable act, with periodic revisions. IGBC, LEED, GRIHA and GEM give ratings while BEE / ECBC have guidelines for appliances and buildings. After all, the idea of getting rated is a voluntary idea, the criteria as a set of advice with no compulsions or mandatory rulings. Beneficial in many aspects from long term savings to feel good, rating systems have enabled hundreds of large buildings to reduce energy consumption, which otherwise would have guzzled more energy. As a bonus, a certificate comes handy as an incentive. One may bluntly say, those who neither need it, nor believe in it, need neither apply nor antagonise it! All the above makes it difficult to criticise green ratings.

If so, is everything acceptable about it? Of course, not. If we wish to see the possible fault lines within the system, we need to re-look at it from multiple directions. Accordingly, this essay critiques the green rating system from social, psychological, professional and philosophical provocations. This is not to question the idea of rating nor to debunk it, even if some thoughts may sound so. This analysis ends suggesting an introspection into our deeper desires, expressed through our designs, which appear to be shaping our collective destiny.

TRADITION OR MODERNITY

Being of western origin, most rating systems initially promoted their approach to modernity, both with materials and construction systems. The fact that Indians always led sustainable life was not recognised, as such our vernacular constructions and traditional materials were totally ignored. No wonder, the majority of rated buildings are located in the high budget, developer promoted, publicly prominent and possibly elitist commercial structures, with few exceptions in institutions or houses. Thankfully, this contextual misfit has been better addressed of late, but rating in India ignoring Indian traditions continues to be a contradiction. The large variety of building types rooted in local and humble contexts, never seek ratings, still a point to ponder.

INTUITIONS, INTENTIONS AND CALCULATIONS

Architecture as a profession has not always been sensitive to its contexts as history proves, but siting at the threshold of doom, it is time to return to our animalist intuitions of survival. We all agree that shelter making is our inborn skill towards problem solving with design thinking and buildings as solutions. If so, we need to rekindle our intuitions and set our intentions right. Instead, design the wrongful, then redress it with corrective measures and get certified by calculations that are not right. The true green building is the one which does not need green certification. Maybe so, a large number of architects do not bother to seek the green tag.

QUANTIFICATION OR QUALIFICATION

What truly qualifies as an eco-friendly building by designing with nature, does not need quantification except for self-satisfaction or for public information. If quantification by data accumulation is a measure for qualification, then we have missed something. The pan Indian variations in culture, climate, geology, site conditions and geography at large are anyway ignored in the exercise of tick marking the criteria with points given by the assessors.

Quantification is oblivious to one of the critical criteria, data on embodied energy – of course difficult to calculate, but should have been a benchmark to qualify as green rated design. Theoretically, the criteria list for rating is very comprehensive, hence worthy of being the first step in designing goes undebated. But practically, it appears to be used like the multiple choice questions students get in exams, just to choose what could be known or appears convenient. Have we made green certification an easy process of quantification, diluting its potential qualifying depths?

ASPIRATION OR INSPIRATION

If a lavish, high end, corporate office gets the highest green rating with the building being beamed everywhere, would it entice a young aspiring architect to design similarly? After all, certification consultants can advise tweaking the design to fit the rating criteria to get instant fame. This is not to blame the designing or greening consultants, but to make us think if the certification is ending up as a professional aspiration rather than a design inspiration.

Medication should not entice a diabetic patient to splurge on sweets, just so, certification should not encourage an architect to design avoidable air conditioning, luxurious furniture and exaggerated interiors with excessive imported materials. Even by doing so we can escape by gaining points on the easier fronts and ignoring the difficult score, for the final rating is an average of all, hence getting a decent rating is still possible. Alternatively, being contextual, minimalist, elegant and appropriate should be the mantra of green buildings. Philosophically speaking and considering dwindling earth resources, perpetrators of high carbon footprint architecture can be pardoned, if not penalised, but not publicised. However, all this argument can be ruled out and ratings justified because voluntary simplicity is a mirage today. Certification may have to be the only incentive to be eco-friendly.

RATING AS A RECOGNITION OR A STATUS

Architects get to be known largely by media, awards, publication and seminars, leading to societal recognition. As rating systems got popular, it appeared as if green certificates became the fifth option to gain that public pride and elation. Theoretically nothing wrong, but practically, it sends the wrong message.

Let us accept the need to certify energy related matters, but should we not also certify typological performance, functional efficiency, climatic conformity, cultural appropriateness, user satisfaction, stable durability, life cycle advantages and others? In the absence of such grounded modes of recognition, merely claiming green rating gives a false impression about the quality of architecture, which could be superficial, yet hyped. This comment is not to abolish the rating system, but suggesting it be elevated to the next level.

MARKING THE RATINGS

Reference buildings and ratings, let's draw a parallel with marks in schooling systems. We believe education should be to explore, experience and learn, yet all schools give equal or more emphasis on examinations, evaluation and marks, judged by the teachers. Anywhere from 35 to 100 becomes acceptable, so very few below 35 fail. Green architecture is also to explore and experience, yet gets judged by someone outside the creators and users, be it critiques or certificates. Of course, this may sound like a systemic problem, nothing to do with the validity of rating as a concept. If so, why are we assessing? Maybe because too many buildings are being built disregarding energy and climate as criteria.

PART APPRECIATION OR HOLISTIC ASSESSMENT

It is a fact that the power of certification has grown many folds across the last two decades, thanks to the sustained efforts of IGBC, GRIHA, LEED, BEE and of late, GEM. As such, the tendency to seek certification to get publicity, with or without full follow up has also emerged. Ideally a project should document all of its design conception, material production, on site construction, monetary calculation, functional performance, user perception and life cycle

issues across 10 or minimum 5 years, to be considered for certification. True champions of energy efficiency could then be revealed, not before or soon after project completion. Being truthful is not reporting a few facts once at the outset, but living it ever after.

CERTIFICATION AS PROMOTION

Increasing number of institutional, Governmental and private buildings are seeking ratings, a good trend. However commercial complexes, residential apartments, hospitality projects, medical care hospitals and projects launched by promoters and developers formed the larger bulk of applicants in the past. They need visibility and marketing, wherein green ratings compliment their business agendas. Considering the direct costs involved in getting a project certified, leave alone the possible carbon footprint of the whole exercise, most people will find it unnecessary. Promotion through green labels leading to sales, awards, publications and seminars may not be a totally wrong move, but when extravagant star hotels get the highest ratings, we need to question the messages being doled out.

DESIGN FOR CONSUMPTION OR SUSTAINABILITY

Architecture has directly complimented the economic growth rooted in extracting from nature, thereby consuming resources. Rating system has only contributed to this scenario, by permitting people to perpetuate consumerist intentions and attitudes. No wonder after the early hype about certification, which was touted in the garb of sustainability, LEED faced much critique in India. Soon it was clarified that green ratings may not fully comply with eco-friendly designs and sustainable projects. As such, Commonwealth Games Village in Delhi; Infinity Benchmark in Kolkata, CISCO in Bangalore and many such projects get rated, yet holistic sustainable goals stay as shortcomings.

CERTIFICATION AS PARADOX

Do we need ratings, because we design inefficient buildings to fulfil our desire for name, novelty, income, image, comforts, business, publicity and many others? Philosophically speaking, a healthy society is not one where we have hospitals, police and regulations, but it is when we have none. Imagine the day when all buildings were green by definition and there are no energy in-efficient buildings at all - there would be no certifiers or certificates. Of course, this argument would be right away demolished as an idealist position! In a country where voluntary compliance to best practises is nearly absent, traffic being an example, we adhering to sustainable designs should also be least expected or can we change?

GREEN RATED BUILDINGS OR GREEN RATED PEOPLE

Too often we hear buildings being criticised for their inefficiency, be it in climatic design, creativity or comforts. Then comes assessment and reprisals to make them efficient and green. Why blame buildings when to be blamed are the people who create them? Can we consciously design energy efficient buildings and not even seek ratings? Going one step further, let us think, do all of us who live and use green rated buildings live a green rated life. If we individually have a high carbon footprint and are high ended consumers, claiming to design and build green architecture can be a hypocrisy of sorts. We surely need green rated buildings, but need green rated people in the first place.

CONCLUSION

Just like the word green for buildings, there can be brown for soil, red for fire, blue for water, grey for air, and no colour for space. As we care for green buildings, if we could also care for all the five fundamental elements everything is made of, i.e., earth, fire, water, air and the luminous ether, then our future could be different.

Then, we would have reversed the climate change and green buildings too would have contributed, going beyond a printed certificate. Thinking fundamentally, let us realise, the solution to the climate crisis does not lie in rating the buildings, but in ourselves. To begin with, can we all get a 5-star platinum rating in minimising our PRC, in our Personal Resource Consumption?

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Prof. Sathya Prakash Varanashi studied architecture in Bangalore, Urban Design at SPA, Delhi and Heritage Conservation at UK. His 27 year old firm Sathya Consultants designs cost conscious, culturally appropriate and eco-friendly architecture, exploring varied design alternatives. Sathya is presently a Professor at KS School of Architecture, Bangalore and is involved with academics, writing, events and NGO inclinations.
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ARCHITECTURE AS OPPORTUNITIES

Ar. Rohit Shinkre

Fact File

Project Name	▶ Lycée Français Internationale de Pondicherry (LFIP) or the French High-School of Puducherry
Client	▶ AEFE, French Government Agency for Overseas Education
Location	▶ Puducherry
Total Area	▶ 5800 sq.m
Completion Date	▶ Building work- April 2018; Sports Court & Landscape Sept. 2018; Security Works - Oct. 2020.

Design Team :

Design Lead	▶ Rohit Shinkre
Project Architects	▶ Saurabh Mhatre, Sonal More
Interior Designer	▶ Komal Valanju
Structural design & conservation consultants	▶ INTACH, Puducherry Chapter
MEP Consultants	▶ Auro Associates
General Contractor	▶ Saravannan Reddiar
Electrical	▶ Kumar Electrical Services
Plumbing	▶ Aurokeethana Aquatech
HVAC	▶ Elite HVAC / Bluestar

Simple structural grid. Lightness and economy.

The renovation and extension of the Lycée Français Internationale de Pondicherry (LFIP) or the French High-School of Puducherry has been a landmark project for me. Like many architects of my generation Maurice Merleau-Ponty's Phenomenology of Perception and Robert Venturi's Complexity and Contradiction in Architecture had a profound influence on my approach to architectural design. The idea of architecture being 'a machine to live in' though intellectually attractive is a reductive of its potential.

The Project

The Lycée occupies a compound of 5800 sq.m in the heart of the White town of Puducherry which is one of the most actively conserved historic urban precincts in India, thanks to the untiring efforts of the local INTACH chapter. The complex has four building blocks, the earliest built around the mid-nineteenth century, the next in the early twentieth century; both in load bearing brick walls, then one in the mid- twentieth century in and the last at the turn of the millennium- both in RCC. Ironically, it was the last addition that was to be demolished. The project was about renovation and modernisation of parts of the existing historic buildings and an extension for new spaces for the primary school. This article is about the many questions that the project raised and how they informed the design process.

Architecture and Design as Resource Management:

The eco-friendliest building is the one that is already built. It is a shame that a structure built in the early part of the twenty-first century needs to be demolished. Its design was unable to adapt to changing use and its poor build quality did not justify any major investment in renovation. It is to be noted that the other historic blocks, though much older, were in better condition and more conducive for adaptive transformation and modernisation, basically because they were better designed. This is a glaring comment on the general state of architectural design and construction in India; more so here since it stands in direct comparison with other historic buildings.

Architecture is resource management too. A long lifecycle can and must be a simple measurable criterion to assess good architectural design and construction particularly in the quest for sustainability. Long life is a statement about not only the quality of construction, in terms of the structural stability and weather resistance, but also about design and planning in terms of spatial adaptability and user appropriation. Such essential values rarely find place in the discussion in the design and construction community or in the media. It is rare to see a project being covered say 10 to 15 years after it is 'inhabited'. A longer-term critical view on architecture may serve better in defending more enduring values of architecture. Highlighting these is even more important in the consumerist abyss that we are faced with. This reinforced our commitment to design / build to last.

Environmental Sensitivity:

Barring the heroic aberrations of the twentieth century that continue till today, good architecture has always been environmentally sensitive. Here too, without being obsessed about the rating systems, the design is traditionally sensitive to its natural and built environment in multiple ways:

a) Economy of resource: Optimisation is a fundamental value of architectural design and planning. The project achieves a remarkable built-up to usable space ratio. The RCC structural frame is rationalised.

It was a deliberate choice to avoid cantilevers to create a simple compressive structure. Even non-structural elements, express lightness, and economy, without compromising on performance. The design of entrance canopy that covers the hold area where students wait in safety before rushing in or out of the school is a case in point. It is suspended with an articulated joint to allow and withstand uplift in case of strong cyclonic winds that are frequent in the region. It is like a hyphen floating between the old and the new with magical lightness. The engineering performance is not a 'look what I can do' gesture but responds to very specific functional, urban, architectural and structural demands.

Entrance canopy suspended between the old and the new.

b) Climate Response and Comfort: Being in an urban context the orientation of the building blocks is dictated by the existing alignments. All passive measures to reduce radiation heat gain are considered. Terracotta screens shield the open corridors, conventional brickbat with lime and jaggery is used to provide thermal insulation and waterproofing. Traditional terracotta tiles with wide joints are used to withstand extreme thermal variations. Though the classrooms are air conditioned the light well created along the adjoining property wall allows for better daylighting but also for natural ventilation whenever desired.

About Conservation:

Architectural and urban conservation is a nascent and somewhat elitist concern in India. It can go from fetishist activism in some privileged parts, like the Puducherry White town, to total disregard in other parts of the country. Most people here are struggling with survival and basic developmental challenges and it is understandable that heritage conservation is not a public priority. The question of built heritage conservation in the demographic and urban reality of India, however, needs some debate. A fundamental question would be why buildings should be conserved and if so which ones and for how long? Can we afford our cities to be fossilised in historic architectural styles? Architecture and cities in designated heritage precincts, such as this, are suffering from a kind of 'provincial sentimentalism' (Pallasma, 2005) imposed by ill-advised city authorities. Conservation policy is reduced to replication of historic architectural features. The city and its architecture are 'made-up' for the tourists, the nostalgic and metropolitan investors while the living urban reality of Puducherry has shifted to other quarters. Our cities may turn into Disneyland and architecture would fail in its task of the defence of the authenticity of human experience. The swing is from one extreme to the other and points to the need to seek a middle ground between total disregard for heritage that has been the norm and meaningless replication that is advocated here.

Initial sketch for the light well

Conservation is also, and perhaps primarily, about construction and details. Quite often casual renovations / stylistic conservation affects the structural integrity and thus lifespan of historic buildings. Here too, previous repairs, alterations, and incorporation of modern utilities such as plumbing and air conditioning were carried without duly considering the nature of the structure. Our approach was to try and heal and restore wherever we intervened in the old buildings. The works in the historic buildings, creation of a new modern kitchen, additional toilets, air conditioning, replacement of damaged structural members were done with utmost case of the old load bearing brick structure. Some simple guidelines and details were prepared based on local observations:

- Removing cement plaster applied during subsequent renovations or repairs and restoring the original lime plaster. The former trapped humidity had over a period totally compromised the compressive strength of the brick walls. This caused the collapse of the Hôtel de Ville of Puducherry in 2014. Though this process was not complete in all the premises it was done wherever we intervened, and the owners have been advised to gradually undertake this wherever required.
- Removing false ceilings so that real ceiling is visible, and any damage or cracks can be immediately identified. Partial false ceilings were used wherever required for acoustic purpose in the dining hall, classrooms, reading rooms and laboratories. Custom designed light fixtures integrating acoustic panels were used.
- Wash basin counter was detached from the walls standing on a SS frame so that water does not seep into the old brick walls.
- Refrigerant and drainpipes for air conditioning were housed in a double skin HDPE pipe wherever crossing through the old walls to arrest dampness due to condensation that was generally observed.
- Pre-cast ferrocement projections have been added to the old load bearing brick walls with torsteel ties embedded in local punctures. Such senseless 'restoration' and modernisation work is inducing failures in the otherwise very simple and safe load bearing structure. We have recommended these violations to be corrected and the ferrocement components to be replaced by conventional projections on wooden / mild steel brackets. This will be part of the next phase of the project.

About renewal:

The extension is a significant event in the life of this historic and influential institution. It is a renaissance of sorts. The architecture must support this renewal. By replicating its old architectural features, you are also reasserting the old

External façade as per heritage conservation guidelines... with castellated beams and polycarbonate cones peeping out

Image A: Each classroom is distinct with its own spatial qualities.

colonial legacy and missing out an opportunity to project contemporary, multi-cultural and humanist values that the institution upholds today. The design has to negotiate the contradiction between the citatory conservation guidelines and the desire for a renewal. As a result, the new extension has street façades that complies to the former and internal courtyard side façades that express the latter. Though the loss of architectural 'integrity' is regrettable the 'schizophrenic' dual personality of the extension conveys the conflicting appreciation of history and culture. Built heritage conservation guidelines would do well in defining architectural controls in terms of scale and typological references to climate responsive space and construction rather than imposing specific architectural features like bands, cornices, railings etc.

Architecture for education; a different scenography:

We know not through our intellect but through our experience. Maurice Merleau-Ponty

This experience in architecture is also scenography of a different kind: architecture as the container of the human experience. Observation, curiosity, wonder, and dialogue are key to education and space is conducive to all of this. The typology of the school building, as we know it, take us to the early industrial era stressing normalisation, addressing children as a group rather than individuals. Most of us have suffered the monotony of the array of identical classrooms served by long corridors during long school years. Many may have become totally insensitive to space and its characteristics as a result.

Image B: Each classroom is distinct with its own spatial qualities.

The three trees and the children

Here, every opportunity of sensorial engagement is exploited. The project despite or rather because of its small scale, is dense in spatial experiences that provoke a dialogue with self, with nature, with the community within the school and out of it.

Each of the new classrooms is different by design: the plan, the daylighting within, and the views and extensions without are unique to each class. It allows teachers and learners to respond to their space. The individuality of each child and the teachers is not neutralised by the repetition of a standard classroom. Individuals and groups can respond to specific spatial conditions, which they have.

There are the projecting balconies, the raintree courtyard, the play area with the banyan, the adjoining 'Préau'- a stilted open hall and finally the open-air classroom on the terrace shaded by deep concrete fins which offer the children a wide variety of spaces to be in, to be by oneself, with a friend or two, in a small committee or a large group. Particularly during the 'recreation' (recess) time, each child makes a choice of how and where to be. The place is not regimental but affords these individual liberties to the children. They deserve that.

Three existing trees are an integral part of the project. A large window highlights the teak tree along the neighbouring plot. Seating around the majestic banyan protects it and draws cool shade from it. A small amphitheatre is created around the raintree as a space for contemplation and communion with it. The foundation design of the load bearing curved walls of the toilet block was with micro plies wherever possible supporting a plinth beam above the root layer to protect the root base of the rain tree. It is hoped that the children will be more aware of their beauty, their strength and fragility, notice the changing seasons and the rich biodiversity that they so generously support.

During a site visit I noticed that many birds gathered on the roof of the toilet block to peck on the seeds and flowers fallen from the raintree, the design and profile of the sky-lighting ventilators was changed to depict that… I am sure some clever kids will get it and smile… for others it is still a nice-looking form!

Social education is an important part of school years. Children learn to deal with others, their peers in class, the student community and the world outside of their homes and the school. Puducherry has a lot to offer to a growing child. Its architecture directly reflects its social and linguistic diversity and history. A lot of traditional building crafts are still alive here. The design wants to manifest of this. Though the structure is conventional RCC frame and slab, traditional brick bat and lime-based techniques were used to insulate and waterproof the terraces. Local crafts find their way in the project through the terracotta and ferrocement components. The characteristics colours of the old and new quarters of Puducherry are cited here on the internal walls of the light well and on the stairwell. Contextuality was defined with very different parameters.

Thinking back, it appears that the thought behind these spaces draws on very personal experiences from my school days. One of our friends had restricted mobility and everyday each one of us used to take turns to spend the recess with him- sitting in a corner, playing a board game, reading, or just watching the others playing. This happened despite the space being available for it. The spatial inadequacy of the typical school building was well understood. Schooldays are a fertile ground for lifetime memories, mostly good ones. This school wants to be worthy of those memories.

We created opportunities to engage the school children even during construction. A group of them volunteered to work alongside the artisans to create mosaics on the seating in the raintree courtyard. Multilingual greetings and good wishes adorn the mosaic. Signage boards for the toilet blocks were also made in the same manner. Similarly, books arranged in fluid stacks like an installation art that allowed children to literally continue to be amidst them during the renovation of the library. The interest, participation, animation, and ownership that such initiatives generated is part of the legacy of the project.

In conclusion, the project was an exercise to enrich the primary functional scope of the project through design thinking. Architecture offers many specific opportunities to engage its users, to create a pleasant environment and to debate broader questions about the discipline. It's the role of the architect to be attentive to these contextual specificities. The project is born of the place… it is simultaneously universal and specific.

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AMUL FOODLAND

A CONTEMPORARY MULTI-CUISINE RESTAURANT DESIGN

by Studio 926

Fact File

Project Name	▶ Amul Foodland, Multi-cuisine Restaurant
Client	▶ Amul Dairy, Anand, Gujarat, India
Location	▶ Anand, Gujarat, India
Total Area	▶ 2500 sft
Design Team	▶ Ar. Shailesh Patel and Ar. Ronak Patel
Execution	▶ Mr. Bijal Shah
Completion Date	▶ January 2020

The first view upon entering of the Buddha with a rustic background.

Amul Foodland is a multi-cuisine restaurant in a contemporary style designed by refurbishing the existing shell structure. The restaurant belongs to Amul, an Indian Dairy Cooperative Society and the client briefed for a design that captures the unique background and values of their 75 years old legacy with a distinctive contemporary touch.

The idea was to create a space that has a contemporary yet traditional vibe attached to it and at the same time uses a material palette with inherent texture & colour rather than applied to finish. The most enthralling idea was to use the compartmental seating with a roof under the main roof. The ambience speaks about the restaurant being a relaxing space. The focus remains on food, and the harmonious combination of modern and traditional design elements with contemporary twists provide the guests with a refreshing dining experience.

Concept and Design Approach

The approach to the design was to create a space that is rustic yet classy with a contemporary vibe to it, by curation of experiences through charming ambience and delectable food. The design considers different dining occasions by establishing separate dining environments throughout the restaurant. The space with its exposed brickwork in the backdrop, industrial ceilings embraces the raw beauty of the well-proportioned space.

The design takes a route of simplicity, clean-lines forms and uncluttered interiors. The linear programme inside is designed parallel to the glazed, garden lawn facing windows in order to leverage views and natural light. With a total of 2000 sq. meters, planning wise the area is divided in 2 parts for kitchen and dining. The spatial planning of the restaurant includes an entrance bay, the fixed seating bay, and the kitchen. Floor plans were designed as an open space with intuitive two linear passages connected endwise. A yellow frosted glass door marks the entrance with clear transparency between the entrance bay and the seating bay by glass panelled wooden French design frames.

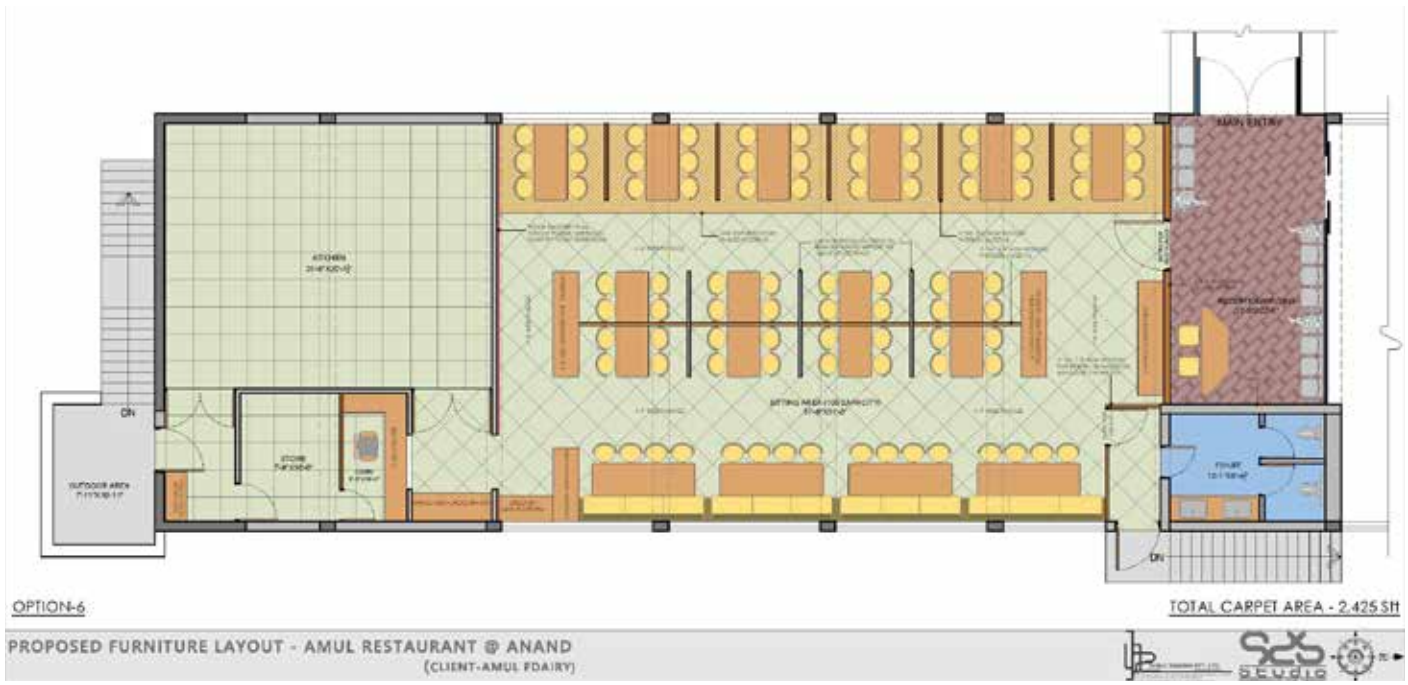
Design Elements

The design team decided to preserve the existing elements and use common grounds from the client's brief and design sense to create a well-crafted masterpiece that has plenty of design elements. The design is replete with rustic, industrial and out of the box design elements that complements the contemporary vibe of the space - be it the compartmental sitting with a roof below the main roof or the roughly finished kadappa stone flooring. The compartmental sitting has a MS grid ceiling, with terracotta plates placed alternatively. This accentuates a roof below the roof running across the shell roof beams of a reachable height of 8 feet. Be it the grainy texture of the acid rusted MS *jaali* panel or the roughly finished kadappa stone flooring, the ambience speaks loud and clear about the restaurant being a relaxing space.

The restaurant houses plenty of laminated wooden tables with matt black metal legs and comfortable wooden chairs and couches strategically placed, while ensuring enough space to move around with ease – a good example of well executed

Compartmental sitting with a roof below the main roof.

The yellow frosted glass door marks the entrance.



Floor plans designed as open space with two connecting linear passages.

Design with compartmental seating and a material palette with inherent textures.

The acid-rust finished MS *jaali* and satin black-painted corrugated cement sheet for compartmental partition.

Design with compartmental seating and a material palette with inherent textures.

space management. The tables and chairs are designed by the studio architects and assembled by Comfy Furniture, located at Anand, Gujarat. Circular pendant lights are set above the dining area, hung on the matt black anodised cable tray with perforated panel.

Colour and Texture Palette

The monochromatic colour palette used adds to the charm of the with a splash of red and yellow, with the dark grey roof and black rough flooring adding to the indigenous effect of vernacular Indian Interiors. Modest shades of brown and beige have been used for the furniture while the walls are adorned with yellow hues. The partition in the compartmental seating witnesses the use of acid rust finished MS *jaali* that are highlighted by terracotta plates on the grid metal ceiling.

The textures and finishes used in the restaurant are interestingly paired to tell the tale of the tradition, with the major visual texture being the rough kadappa flooring and the acid-rust finished MS *jaali* and satin black painted corrugated cement sheet for the compartmental partition.

Along with all the other aspects, the project qualifies to be a sustainable project because of the fact that it does not unnecessarily use design elements while destroying the existing ones, rather the design team believes in sustainability and avoiding wastage of resources.

Studio 926, founded in 2015, is an architectural and interior design studio, led by Ar. Ronak Patel and Ar. Shailesh Patel, both graduates from COAID, SVIT, Vasad. Architects by profession and academicians at heart, the duo create a style of design which is thoughtfully considered, environmentally responsible, and highly emotive. Always looking for exploration and innovations, their work displays a blend of function and style.
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Content Write-up by : Ar. Yamini Shah

DELHI COLLECTIVE

Ar. Mitali Kedia & Ar. Sidharth Khatri

Straight lines and minimalism creating a linear built form.

Delhi Collective is a young multi-disciplinary design studio started by Sidharth Khatri and Mitali Kedia in 2017. The studio embraces the principles of design thinking and accommodates them to create a unique design language within the projects. The firm works at multiple scales and platforms, catering to diverse clientele, from homeowners to corporates & NGOs. This diversity allows the studio to experiment with the architectural & interior language of the projects, such as villas, residences, corporate offices, restaurants and retail spaces. Delhi Collective's approach is to actively solve problems and develop human centred design solutions. The firm's philosophy is to create adaptive and sustainable designs with respect to its socio-cultural context. The design studio has always aspired to develop a space where young architects can innovate and be enthusiastic about design and the processes involved with it. From the inception of the studio, we have always hoped to give young and budding architects freedom to understand and challenge their limitations. We understand the needs of the ever changing world and the implications that come along with it; however, the challenge for us is not to blend in the chaos but to stand out and bring normalcy back into design.

We believe that architecture as a profession is bestowed with a great responsibility of shaping not just the cities but also the future and we as architects have always endeavoured to create spaces which are universal. Through our projects we have endeavoured to make universal a part of our overall design schemes, starting from the passive ways of including ramps to incorporating smart technology in order to make design solutions friendly for all. Universal has over the years adopted many definitions and forms, our understanding of universal stems from creating spaces which are suited for all and not aligns just with trends of the year.

Our project 'Outhouse', located amidst the lush greens of Chattarpur farms in New Delhi, embraces universal in the form of flexibility. The open floor plan of the structure can accommodate multiple layout and configurations, with access from all sides the house is not restricted with one entry and exit point but opens with the need of the user. The plinth has been treated as a stepped platform that helps the volume merge into the ground smoothly as well as creating a seating space. The house has been treated with large glass windows with sliding doors that allow the landscape to merge with the interior. While the toilet block is treated with a blank façade with a strip of wood cladding accentuating the linear form of the building. Using linear lines and neutral tones for the front façade the whole building exudes symmetry and balance, qualities which do not fade with years instead becomes timeless.

Universal took another meaning in our newly constructed farm house in the outskirts of Delhi. The linear plan form creates small modules where each living space stands as an entity on its own and the common amenities are placed at the centre for ease of access. The four-bedroom house overlooks the beautiful Aravalli ranges close to Mangar Bani

Mix of openings overlooking the Aravallis.

Box windows projecting onto the Verandah.

forest, and is surrounded by farmlands on the sides. Context played a significant role while designing, the materials used, the aesthetics of the house was so developed to match its surroundings and blend in rather than stand out within the lush greens of Aravallis.

The house was conceptualised with simplicity in mind, where visual appeal and complexity is made apparent through vertical elements of the buildings. The sloped roof cantilevered beyond the edge of the house rests on exposed brick columns, creating a covered verandah overlooking the hills. Every room is fitted with window walls with ledge seating to look out into the forest around. These box windows protrude onto the verandah which showcases their duplicity. In this project the goal was always to open the spaces and the building to nature and respond to the surrounding settings.

A project very dear to our hearts is a simple house nestled between the Aravalli hills of Jaipur, the house blends in with the surrounding landscape. Amongst the tall trees one can see fragments of an earthy pastel structure quietly staring back at you. Our weekend home has been designed keeping in mind its context and climatic conditions, the idea where to amalgamate the outside and the inside. Each room opens out to allow nature to flow through each space. North - south orientation has been kept for all major openings with slit windows opening in the east and west directions. The layout of the house works on a simple grid with the front and rear elevation being symmetrical. The flat façade is broken by veranda niches on the front and rear with Dholpur Stone box windows cutting through the east and west walls. The keyhole opening of the main entrance is symbolic of the vernacular haveli entrance design. We enter into a foyer which overlooks a small courtyard with the view of the forest. The Living and dining space is situated towards the front of the house and the Main bedrooms towards the rear. Each space opens up onto the outside keeping the landscape connected with the interiors of the home. Exposed concrete takes over the interior ceilings with polished Kota stone flooring. All the materials used in the project have been sourced locally from a 20km radius keeping the house true to its natural surroundings. The terrace of the house has a small pergola feature made out of bamboo for one to enjoy the surrounding views of the hills and forest. The elevation

of the house has been divided into 3 parts – the heavy base which sits above the plinth, an off-set parapet wall that breaks the vertical massing and a floating pergola which accents the house. Rough plastering wraps around the base with a beige pink hue complementing the Dholpur stone box windows. A lighter paint of the same hue has been used on the parapet with smooth plastering. These small details bring out the simplistic nature of the owl house.

Nestled in the forest, soaking in the surrounding beauty.

Our overarching goal as a collaborative design studio is to be able to contribute to society and the city as a whole by bringing more innovation into passive design practices which over the years have taken a back seat and blend new with the old in a sustainable and universal manner. As architects it is imperative for us to consider the implications and impact of our current design decisions on the generations to come, and it is upto us to make it pure and beautiful.

Ar. Mitali Kedia
Having an academic background in design with practical experience of working in transport and urban planning, Mitali has been exposed to a design practice that integrates site, landscape, and people. Bachelors in architecture and Master in Urban Design from University College London, she has undertaken various city development projects.

Ar. Sidharth Khatri
An architect by profession with a master's degree in Industrial Design, Sidharth has undertaken multiple stints in the industry before venturing into starting his own design practice. Honoured with India's best design studio award and published in multiple platforms, he has undertaken various architectural and interior design projects and is a visiting faculty at School of Planning and Architecture, New Delhi.
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The front openings replicate the silhouette of an owl, hence 'The Owl House'.

ARTICLE

CONVENTIONAL VS UNCONVENTIONAL
A CASE OF THE CLOUD PROJECT

Prof. Fatema Kabir

Image 1:Farnsworth House by Mies Van De Rohe, Plano USA
(Source: https://www.archdaily.com/59719/ad-classics-the-farnsworth-house-mies-van-der-rohe)

Image 2: Charles-Dominique-Joseph Eisen (1720–1778), Frontispiece, Marc-Antoine Laugier's Essai sur l'architecture, c. 1754
(Source: https://drawingmatter.org/other-lives-charles-eisen-and-laugiers-essai-sur-larchitecture/)

How ironic that from Laugier's primitive hut to Mies' *Farnsworth House* until Coop Himmel Blau we are critiquing the conventional. Each thinks the other 'the past' was conventional and they, 'the present', are innovative. So ultimately we are facilitated with variant, the so-called unconventional architecture, yet the quest to critique the conventional continues probably because we still lack the definition of the 'conventional'.

First conceived on a site at Piano, Illinois in 1945 for a client, Dr. Edith Farnsworth, the house was finally built as a structure of platonic perfection. But to Mies' regret, if at all, his friend/client was disappointed by the design. To Mies' notion of "Less is more", Edith Farnsworth said "We know that less is not more. It is simply less!" Every physical element was reduced to its most negligible essence. It represents the ultimate refinement of Mies' minimalist expression of architecture. Two rows of eight steel columns supporting the floor and roof defined the house (Image 1).

By reducing architecture to 'almost nothing', according to Mies, he had created ultimate universality, embodying the highest ideals of the new, utopian International Style at its time. While it was intended to be a critique of the existing architectural culture, or rather a new international architectural vocabulary after the washing-away wave of World War II, it doesn't seem more different from Laugier's primitive hut. The frontispiece to Abbe Laugier's Essay of 1753 (Image 2) was intended to urge contemporary architects to keep in mind the primitive origins of architecture through the little rustic hut. While if Laugier were questioned today about a conventional house design and his primitive hut, he would surely agree that the primitive hut was intended as a critique of the conventional. Probably because it had reduced itself to nothing but architecture or a structure or should you call it a space. How much the space was liveable in regularly, was never an issue. The fundamentals of a structure were present in the hut: four columns, connecting beams and a roof. The space that the roof covered was the virtually bounded area of the house. The boundary was more psychological than functional.

The boundary, though functional in case of Farnsworth house, was less acceptable by the client yet. The boundary and a plinth are probably the only two differences between Laugier's primitive hut and Mies' Farnsworth house. The glass walls cladding the structure throughout make the transparent interiors unparalleled on the landscape-surrounded site. The client complained about the overlooked requirements of privacy and personal space. To add to this, the structure gave rise to unimaginably expensive heating costs. From the primitive hut, at least, the glass house had a physical boundary even though it was less visible, yet it functioned to keep the exterior and interior spaces separate.

The envisioned austere and abstract house of Mies, also at the end, seems similar to the primitive hut - yet not conventional, since the conventional is yet undefined and probably Laugier also didn't consider his hut as a conventional house. So while in the midst of the arguments over the conventional, we have the fantasy architects of the post war period - Metabolists, Super Studio, Archigram, etc. One of them is Coop Himmelb(l) au Architecture. As the firm says, it's not about the colour but the idea, or it's not about the physicality but the virtual creation, it's not how a human reacts to architecture but the change in space according to human stimuli. Their philosophy is about abstracting from the institutionalization of architecture, to step forth and simultaneously step away from the ongoing trend and to establish a vocabulary that time requires. In short, once again, we have architects yearning to critique the conventional. Their design of 'Cloud, The Wolk' is one of the exemplary designs for the study (Image 3).

The design was conceptualized in 1968 with the intention to study futuristic housing. Hence The Cloud is supposed to be mobile housing. To make it futuristic, imaginations of the designer have been wild enough to make the structure not establish itself on ground at all. The Cloud, in the real sense, serves as a cloud as it attempts to exist in the world opposing gravity. Considering the futuristic aspect of the design it was obviously an unimaginable site, if it all, a site would exist, hence the cloud in its unique way will benefit any site if ever used.

Though the design seems conceptual for future housing, it is developed to the core detail of requirements for living. It conveniently unwinds itself or blows up to construct a

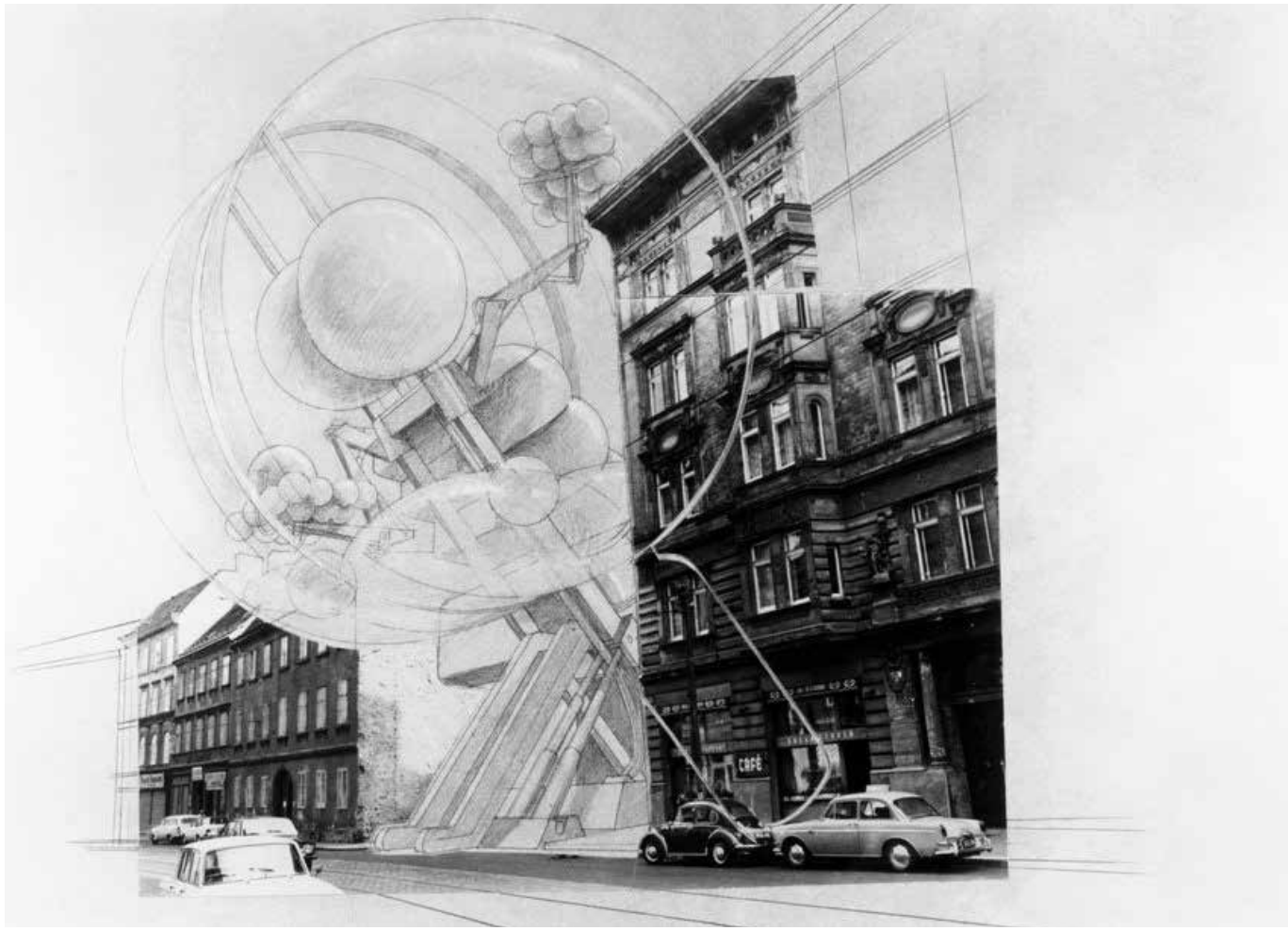

Image 3: The Cloud by Coop Himmelblau, 1968
(Source: http://architectuul.com/architecture/the-cloud)

liveable space for two within itself. All spaces, though not defined by walls, are thought of and provided in The Cloud. The transparent skin of The Cloud serves as the separating skin from the exterior, for rather more important reasons of maintaining air pressure within. Yet it undeniably serves as a window too, but unfortunately from both sides. Though the transparency issue of Mies' house continues, it may be different here. Farnsworth house was built on a site fully surrounded by landscape assuming that it would satisfy the client on the personal space and privacy front, but The Cloud has no decided site, so site issues cannot be discussed yet. But it can be considered that if in future this is the adopted way of living then everyone's house will be transparent.

As a future living, it seems most different from the present adopted and or suggested styles, types and methods. The non-existent ground, column, beam and roof, the floating nature of the balloon, the rather permanent separation from the exterior, the rather undefined doors and windows of the structure, etc. all add to the step-off of the past or even the present. The attempt is wild enough to have escaped the requirements of defining the conventional.

Yet, if this is what seems unconventional, then should the opposite of it be conventional?

A conventional house would then be a well-grounded structure on a defined site, having four opaque walls that respect privacy while providing protection. They are impenetrable boundaries. Unlike The Cloud, the windows break the monotony of the walls and provide an escape from the interiors to the exteriors. But the window is under the users' control that can be closed and opened when they wish. A door defines the entry and exit point to the house, which again emphasizes the inhabitant's relation to the outside world. A defined roof covers the house and sits exactly over the walls, which also respects the gravitational force like the other members and stays attached to the ground.

The controversy of the Conventional vs the Unconventional continues . . .

Ar. Fatema Kabir, is an Associate Professor at Aayojan School of Architecture, Pune. With eleven years of teaching experience. She is currently pursuing her Ph.D. in Experiential Analysis of Architecture. In her quest of Architectural Theory, she has gone from being a writer at IA & B to being a teacher in architecture schools to being a workshop organizer and resource person for Teachers Training Programmes (TTP) held by the Council of Architecture. Ar. Fatema has also curated art galleries as part of her exploration. She has a couple papers published to her name that reflect her varied interests.
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COMPARATIVE ANALYSIS OF BAMBOO REINFORCED AND STEEL REINFORCED STRUCTURES

Ashish Jain and Prof. Kirti Nandode

ABSTRACT

The present power generation consumes the resources rapidly to meet the demand. This is primarily because we are not able to harness non-renewable resources. Thus, there is a need to reduce the dependency on non-renewable resources. Bamboo is gaining popularity as the alternative to steel reinforcement. Use of bamboo instead of steel reinforcements affects a few important parameters such as cost which is considerably important to study to correctly use bamboo and benefit from its advantages. Comparatively, studying both steel reinforcement and bamboo reinforcement with the listed parameters, will help in finding the advantages and disadvantages of individual materials when used in construction. The paper compares the bamboo reinforced structures with typical RCC structures with respect to member sizes, compressive strength and cost which will make it readily available and eco- friendly bamboo in reinforcement.

Key Words: *Bamboo reinforcement, Cost.*

INTRODUCTION

Concrete being the mainstream material in the construction industry is majorly used due to its economic factor, easy availability and its ability to carry large compressive loads. The limitation in the use of concrete is due to its low tensile strength. Hence, it has to be with the most popular reinforcing material, that is, steel. Most developed countries can avail and afford steel reinforcements. Unluckily, other parts of the world lack this opportunity and soon it may be unavailable everywhere. In the current scenario, the need arises for a more economical and easily available substitution of steel reinforcements. Bamboo as an alternative reinforcing material has started gaining popularity. The obvious question that arises is how bamboo is better than steel as a reinforcement.

AIM: To make a comparative study between bamboo reinforced and steel reinforced structures with respect to the parameters affecting them.

OBJECTIVES:

- To review bamboo and steel individually as reinforcement materials.
- To study advantages of using bamboo as reinforcement w.r.t. various parameters.

Scope and Limitations: To compare the structural member sizes of two case studies individually with typical RCC structures along with comparison of structural strength of both the materials and cost of the structures. The study will be limited to G+1 structure.

METHODOLOGY

Data has been collected through primary case studies, secondary case studies, research papers, internet and literature study. A bamboo reinforced G+1 structure is identified in Ahmednagar for live case study. This case study has been selected with a view to find various structural member sizes with reinforcement detailing. A bamboo reinforced ground floor structure is identified in a book case study. The selection of this case study has been done to identify various structural member sizes along with reinforcement detailing and structural strength of bamboo. The live case study deals with the cost comparison whereas, the book case study deals with the structural strength comparison of bamboo and steel. The literature study has helped in collecting information on bamboo as a reinforcement. The advantages and disadvantages of using bamboo as reinforcement in place of steel is understood through case studies.

Literature Review

In their paper, Nayak & Bajaj (2013) have studied the possibility of replacing steel with bamboo reinforcement in terms of its ecological and economic advantages. The study reveals that steel reinforcement is three times costlier than bamboo reinforcement. The strengths and characteristics of bamboo are also discussed in this paper. The paper questions whether the traditional method of constructing with bamboo will be carried forward in the form of modern construction of structures. The research was carried out by experimenting with steel and bamboo reinforcement in slab, beams, column and footing. A proper selection and preparation method of bamboo was followed to conduct the various tests. The cost of steel and bamboo reinforcement in structural members were calculated and compared for conclusions and discussions. The results evaluated from the tests proved that bamboo is a much cheaper material as compared to steel reinforcement especially for a single storey structure and it can replace concrete, steel and wood depending on the situation and application although more built examples and dissemination is required. It also concluded that bamboo reinforcement technique can be used for both main and distribution reinforcement. The paper achieves its objective of proving steel reinforcement to be costlier than bamboo reinforcement. The overall content and experiments supported with the formulas and calculations is commendable. However, the research is limited to structural members of a single storied building and can be done for multi-storied structures as well. The research may also be taken further to develop a simple design code for the application of bamboo as a construction material.

The paper Comparative Study on Replacement of Steel Reinforcement with Bamboo Reinforcement (Nikhil, 2018) explores the possibility of using bamboo as a reinforcement substitute for steel in concrete beams. Steel as the reinforcement material with concrete has been a conventional method in the construction industry since decades. The author tries to bring naturally available bamboo as a replacement/ alternative for steel reinforcement considering various parameters such as cost, availability and so on. The author also comments on the present scenario of energy crisis due to rapid industrial growth having a direct ecological impact on our environment thus raising concerns about energy resource management and utilization of readily available material from the environment. The research was carried out by undertaking various tensile strength tests and flexural strength tests on bamboo strips in three different conditions i.e. one node at mid-span, two nodes at either ends and without node. The results were compared with the strength of steel as a reinforcement in concrete beams. Various tests such as the flexural test for 7 and 28 days on bamboo reinforced members and on reinforced cement concrete reveal that bamboo reinforced beams can be used in some minor structures. The study also reveals that there is no effect of nodes on the tensile strength of bamboo hence can be replaced with plain cement concrete for better durability and better strength in rural construction. The paper achieves its objective of providing steel reinforcement to be replaced with bamboo reinforcement for minor construction work. The field work such as the various tests carried for comparative analysis is commendable. However, the research is limited to structural beams only and needs to be extended to various

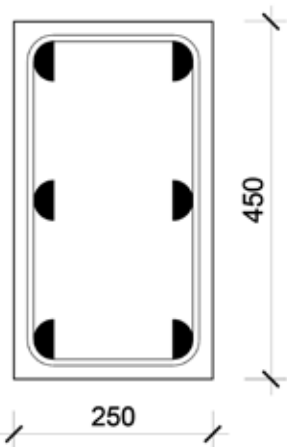

Figure (a) : Cross-section of column sized 250 x 450 mm

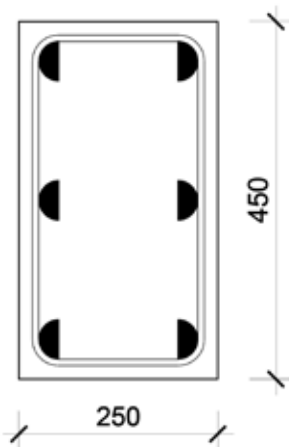

Figure (b) : Cross-section of beam sized 250 x 450 mm

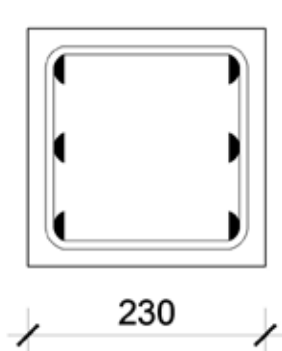

Figure (c) : Cross-section of column sized 230 x 230 mm

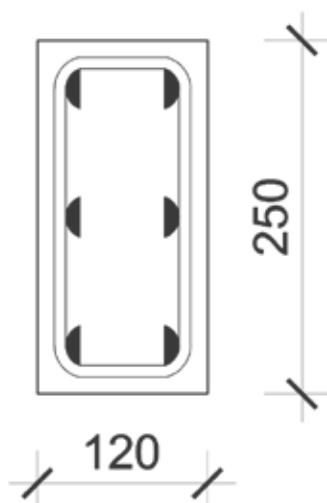

Figure (d) : Cross-section of beam sized 120 x 250 mm

other members such as columns and slabs. The research may also be taken further to find out the behaviour of bamboo as a reinforcement in multi-storeyed structures.

Parameters to be compared:

- Sizes of structural members (columns and beams) and structural strength of bamboo and steel in book case study
- Cost comparison in live case study
- Comparison of structural strength and sizes

The research includes two case studies. One being a residential house in Ahmednagar and other being a book case study of a ground structure in Bali.

Case study 1: G+1 bamboo reinforced structure in Ahmednagar

The bungalow has been designed for a nuclear family residing in Ahmednagar. The entire structure has been designed using bamboo reinforcement in place of steel right from foundation to slab. The structure has a plinth of 600 mm with 20 columns and footings of the size 250 x 450 mm throughout the height (footing to terrace) and 2000 x 2000 mm respectively. All the beams are of the size 250 x 450 mm. Slabs are 150 mm thick.

Comparison of cross-section of structural members (column and beam) with steel reinforcement:

- *Column:* Fig. (a) represents the cross-section of columns up to plinth level of the structure. The column size is 250 x 450 mm throughout the height (footing to terrace). Bamboo reinforcements of size 25 x 50 mm have been used in the columns with 6 bamboo bars as shown in Fig. (a). Links of 8 mm dia. (steel bars) are used to tie these bamboo reinforcements.
- *Beam:* Fig. (b) represents the cross-section of beams of the structure. The beam size is 250 x 450 mm spanning up to 3m (column to column). Bamboo reinforcements of size 25 x 50 mm have been used in the beams with 6 bamboo bars as shown in Fig. (b). Stirrups of 8 mm dia. (steel bars) have been used to tie these bamboo reinforcements in the beam.

Case study 2: G+0 bamboo reinforced structure in Bali

The book case study represents the ground structure built using bamboo reinforcement in Bali province (Sutarja, 2017). It has a sloping roof due to the climatic conditions. From this case study, only the sizes of structural members (column and beam) and the structural strength of bamboo used is tested and compared with a similar structure to be built using steel reinforcement.

Comparison of cross-section of structural members (column and beam) with steel reinforcement:

- *Column:* Fig. (c) represents the cross-section of columns of the structure. The column size is 230 x 230 mm with bamboo reinforcements of size 10 x 30 mm. Total 6 bamboo bars have been used in a single column as shown in Fig. (c). Links of 8 mm dia. (steel bars) have been used to tie these bamboo reinforcements.
- *Beam:* Fig. (d) represents the cross-section of beams of the structure. The beam size is 120 x 250 mm spanning up to 3m (column to column). Bamboo reinforcements of size 10 x 30 mm are used in the beams with 4 bars as shown in Fig. (d). Stirrups of 8 mm dia. (steel bars) have been used to tie these bamboo reinforcements.

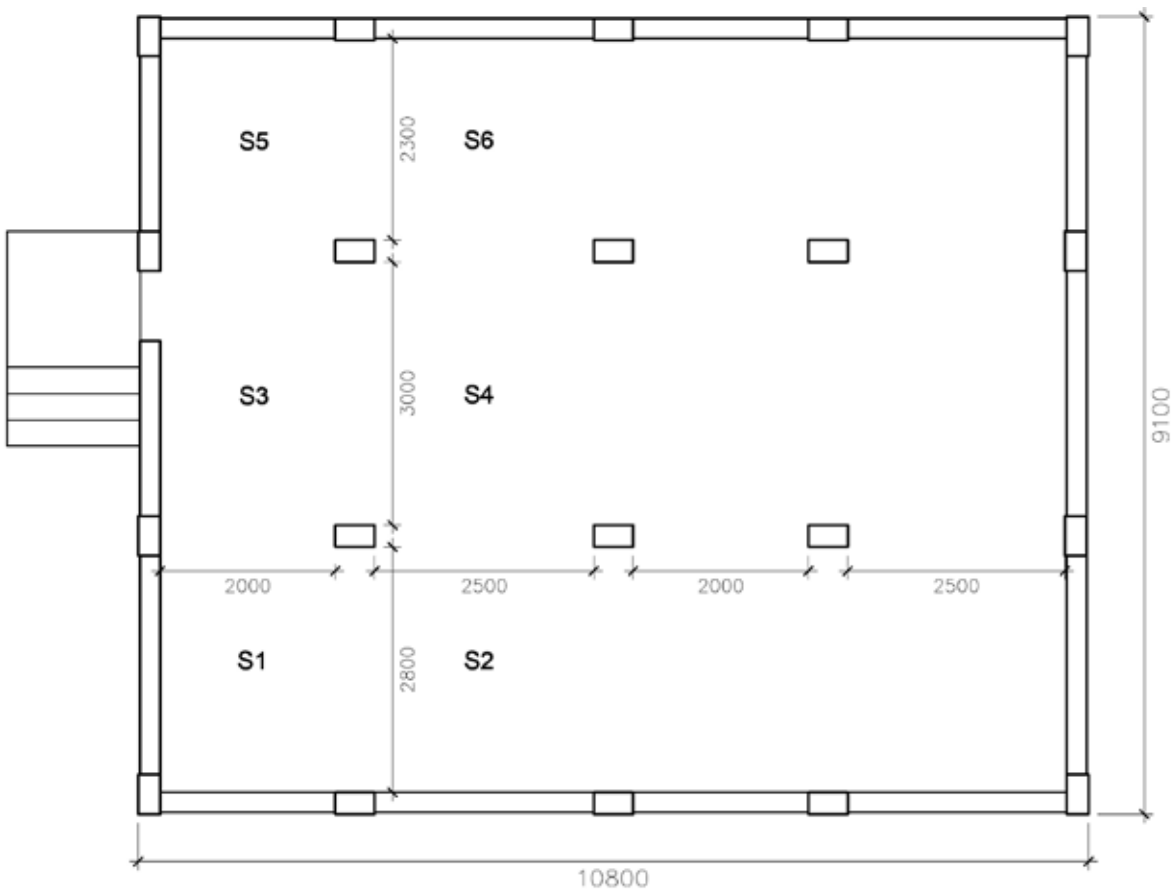

Figure (e) : Typical Ground Floor Plan of the structure

Bamboo reinforcement in columns *(Source: House Owner)*

Bamboo reinforcement in plinth beams *(Source: House Owner)*

Bamboo reinforcement in footing
(Source: House Owner)

Detailed cost estimation of G+1 bamboo reinforced structure in Ahmednagar

Firstly, the total length of bamboo required in various structural members such as footings, columns, beams and slabs are calculated and the total cost of this reinforcement is calculated. Then the quantity of cement, sand and aggregate required for the structure is calculated and detailed cost estimation is evaluated. The plan focuses on the structural layout of the house with various dimensions.

Explanation of the process of detailed cost estimation:

Firstly, the cost of bamboo required in footings, columns, beams and slabs of the overall house is calculated by multiplying the total length of bamboo required by its rate/ running feet viz. Rs. 6/ running feet. Followed by calculating the total volume of cement needed in the structural elements in m3 and multiplying it with 30 bags. Then multiplying the total number of cement bags required by its rate, viz. Rs. 350. The same process is followed for calculating the cost of sand and aggregate required.

The whole process is repeated for calculating the cost of structures made using steel reinforcement. Hence, the final costs are compared and conclusions are made based on them.

a) Total cost of bamboo required in the structure:

i) Footings: Overall cost of bamboo in 20 footings= Rs. 12,800/-

ii) Columns: Overall cost of bamboo in 20 columns from footing to terrace= 16,700 + 7,100= Rs. 23,800/-

iii) Beams: Overall cost of bamboo in all the beams of the structure= Rs. 10,500 x 3= Rs. 31,500/-

iv) Slabs: Overall cost of bamboo in slabs of the structure= Rs. 40,000/-

Total cost of overall bamboo used in the structure = 12,800 + 23,800 + 31,500 + 40,000 = Rs. **1,08,100/-**

Exterior view of the G+1 structure *(Source: House Owner)*

Bamboo reinforcement in plinth beams *(Source: Author)*

Exterior view of the G+0 structure *(Source: Author)*

b) Total cost of cement, sand and aggregate used in the structure = 4,10,550 + 89,760 + 1,10,480= Rs. 6,10,790/-

Total cost estimated for the overall structural members of the structure viz. Bamboo reinforced structure = Rs. 7,18,900/-

If the same structure was to be built using steel as the reinforcement then the cost would be as follows:
c) Total cost of steel used in the structure:
i) Footings: Total cost of steel required in 20 footings= Rs. 2,62,080
ii) Columns: Total cost of steel required in 20 columns= Rs. 1,66,400
iii) Beams: Total cost of steel required in overall beams of the structure= Rs. 2,44,920
iv) Slabs: Total cost of steel required in first and terrace floor= Rs. 1,22,000
Total cost of overall steel required in the structure= 2,62,080 + 1,66,400 + 2,44,920 + 1,22,000= Rs. 7,95,400

d) Total cost of cement, sand and aggregate used in the structure = Rs. 6,10,790

Total cost estimated for the overall structural members of the structure viz. Steel reinforced structure = Rs. 15,00,000/-

Advantages of Bamboo

The various advantages of bamboo are mentioned below (Rane, 2017):

- Light, strong and versatile
- Environment friendly
- Accessible to the poor
- Self-renewing resource
- Fast growing
- Highly productive

Disadvantages of Bamboo

The major disadvantages of bamboo are as follows (Rane, 2017) :

- Requires preservation
- Shaped by nature
- Durability–bamboo is subjected to attack by fungi, insects; for this reason, untreated bamboo structures are viewed as temporary with an expected life of not more than 5 years.
- Jointing–although many jointing techniques exist, their structural efficiency is low.
- Lack of design guidance and codes.
- Prone to catch fire very fast by the friction among the culms during wind, and is seen to cause forest fires.

CONCLUSIONS

As can be seen from the live case study, the column and beam sizes used for the G+1 bamboo reinforced structure are slightly larger than that used for typical G+1 RCC structure (Table 1). Stirrups and links used for tying bamboo and steel reinforcements are the same viz. 8 mm dia. steel bars. Since bamboo does not have the bending property, more bamboo reinforcements (6 nos.) are used to take care of tension at the supports viz. beam ends, whereas in steel reinforced beams 4 bars are used (two at the top and two at the bottom) which can easily be curtailed at the supports to take care of tension at the ends.

On the other hand, it can be seen from the book case study that the column sizes used for the G+0 bamboo reinforced structure are the same as that of a typical G+0 RCC structure (Table 2). The beam size required for bamboo structure is smaller than that of RCC structure due to its minimum standards. It can clearly be seen in (Table 2) that the yield strength as well as the ultimate tensile strength of steel is twice as that of bamboo thus making it a disadvantage of using bamboo as reinforcement.

The cost comparison of G+1 bamboo reinforced structure in Ahmednagar with steel reinforcement clearly shows that constructing a house using bamboo reinforcement is much cheaper and economical than steel reinforcement. The overall cost of steel reinforced structure is more than twice as that of bamboo reinforced structure.

INFERENCES

Bamboo has been used for several years since the ancient times as a building material but has gained much attention in the spotlight recently over the years. The property of

Table 1: **Comparison of column and beam sizes and cost of the structure using bamboo reinforcement vs steel reinforcement.**
(Source: Compiled by Author)

Structure	Column cross- section	Beam cross- section	Total cost of reinforcements in all columns	Total cost of reinforcements in all beams
G+1 Bamboo reinforced structure	250 x 450 mm	250 x 450 mm	Rs. 23,800	s. 31,500
	6 bars of 25 x 50 mm 8mm dia. links	6 bars of 25 x 50 mm 8mm dia. stirrups		
G+1 Typical RCC structure	230 x 400 mm 6 bars of 12 mm dia. 8 mm dia. links	230 x 350 mm 2 bars of 16 mm dia. at bottom and 2 bars of 12 mm dia. at top. 8 mm dia. stirrups	Rs. 1,66,400	Rs. 1,63,280

bamboo is the reason for which it was selected as the material for reinforcing beams and columns. Some of the inferences drawn from the research are as follows.

a) Replacing steel with bamboo reduces the cost of the structure by 50 %.
b) Construction using bamboo is more resistant to earthquakes since the forces are absorbed by the flexible bamboo.
c) The sizes of the structural members change slightly when steel is replaced with bamboo.
d) Bamboo cannot be used in high-rise construction because of the complex joineries required for lengthening joints etc.

FUTURE SCOPE OF RESEARCH

The research can be taken ahead to promote acceptance and use of bamboo as a mainstream material in the construction industry. It can also be found out whether a structure above G+1 can be constructed using bamboo reinforcement. Other sustainable materials which can be used along with bamboo to enhance the durability of structure can also be explored.

Table 2: **Comparison of column and beam sizes and cost of the structure using bamboo reinforcement vs steel reinforcement.**
(Source: Compiled by Author)

Structure	Column cross- section	Beam cross- section	Yield strength of the material (Bamboo vs Steel)	Ultimate tensile strength/ rupture strength of material (Bamboo Vs. Steel)
G+0 Bamboo reinforced structure	230 x 230 mm 6 bars of 10 x 30 mm 8 mm dia. links	120 x 250 mm 4 bars of 10 x 30 mm 8 mm dia. stirrups	130 MPa	200 Mpa
G+0 Typical RCC structure	230 x 230 mm	230 x 230 mm		
	4 bars of 12mm dia. 8 mm dia. links	2 bars of 16 mm dia. at bottom and 2 bars of 12 mm dia. at top. 8 mm dia. stirrups	250 Mpa	400 Mpa

Acknowledgement

I would like to thank my research guide Prof. Kirti Nandode and Prof. Sneha Bendre and my research subject teacher Prof. Manjusha Ukidve whose guidance was helpful in achieving the aim. I would also like to thank Mr. Satish Gugale, Ahmednagar for allowing for the case study.

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Ar. Kirti Nandode has been in the profession for past 15 years, as a practicing architect and Assistant Professor at Aayojan School of Architecture till 2020. She completed her Masters in Landscape Design. Her core subjects are landscape and architectural design.
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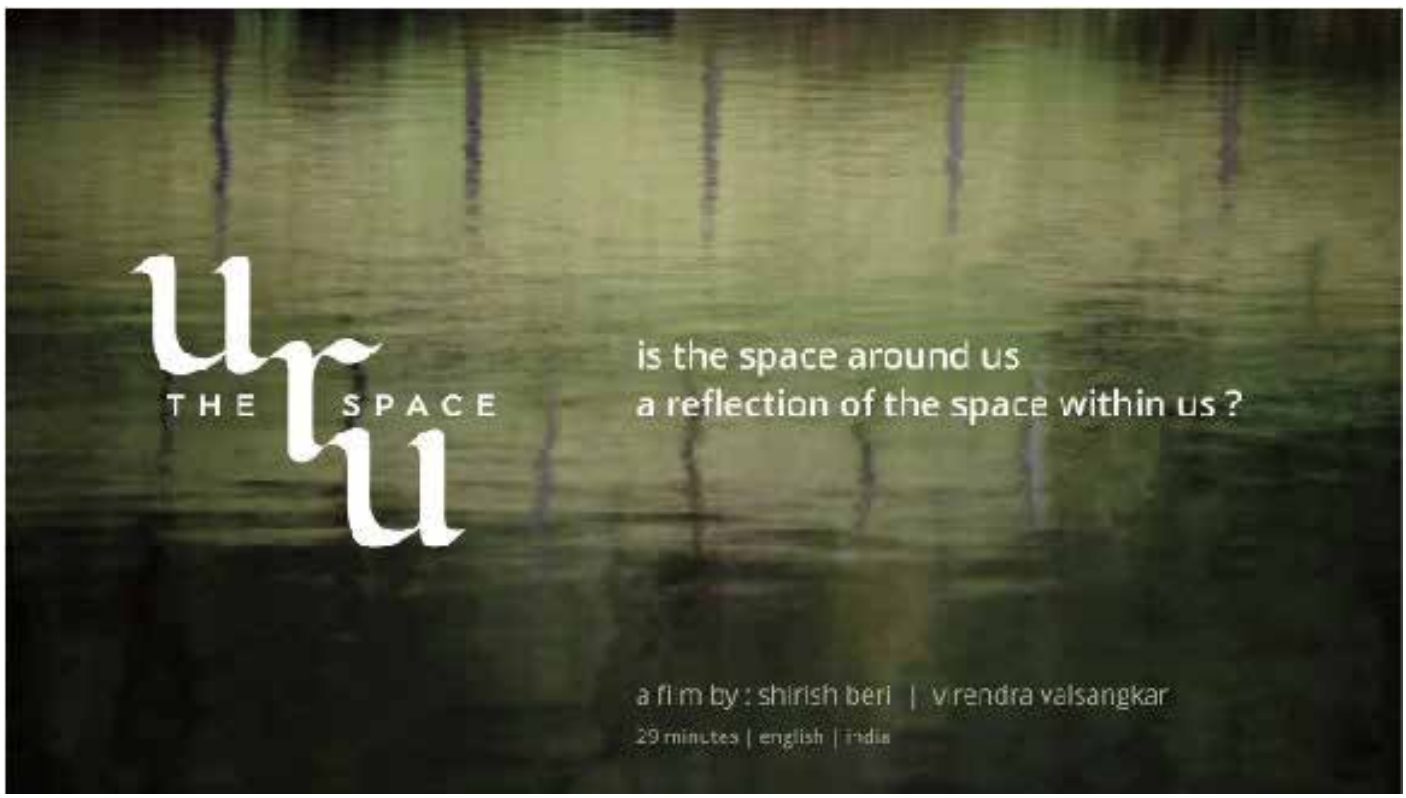
URU : THE SPACE

A DOCUMENTARY FILM BY AR. SHIRISH BERI

A Preview by Ar. Amarja Nimbalkar



We can live without food and water for a few days; without air for a few minutes but we cannot live without space even for a nanosecond.

In spite of this, Ar. Shirish Beri says that we all take space for granted and many a times are indifferent towards it. His film Uru – The Space is an attempt to sensitize people to space – this very important dimension of our life. This 29-minute documentary film presents the existential space of the common person with its manifold dimensions and examples in an awe-inspiring and engaging way.

Shirish Beri is an architect, an artist, a poet and an ascetic whose urge for wholeness in life has driven him to create spaces in harmony with nature through his architecture. This omnipresent space shown through his own works, and other outstanding visuals probes into the relationship of our outer, measurable, physical space with that of our inner, immeasurable, psychological space. The various illustrations have been appropriately chosen to express the significance of space in our lives. Well-orchestrated sequences, examples and video clips hone into a meaningful narration that delivers a message about space that has rarely been conveyed so beautifully. This message is for everyone and not just for architects, as we all seem to tolerate the degradation of space even after experiencing better quality spaces. On one hand the film demonstrates the splendours and marvels of the natural and man-made spaces. On the other hand, it also shows the misuse and vandalism of such spaces arising from our irresponsible behaviour, disrespect and apathy.

As far indeed, as the vast space outside,
extends the space inside within the heart;
within it indeed are contained both heaven and earth,
fire and wind, sun and moon, lightening and the stars
both what one possesses here and what one does not possess
all is contained in space.

Chandogya Upanishad

The documentary starts with this hymn from Chandogya Upanishad, which tries to convey the Wholeness and Oneness of life. The soothing background music sensitizes and stimulates the mind to appreciate this significance of space. The narration by the writer-director himself is the soul of the film. The voice delivery, the diction and articulation connect the viewers seamlessly with the visuals. The black attired abstract persona of Shirish Beri gradually emerges from the blank white screen that signifies the Nirakaar (formless) space to start the narration.

Cinematography has been yet another noteworthy constituent of this film. The changing pace of the visuals is synchronized to bring about the desired effect. The editing though subtle, highlights these nuances and helps the viewer to absorb the essence of the film.

There are many aspects of space that have been delved into during these 29 minutes and each one of them is a subject that can be explored extensively. It makes us question the quality of our space and the environment around us. This film has the potential to influence us and especially the young minds towards a better living environment that is sustainable, simple, orderly and beautiful.

As 'space' happens to be the medium of working for us architects, this film can become an indispensable constituent in the architectural syllabus, that will lay the foundations for the students' understanding of space. it will help them to relate their designs to this 'space in life'.

Beri has been drawn to the powerful audio visual medium of films and that of writing to express his deeper concerns for sustainability and quality of life. He had teamed with Virendra Valsangkar and his team to create an award-winning film, The Unfolding White in 2007, which explored the relationship of his work to the wholeness of life. Now, both of them along with their team have crafted this documentary Uru – The Space which delves deep into the relevance of space in our lives.

As an architect too, Shirish Beri has created a number of award winning spaces that have helped in improving the quality of life of their users.

The film finally questions . . .
Can our true understanding of 'space' help us to unify rather than divide ?
Can we feel space as that pause and silence in our lives?
Can living as an inseparable part of this unified space inspire empathy in us?
Can space encourage tolerance by granting each one their space?
How can we create that SPACE, within and without, which could translate into greater harmony, compassion and joy in our lives?

This is definitely a film not to be missed.

URU English: https://youtu.be/WZu7ia7Brqw

URU Marathi: https://youtu.be/1tol3naiLdo

Ar. Amarja Nimbalkar, is a committed architectural conservationist and Chairperson of the local Heritage Conservation Committee since 2015. She has worked on landmark projects for the government and private sector, archaeological and heritage structures. She received the IIA Maharashtra Chapter Award for Excellence in Architectural Profession and Education in 2014.

Ar. Shirish Beri, After graduating from CEPT, Ahmedabad in 1974, Shirish Beri has been trying to understand and explore the relevance of the quality of our space to the quality of our life through his numerous path breaking and award winning designs.

SRIRANGAM
ART & ARCHITECTURE

J. Ramanan **Vrinda Ramanan**

Temple architecture in India, with its rich architectural history always reflects in-depth complexities of how traditions and cultures are expressed through art and architecture. Many places in India and Asia, in particular architectural heritage structures, have never been documented in terms of its architectural planning language in our books and publications. Most of the religious structures have their presence in the various socio-cultural calendars in terms of religious significance.

Authors J. Ramanan and Vrinda Ramanan have appropriately addressed multi-dimensional planning concepts in temple architecture, which can always be a huge learning experience that elaborates various methodologies and techniques that are adapted through art and architecture in South India.

A well-researched and pictorially vivid book on Srirangam, the foremost of the eight self-manifested shrines or Swayam Vyakta Kshetras of Lord Vishnu and the first, foremost and the most important of the 108 main Vishnu temples or Divyadesams.

The author has created a very interesting platform with a thorough analytical framework via this temple complex master plan which is situated in between the two rivers, the Kaveri and the Kollidam, spanning 156 acres with 21 magnificent towers and 7 prakaras or enclosures with enormous rampart walls that surround the sanctum sanctorum.

The details of design and planning strategies of the temple of Sri ranganathaswamy at Srirangam are very well documented with dynamic and regenerative spaces which are a testimony to both the spiritual, principled and architectural prowess of great kingdoms in Southern India that explains the historic civilizational roots that go back thousands of years.

The book focuses in particular on the art and architecture of this magnificent temple. With context based resilient concepts of structurally stable plan, oriented along an axis with its unique plan, highlighting the imposing gopuras, the awe-inspiring hundred-pillared and thousand-pillared mantapas and the many impressive shrines and mural paintings within the temple.

The authors have supplemented the entire content of the book with a collection of unique, measured drawings and sketches that reflect the glory of traditional architectural processes, the wisdom of using indigenous material such as mud, stone, mortar and lime and the finesse of traditional craftsmanship. Indian architecture in our country has a vast outlook on our tradition and culture, and is seen being exemplified by the richness of its art. Architecture education in our country can use this book as a document that facilitates the learning experience of how art and architectural heritage has been integrated with our traditions and rich culture.

Ar. J. Ramanan's passion, also addresses the essence of the rich cultural & architectural heritage of the Srirangam temple, with focus on its concepts, execution, workmanship and use of material that has endured several foreign invasions and natural calamities, over many centuries, is very laudable and is a must for stakeholders to understand when one gets into either restoration processes of our heritage or drafts policies and guidelines for the conservation approaches in temple architecture and planning process. The sketches and drawings actually facilitates the process of understanding of planning concepts especially with focus on the various elements of the gopuras, pillared Mantapas, the Sculptures & Murals & the enclosures of the temple, which is a visual treat to the connoisseurs and the public that brings to life the glorious past, to reminiscence on the timeless glory attributed to this great temple.

The meticulous way, in which this book has been presented, shows the deep sense of concern, for providing a thoughtful treatise on Srirangam. The book will certainly keep the reader glued to the scintillating visuals and narration, which takes us on a walk through the festivities and rituals of the temple. The basics of temple planform integrated with town planning, especially the form and the balance between the towers culminating in the raja gopura, the sense of hierarchy, provides a huge knowledge base which should certainly be incorporated in pedagogy of architecture education in the initial years.

Indian history, especially on the architecture of temples across the nation, if documented in such a compiled framework, and explains concepts adopted and practised over centuries, our country will certainly have sensitised planning approaches in design which will be a turning phase for the policy makers in India. Restoration policies and conservation guidelines have to use architectural elements as seen in this book and its sustainable aspects which have stood stable over the centuries .

Overall the book *Art and Architecture of Srirangam* concentrates on the classical mural art and sculptural wealth, created in the stone pillars and walls, in the Mantapas (Pavilions), in the Sannidhis (shrines) and on the Gopuras (temple towers), that are visual treats for the connoisseur of art. Architect J. Ramanan's fascinating photographs of the temple's magnificent stone structures, impressive frescos and exquisite sculptures are supported by an engaging explanation by the authors, Vrinda and Ramanan.

This book is the result of the couple's belief that every professional should contribute to the development of the society he or she is a part of. While the corporate world works towards the improvement of the community through several projects directed through their Corporate Social Responsibility Programs (CSR), Ramanan and Vrinda work towards making a positive impact on the society through their documentations of temples and centres of our cultural heritage, that will help the next generation to appreciate and conserve these ancient landmarks. They call it the 'Artists' Social Responsibility' (ASR) Program.

By and large , the authors with their well-researched information in this book opens up a new debate that will certainly provoke architects' fraternity , allied professionals, stakeholders and the masses in re-visiting the current emerging challenges on such temple architecture precincts in India.

Experience the book to explore and review the essence of art and architecture at SRIRANGAM .

The details of the book can be accessed on
vrindaramanan@hotmail.com

J. Ramanan and Vrinda Ramanan
J. Ramanan is a Consulting Architect, with a Masters in Town Planning, while his wife Vrinda, a graduate in English Literature, is an accomplished Bharatha Natyam Dancer. Ramanan is a passionate landscape photographer and exhibitor, who has given several exhibitions inaugurated by stalwarts like Tenzing Norgay, Sir Edmund Hillary, Dr. Vyjayanthi Mala Bali, N. Ram of the national daily newspaper, The Hindu', Cricketer Krishnamachari Srikanth, to name a few.

They are also founders of the institution 'Bala Kala Vidhanam', an Academy of Indian classical Arts, that conducts classes in Bharatha Natyam, Carnatic Vocal and Instrumental Music, Yoga, Classes on Indian Culture, Advaita Vedanta and Sanskrit in its premises.

BOOK REVIEW by

Ar. MANGUESH R PRABHUGAONKER, along with B Arch degree, has a Masters post graduate degree in Landscape Architecture from SPA New Delhi and is a Fellow Member of IIA, ISOLA and an Associate Member of IIID. He is a National Council Member of the National Council Member, The Indian institute of Architects. He is also an Expert member of Goa state Wetland Authority and a Senate Member at School of Planning & Architecture, New Delhi. He is also an Visiting faculty at Goa College of Architecture for Post graduation in Masters in Architecture.
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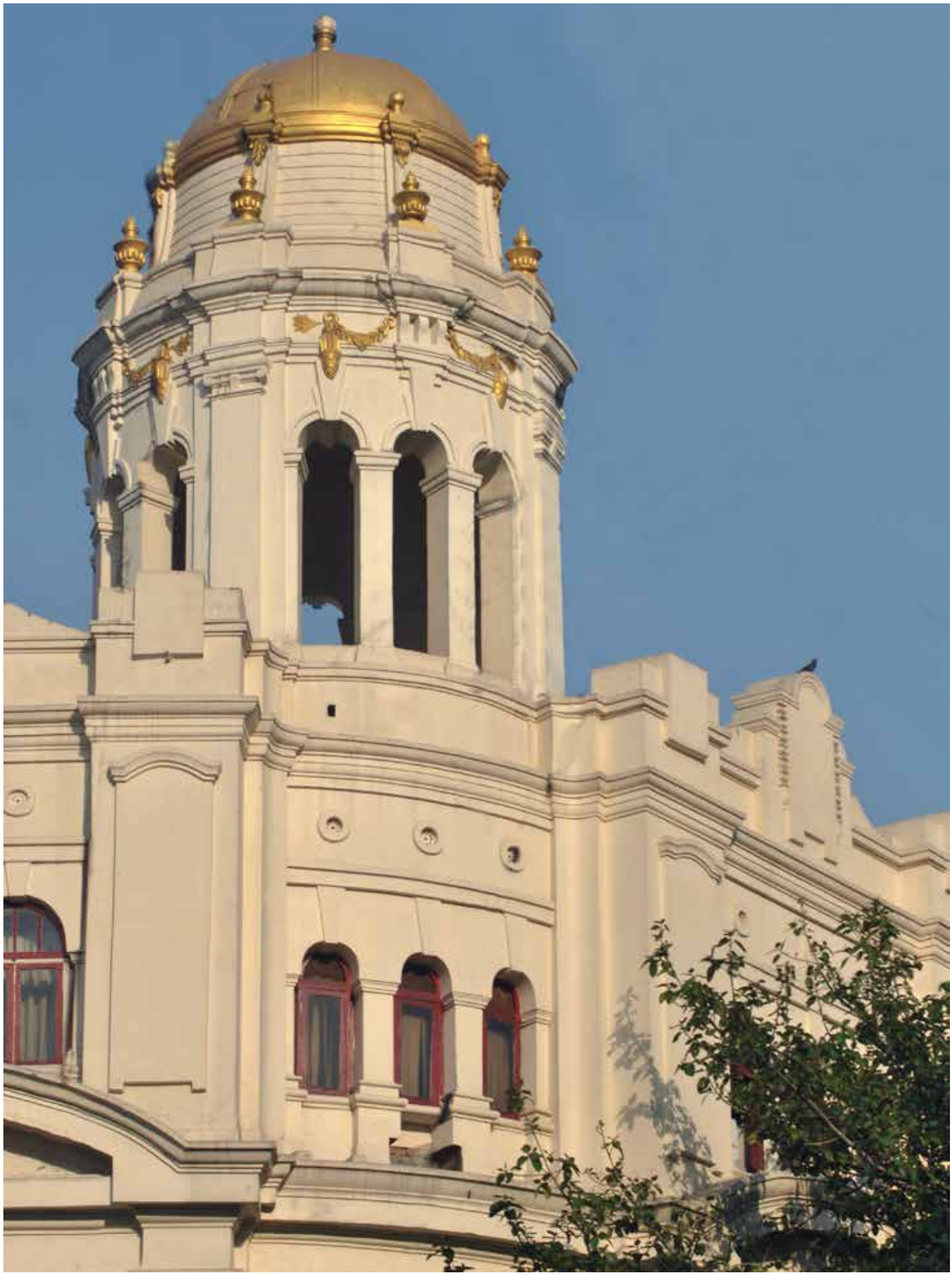
KOLKATA: A SCULPTED VESSEL OF HERITAGE AND CULTURE

Adhiraj Bose

As a deep-rooted Kolkatan and student of architecture, my senses have always cherished the city. Here, architecture follows no specific pattern, epitomical of a mixed medium form. Once established as a British capital, and being an economic hub of commerce, Kolkata has a rich history of bringing together an eclectic mix of cultures. Every building has its own character. Subtle details depict an array of emotions: clamoring hope, drives of passion, even assemblages of agony. That's what I try to capture within each frame as I feel them pulsing in my blood, the expansive history and heritage embedded within these marvelous buildings.

A morning in the business heart of Kolkata with the 95-year old Nakhoda Masjid.

The details of High Court, Kolkata.



Art deco style depicted.

Modernism framed with Indo-British style.

The heritage of Kolkata.

A daily lifestyle.

A stage worth centuries.

Worshipping in the middle of busy streets.

The connection between life and hope.

Silhouettes reflect details.

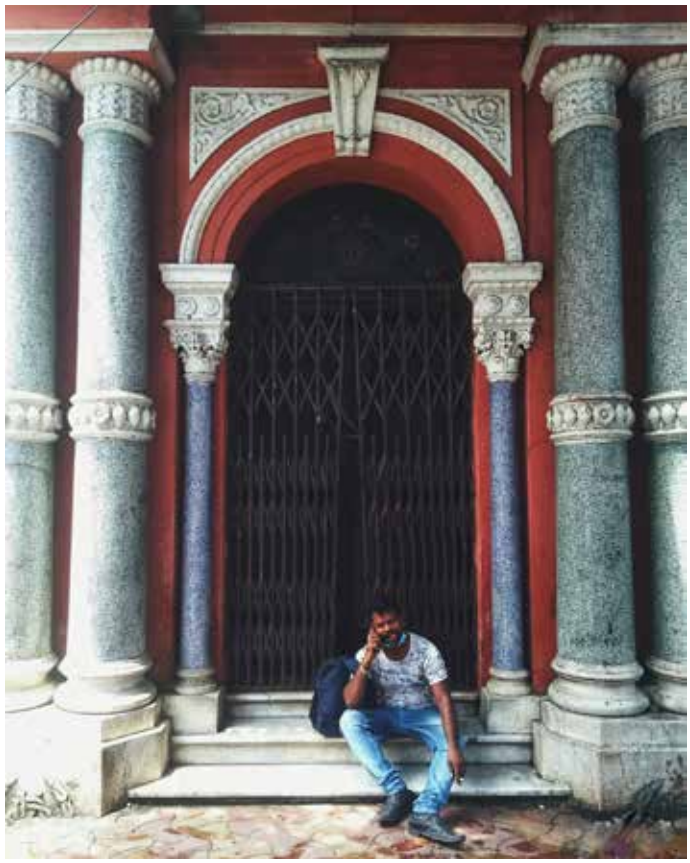
Colours never fade- they glow and they nourish.

Windows and doors - the main essence of buildings.

Looking through an octagonal courtyard.

The junk facades.

A cup of tea – apart of daily life.



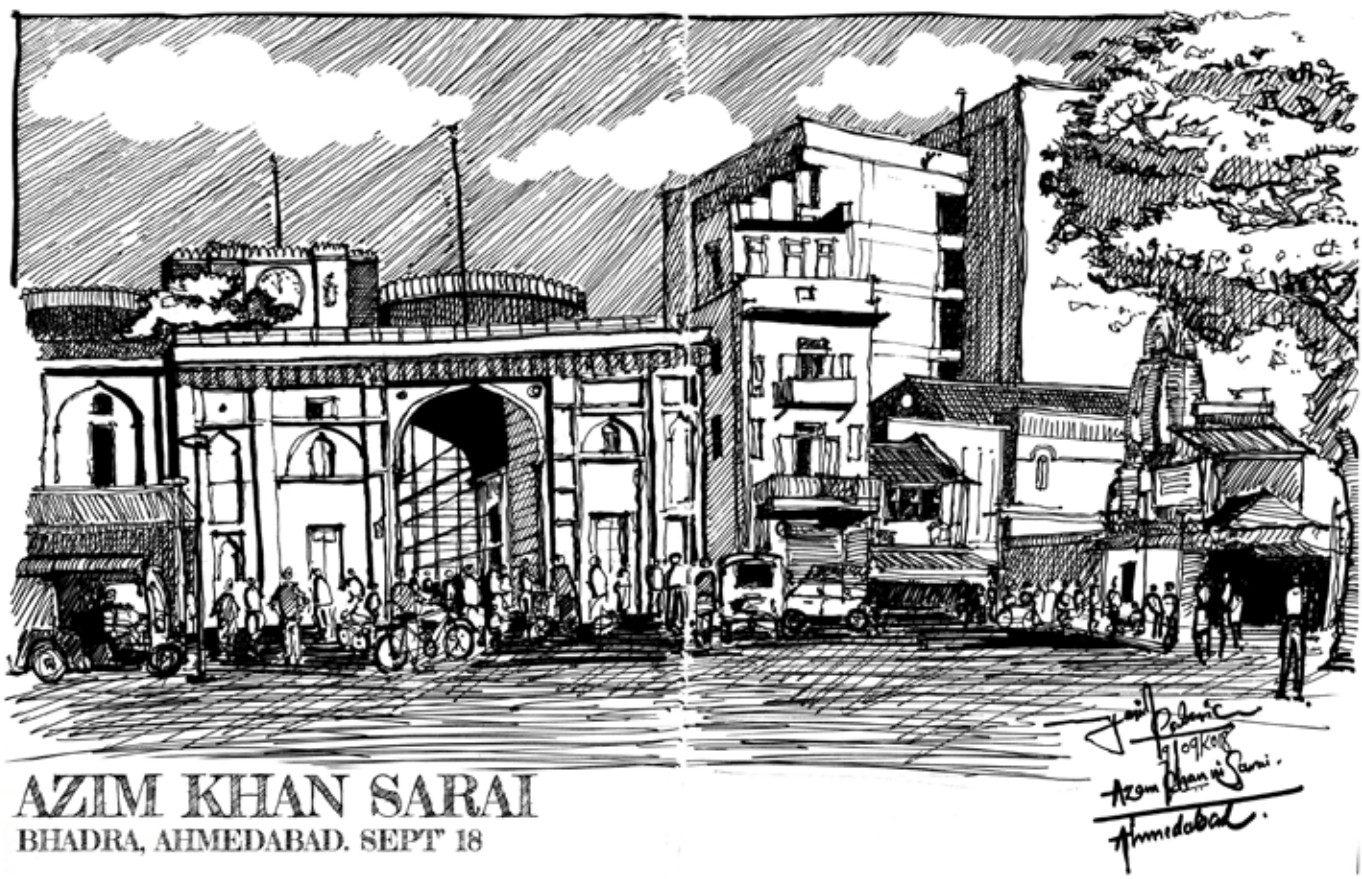
This pages (Clockwise from Left):
- Details and arches through a time period of centuries
- Facades and the illusive sunlight that highlights the details.
- Horse-pulling carts carry a legacy of decades.
- A resting afternoon.

Adhiraj Bose is currently a Final Year student. He appreciates architecture in all forms in all medium. He loves to frame everything and every emotion that is portrayed through the design, form and function of the building. He loves photographing architecture.
adhirajbose18@gmail.com

SKETCHES

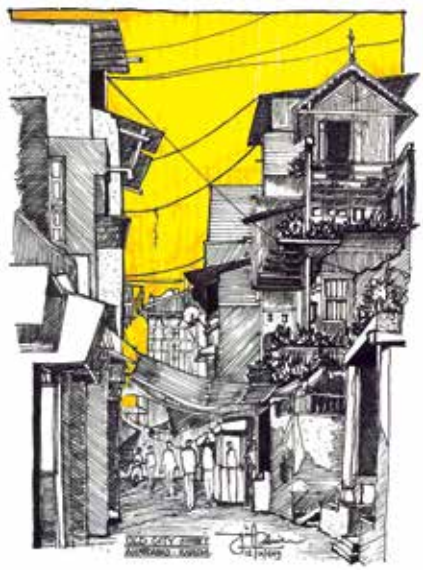
Live Urban Sketching as a tool to explore our own heritage and Architecture marvels.
By Ar. Yasin Kabaria

Let's Hold the Pen and Draw the line.
Happy Sketching.

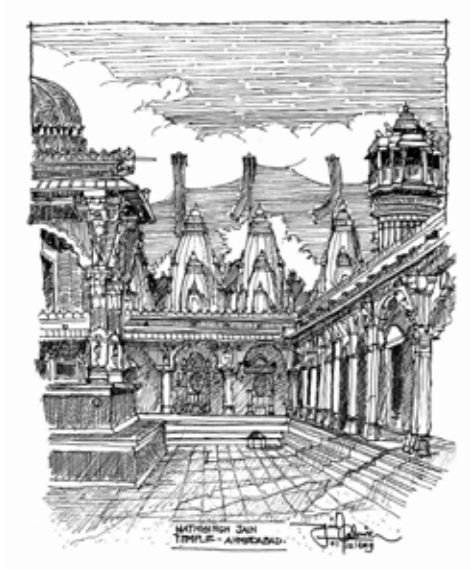


Azim Khan Sarai, Bhadra Fort, Ahmedabad.
Date: 9 Sept., 2018
Medium: Pen and Ink

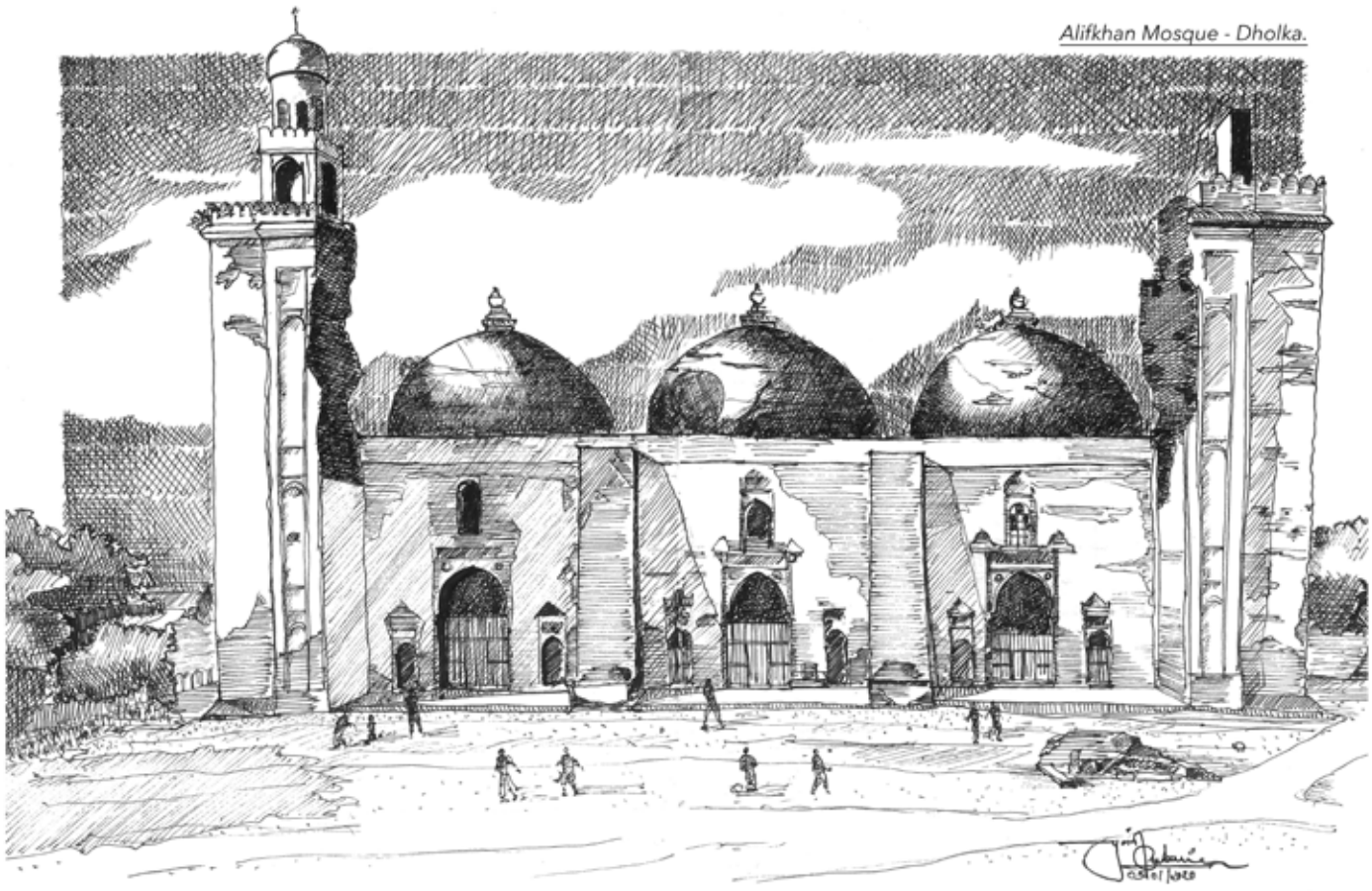
Gandhi Road, Teen Darwaja, Ahmedabad.
Date: 8 Sept., 2019
Medium: Pen and Ink



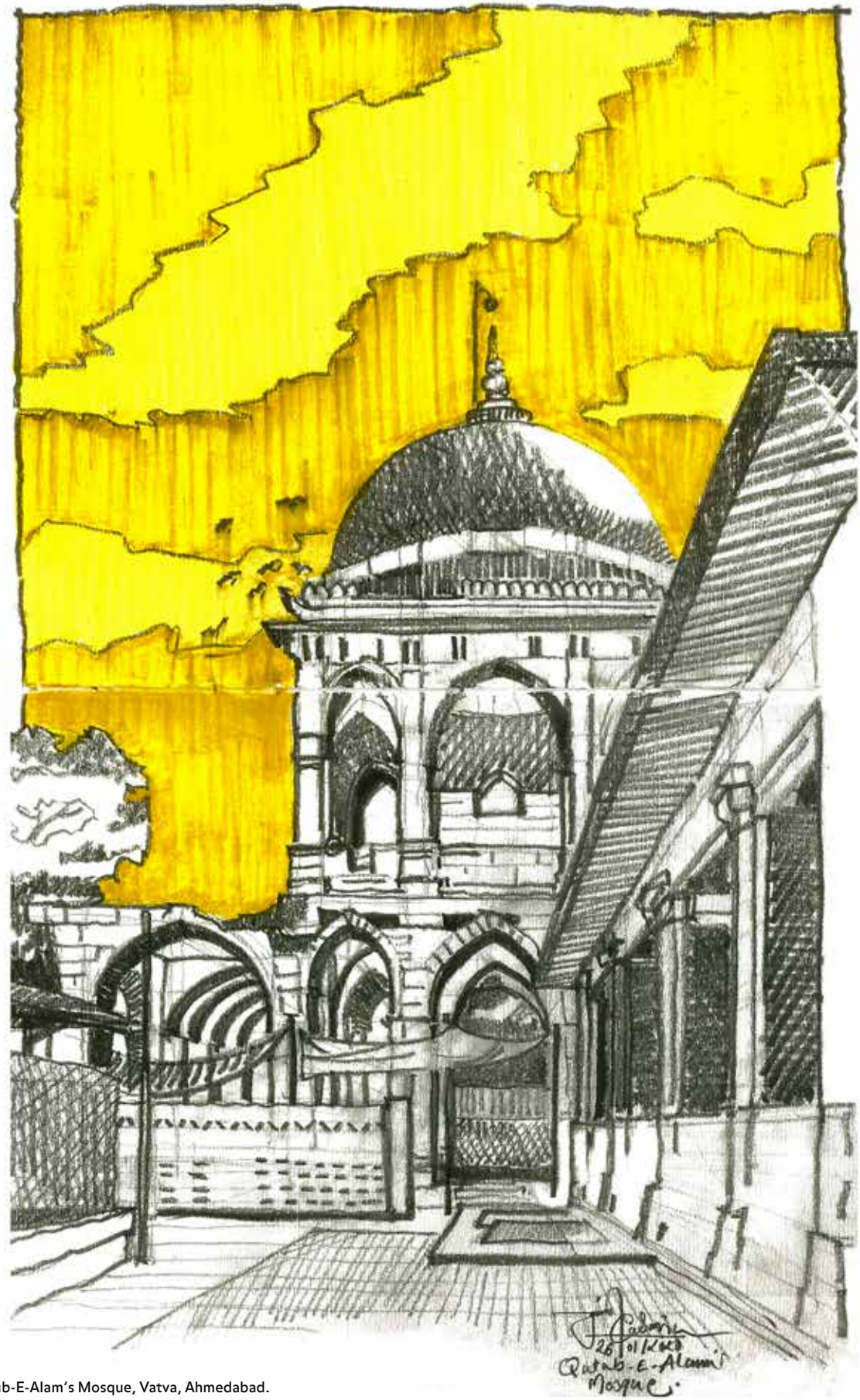
Streets in Pol, Khadia Raipur, Ahmedabad.
Date: 12 Oct., 2019
Medium: Pen and Ink



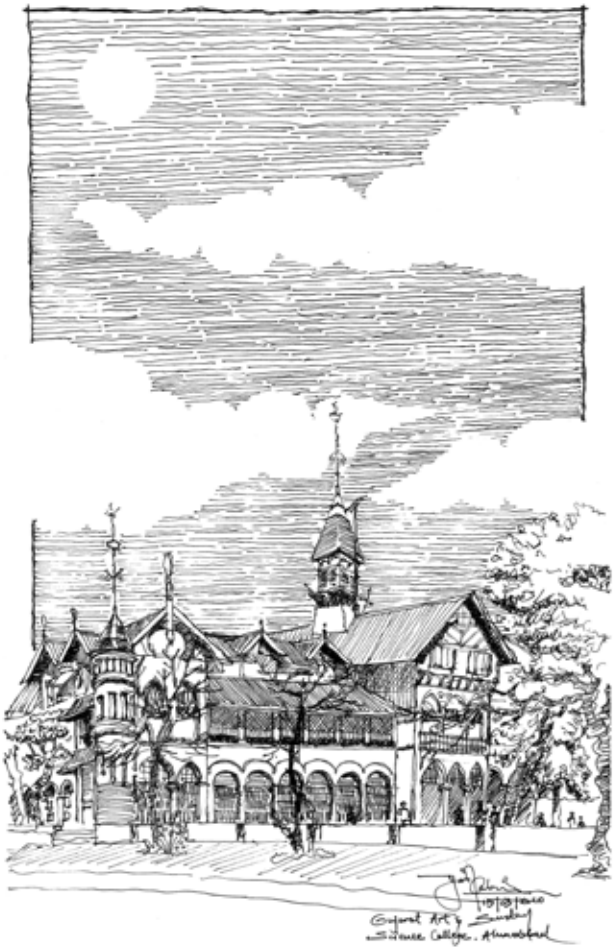
Hutheesing Jain Temple, Madhupura, Ahmedabad.
Date: 1 Dec., 2019
Medium: Pen and Ink



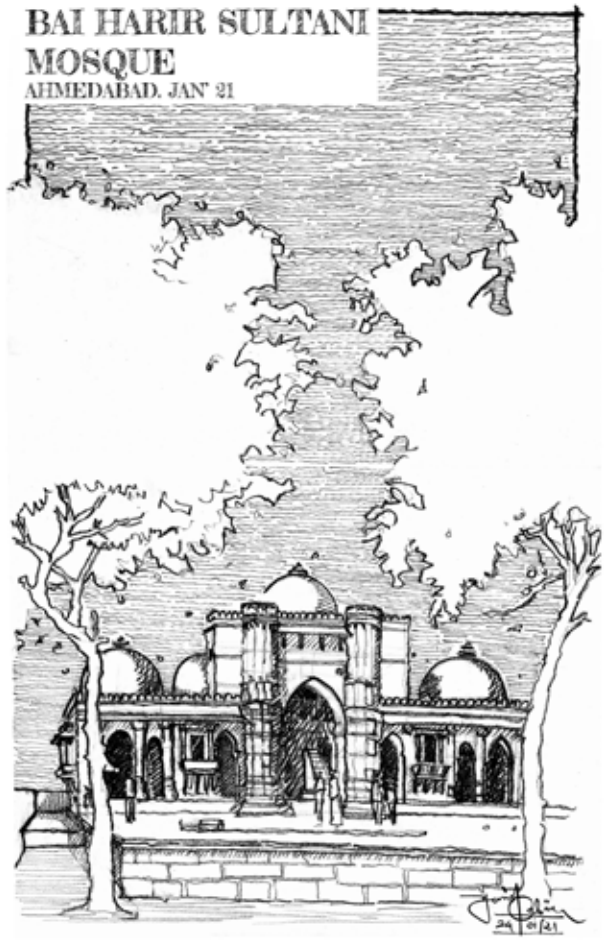
Alif Khan's Mosque, Dholka, Ahmedabad.
Date: 5 Jan., 2020
Medium: Pen and Ink



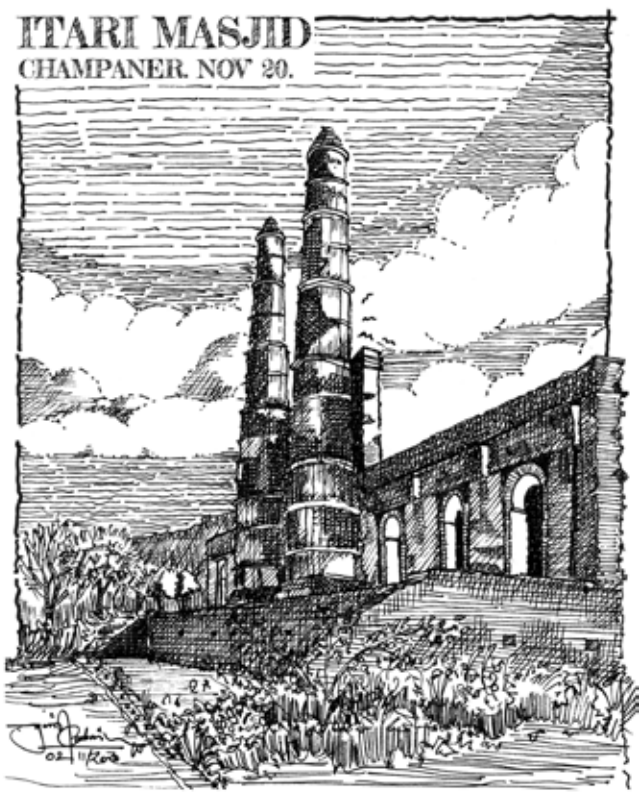
Sketch 06: Qutub-E-Alam's Mosque, Vatva, Ahmedabad.
Date: 26th Jan, 2020
Medium: Pencil and Color



Gujarat Arts and Science College, Ellis Bridge, Ahmedabad.
Date: 15 March, 2020
Medium: Pen and Ink



Bai Harir Sultani Mosque, Asarwa, Ahmedabad.
Date: 24 Jan., 2021
Medium: Pencil (Bold)



Iteri Masjid, Champaner, Pavagadh Archaeological Park.
Date: 2 Nov, 2020
Medium: Pen and Ink

Ar. Yasin Kabaria is an architect and urban sketcher. He is currently pursuing Master of Urban Housing at CEPT University, Ahmedabad, Gujarat. He is also a co-admin at Urban Sketchers, Ahmedabad Chapter, where he conducts live sketching sessions on location every Sunday. With sketching as a passion, he learns, explores and translates his skills on to the paper with pen and pencil.
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DEEP THOUGHTS AND STRANDED STREETS
THOSE 70 DAYS!

Ar. Geeta Kowalli

Ayutthaya, Thailand

Confused in my mind and hungry, I wandered with my backpack among the chaos at the airport. I was lost like a sheep. Everyone around me looked confused as well, lost with no clue about what was next.

17 March 2020- I was in Cebu, Philippines. I was pretty agitated when I reached Mactan Airport in Cebu and was told that all the flights including domestic are cancelled because of COVID-19 lockdown rules. Nobody including the airlines themselves had any clue about the whole situation. The local airline agent informed me that Clark International Airport at Manila, 40 km from the Ninoy Aquino International Airport (NAIA) was still open and I could take a shuttle transport between to reach NAIA . . . but it wasn't right and it wasn't as easy as I thought . . .

Ayutthaya, Thailand

Bali Indonesia

I couldn't take the shock that my travelling had come to a standstill. I was upset and worried that I couldn't move further, especially when you quit your job and wanted to travel around but - the whole purpose was lost! I couldn't go back home. I was alone. I didn't have enough money. My friends and family were worried. I grabbed some coffee and booked a hostel as there was no option left but to head back and wait. looked for one closer to Mactan Airport so that I could get the updates from the counter directly. But unfortunately, not all of the counters were helping people at the airport. Flights were getting cancelled over and again. All my money was stuck in the airlines and my credit card was exhausted.

My visa was about to expire and did not know when my next flight would be. I didn't have a face mask and didn't bother to buy one until I was sent back from the door of the immigration office which said "No mask, no entry". When I went in search of a mask, they were out of stock. The immigration officer denied extending my visa beyond 7 days when neither he nor I or this whole world knew how long will it would have to be extended. Officers did not bother about the situation. The charges were heavy. I was sent to the cashier to pay 2500 Pesos for just 7 days (about Rs 3750) which pinched my pocket as I had already run out of money.

Unfair- I thought! I came out of the office and called the Indian Embassy in the Philippines. They insisted that I not pay since immigration was going to roll out an advisory and waive the fees for all aliens who were stranded. I never went back to the Bureau of Immigration (BI) officer. It was strange, but I was happy I did not pay and lose that money.

Moalboal was the only beach place in Cebu which was still open for travellers. Everyone wanted to head back to the beach. If I had to be stranded, then it better be at the beach and not in Cebu City. But after a 4-hour long wait in the queue at the bus terminal, I gave up.

HQ Hostel was in proximity to the bus terminal. It was clean and cheap where I could afford to stay longer especially in such a situation. 7 Eleven and a few fruit vendors were still open for essentials. Many of us from different nations, including locals were stranded. We all waited patiently, busy looking for flights and talking about the same subject every day. I was hoping 25 March 2020 via Singapore would work out this time- but that too announced its closure.

Bali Indonesia

Bali Indonesia

Bali Indonesia

Borobudur, Yogyakarta- Indonesia

Chaingmai Thailand

A Bangladeshi guy from the hostel was going to the airport. Another Indian guy and I quickly jumped into his car to check if there was any other option to fly home. I was also considering flying to any other country if possible. At the lobby, we got to know that Philippine Airlines were arranging sweeper flights from Cebu to Manila helping people stranded on various islands to fly to their home country, provided the passenger had confirmed flight tickets with the maximum stay of 5 days in Manila and also confirmed hotel bookings. Without these two confirmations, no one was allowed to board the flight.

Well, I decided to take this flight and go to Manila, considering India and Malaysia would lift the lockdown by 31 March 31 and we could fly after that since Manila has better connectivity being the capital of the country. On 24 March, we landed in Manila. It was a mistake! The streets were haunted- so empty and stranded. I shared a taxi with two other guys from Turkey and reached The Leaf House The accommodation was boring and four times expensive compared to the hostel in Cebu. There was no other option as everything was shut because of lockdown and I felt ridiculously bad.

Well, here I was - stuck and so helpless. India kept extending the lockdown as the number of cases went on rising and I eventually ended up staying 70 days in the same place. Ah. Those 70 days!!

A guy playing loud music in the next room came knocking at my door and said, "COVID-19 is all nonsense. Why is everyone inside the room so scared? There is a party going on here. Why don't you join me?" I thanked him and pointed out that COVID -19 was no nonsense and was killing a lot of people! He shut the door on me. I guess he was stressed being inside for so long.

Being tough, battling through this life all alone, making countless mistakes- I was tired of it all. This was a much-needed long break to recharge life. I was living my dream of backpacking and travelling around Southeast Asia and a few other countries this year. Happy, free as a bird, walking around, biking around crazy distances, eating local street food, making new friends and enjoying beaches. Couldn't take the shock of this whole world coming to a standstill. On 10 December 2019, I quit my well-paid corporate job and started travelling just two days later. This time I had no plans to end my travel for at least 2 years - really wanted a good long break to recharge myself.

I started within India for about a month. It was a random decision to tick off a few places from my wish list to travel which were pending for a long time. Gujarat and Rajasthan, Rann of Kutch- a salt desert, Bhuj- Hodka- Dholavira- Ahmedabad- and few other places in Gujarat, also Jaipur, Pushkar, Jaisalmer, Jodhpur in Rajasthan. With a small break at the year's end, I packed my bags again and this time to Vietnam and Cambodia. Since I had already registered for the annual Standard Chartered Tata Mumbai Marathon, I had to return to India to run a Half Marathon in Mumbai. As soon as I finished my run, I packed my bags again.

Chiangmai Thailand

Chingrai Thailand

People asked me . . .How did it feel being stranded on an unknown island for 70 days? How did I hold up staying all alone for so many days? And what about food, stay, and money? What did I do all day? Many thoughts travel through your mind when you are alone at such times. Holding on to only positive ones is difficult. Especially when you are locked in a room of 10 × 10 feet with a small window that opens into a dead wall and no good view. Well, for once I wished if I were to be stranded for so long then why didn't God put me by the beach closer to nature? it was tough! In such times when you have a lot of time, it's tough to be holding up, to slide away negative thoughts, and stay calm all the time.

Having said that, lockdown in a way was good at times. 70 days is a lot and enough time to introspect your thoughts and feelings. I started asking all the big questions about life. My past and present. The future just looked pitch black! I do try and wish for many things, but nothing comes easy. We have to believe and trust in destiny. As the days passed, every day I gave up a little in my mind - What is the hurry? Who is waiting for me? – were the few questions that came to my mind. My whole perspective changed the way I looked at life. All your expectations and wishes at such a time go down to just basics- only if you reach home safe and live healthily, will you be able to make your wishes come true.

Meanwhile, the number of deaths were reaching sky high. It was scary! Who knew this pandemic would spread this rapidly, taking away so many lives and the whole world would come to a standstill? The way the media summed the number of deaths every day, the crazy number of cases rising up in thousands in Italy and other parts of the world would make me think- what would I do if I got infected? I didn't know anyone so close that they would come to help me in this country. No clue whom to contact for medical help. But I was hopeful and somehow had confidence that I would be fine and would reach home safely - the sense of life and death crossed my mind several times!

To keep calm, I started my day with sun salutations and stretching a bit. A cup of tea and a walk around a small stretch kept me healthy along with spending time reading online books and watching some tv series. San Juan city was pretty crowded despite many cases around the area. But for a certain time in the morning hours. People didn't bother to stay home. I went out once in four days to buy some food, grocery etc. from 7 Eleven and stocked up some cup noodles, peanuts, fruits. One of my running friends who introduced his friends lived in Manila, Philippines. They both took care of my food and guided me to an Indian restaurant that delivered food. They were lovely people who helped me a lot throughout this whole journey. I had limited cash for daily essentials. Since I had no clue when India would announce repatriation flights, I borrowed some money from friends and siblings.

I tried all possibilities to move from this place. Hong Kong, Japan and South Korea were still open but were unlisted by many countries to enter. With the rising numbers of the corona-affected, the rule of 2 weeks quarantine was implied as well. It was rather difficult to make any decisions. I got in touch with India in the Philippines through their social media page and a few others. Apparently, there was a social messaging group with about 200+ people excluding students.

Kanchanaburi, Thailand

The Indian embassy was part of this group. The embassy was helpless until the Indian government took any decisions for repatriation. People were frustrated and impatient. Everyone seemed stressed. Group messaging was helpful but it was stressful at times. People were restless with too many opinions and speculations. There were few who wanted to discuss Indian politics at such times- blame on the Indian Modi government and the rest would rise up and react! Who would be interested in listening to such unnecessary talk and their opinion in such stressful situations?

India's lockdown kept extending and had no clue about international flights. Would I ever go home? What if I didn't for this entire year? How would I manage living here and what would I do? I was ready to even take up some work if Manila offered me any. Difficult, it seemed. I stopped reading the news and constantly looking through messages as it was too disturbing. I was shocked to see thousands of Indian migrant workers walking back home with no means of transport due to the lockdown, trying to reach their loved ones. Many of them died from starvation, exhaustion, road and rail accidents, police brutality and no medical care, etc. I stopped complaining about myself about my situation when compared with them. The Indian Embassy in Manila was very helpful. In fact, when the face masks were out of stock in the market and I didn't have one with me, the team came all the way to my door and delivered masks and hand sanitizers. I was constantly in touch with the embassy through their phone and social media on which they were pretty active. My brother's friend, a retired Indian army personnel, suggested I follow all the updates on the Vande Bharat Mission on social media. I started doing that – I followed India in the Philippines, MoCA GOI, Hardeep Singh Puri, Dr. S. Jaishankar, Anurag Srivastava, S. Suresh Kumar, CM of Karnataka, PMO India and Air India and a few more who I thought would also be helpful in this situation.

When the Indian government announced repatriation flights, The Indian embassy sent out a bulk email to all Indians stranded in Manila- tourists, students, business travellers, etc. I registered myself with all the details and signed an undertaking form which stated that I would abide by all the rules set by the Indian government for 14 days quarantine upon arrival in India. Following this, Air India sent out a confirmation email. It was on a first come first serve basis based on their scheduled departures to various cities in India. The first flight of the Vande Bharat Mission started was from Manila to Mumbai. I waited a long time to get a flight to Bangalore. There was none in phase -1 which was May 10-17. The phase-2 schedule luckily had one flight on May 24 to Bangalore via Mumbai.

I followed the embassy's web page every day for any news. Since Manila was in ECQ, no aliens were allowed to go out during this time, unless they had an ACR card for any emergency. The visa extension fees were meant to be waived as per the Embassy's advisory rolled out sometime in March, but when I was about to take my repatriation flight. I was charged an extension fee of about 7310 PHP for 90 days. I wasn't in a position to argue, all I wanted was to go home. The visa extension was carried out at the airport itself. We all were expecting the embassy to pitch in and request the authorities to waive the fee for all of us as we had already spent a lot on our overstay. but that is at the BI's discretion anyway.

The almost-empty Ninoy Aquino International Airport Manila, Philippines in Manila during the lockdown saw the AI flight landing. I was happy. I got a pic of my album too. Many Indian students who studied medicine in Manila were going back home. We all took photos and waited patiently. The waiting lounge was full and there weren't enough seats. I sat on the floor near the staircase. Slowly, others joined me. There was no social distancing in the lounge. The flight was scheduled for 6 pm and the waiting time went beyond schedule. Were we really flying today? Soon there was an announcement. There was some technical issue with the plane. The embassy was kind enough to provide food and accommodation at the Holiday Inn. They arranged another flight the next day. And FINALLY AI took off.

Appreciate the entire team from the Indian embassy and Mr. Jaideep Mujumdar, Ambassador for their efforts. The team helped Indians with pickups from their respective places, to providing food, masks, sanitizers and any other issues with their immigration documents, etc. They were available at the airport from morning until every flight took off to India.

Here is my advice for everyone who is currently stranded in any part of this world: Stay in touch with your embassy for any help. Follow their social media and messaging accounts to get updates regularly. Check on your visa extension rules with the embassy and local authorities. You may have to extend your visa when your repatriation flight is confirmed or the lockdown is lifted, but reach out to the immigration office soon. Stay away from people and take extra care when

Sukhothai Thailand

Sukhothai Thailand

you go to crowded places. If you have money to suffice, good. Otherwise, borrow some from friends or family. You can always pay them back later. You only need to think of your health and safety at that moment.

Yoga, a few stretches and a bit of walking helped me stay fit. Don't skip food. You must maintain your immunity. If you have a notepad and a pen, please write your thoughts. It helps reduce stress. Internet these days connects to your folk in any part of the world. Talk to them. Talk to your fellow travellers to understand and help each other in such difficult times. Indulge yourself with reading, writing or learning new things. The only mantra that works in this situation is stay isolated from people and you will be safe.

I must say this was one crazy trip of my life that I can never forget, along with being a most memorable and not to mention the most expensive one- but it was a unique experience with a lot of learning. Gratitude to all my dear friends and family who were constantly checking my safety through social media in these difficult times.

Stay safe. Love and prayers.

Ar. Geeta Kowalli is an architect and a design consultant based in Bangalore. She is a globetrotter and solo backpacker by passion. She loves to explore places, people, food, culture, art and architecture around the world. She also treks and runs long distances.
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CAREER CHOICES IN ARCHITECTURE

Prof. Dharitri Das

After undergoing the five-year training as an architect, a young student is prepared to step into the real world, equipped with the desired skills and knowledge and the confidence of a new professional and ready to take up new challenges. At this stage, there is a wee bit of confusion about the career path to be chosen by him/ her which is mostly dictated by the market. The graduating architect is already a generalist, and therefore, salary becomes a major deciding factor in choosing their next career path.

For the same reason, many students opt for starting independent or partnership practices and looking for work. These new practices often thrive on interior projects, 3D assignments or sub-contracts from bigger firms. Some are lucky and are able to sustain, while others, after a brief stint, fail and again start looking out for jobs under senior architects. Turnkey projects are usually the norm, not to mention the initial struggle. Most of these practices are often multi-disciplinary with civil engineers and graphic designers in the team.

Of late, many fresh graduates are also venturing into setting up lifestyle stores or retail units for building materials, furnishings and fittings. Their expertise is to their advantage here. Architecture journalism is also another avenue for fresh graduates with the gift of creative writing. Writing for travelogues, world architecture communities, and the like is also becoming popular in present times. Many others follow their dreams of pursuing higher education in reputed institutions in India or abroad primarily for purposes of branding and sometimes also for biding time to avoid getting dragged into marriage and other routine activities. Higher education is also an avenue to open more possibilities in career growth as opposed to the prevailing low salaries being offered to freshers in most offices in small towns and cities.

Teaching, for those academically inclined, is a safe and relatively risk-free profession, which mandates a post-graduate qualification. So specializing in subjects like Landscape Design, Urban Design, Urban Planning and Construction Management is a clear favourite. Students generally take a cue from their peers as well as teachers while finalizing their choice for specialization. Sustainable architecture is also a demanding option at present with the global cry for sustainability in all development sectors.

Many graduates are also pursuing Real Estate Management as they are keen on joining multinational infrastructure corporations like GVK Group, Adani, L&T, Gammon India, TATA Infrastructure as well as private and corporate sector housing corporations like, DLF, Ansals, Godrej Properties and other real estate developers.

The government sector, especially CPWD, state PWDs, TCPO and Military Engineering Services, are of course coveted areas but only to a select few as the openings are less in number. Financial institutions like HDFC, HUDCO and NHB also absorb some architects every year.

Though architecture, being an all-encompassing discipline offers many career choice options, what the future will bring remains to be seen due to the uncertainties thrown up by the pandemic. Many offices just do not have adequate work to take in fresh graduates and yet sustain. Many ambitious

Figure 1: Using conventional methods
(Source: asitek hd)

Figure 2: Using AR/ VR
(Source: Pinterest Stage design 3DMAX2009-1841 by CGTradr)

Figure 3: Parametric Design
(Source: 3rd year B.Arch. student from PMCA)

projects stand stalled and work is fragmented and divided between firms. The market is currently facing a slump and firms are facing cut-throat competition for projects. Many are looking at downsizing their staff strength to stay afloat. Middle level people are preferring to work from home than going back to the offices as it improves the work-life balance. Post-pandemic remote work seems to be catching up with many firms and could change the current office scenario. The profession could be looking at major changes also in the way we currently build. Switch to pre-fabrication and time-saving practices as contrasted to in-situ techniques, could be the new normal. Digital design transformations using augmented reality (AR) and virtual reality (VR) are also catching up fast and students are inclined towards these emerging technologies.

Colleges will therefore also have to change their focus from teaching conventionally to incorporating the new needs and demands of the profession into their syllabi and make students adept at them. Knowledge of BIM and parametric design will have to be imparted. The approach to the way we design our buildings and cities will also need to be re-looked at with social distancing and resilience as important criteria for design.

The changes being forecast for the future hold many challenges but are also opportunities for architects to redefine and re-design the way people live and re-create options and possibilities.

[This article has been written with inputs from a survey of 100 students from 3 batches of graduating students.]

Prof. Dharitri Das is an Urban Planner from SPA, New Delhi with 25 years of experience in the field of architectural education. She graduated from CET, Bhubaneswar in 1993. Prof. Das has served as Inspector of schools of architecture for the Council of Architecture for the last 15 years. She is also a consultant for SEEDS, New Delhi and SPARC, Bhubaneswar on urban development projects. She has been involved in the preparation of the master plan for Paradip and Bokaro. Currently the Principal of PMCA, Cuttack, her current research interests include inclusive development for the aged and people-centric public spaces design. She has published papers in international conferences and co-authored numerous publications of the institute.
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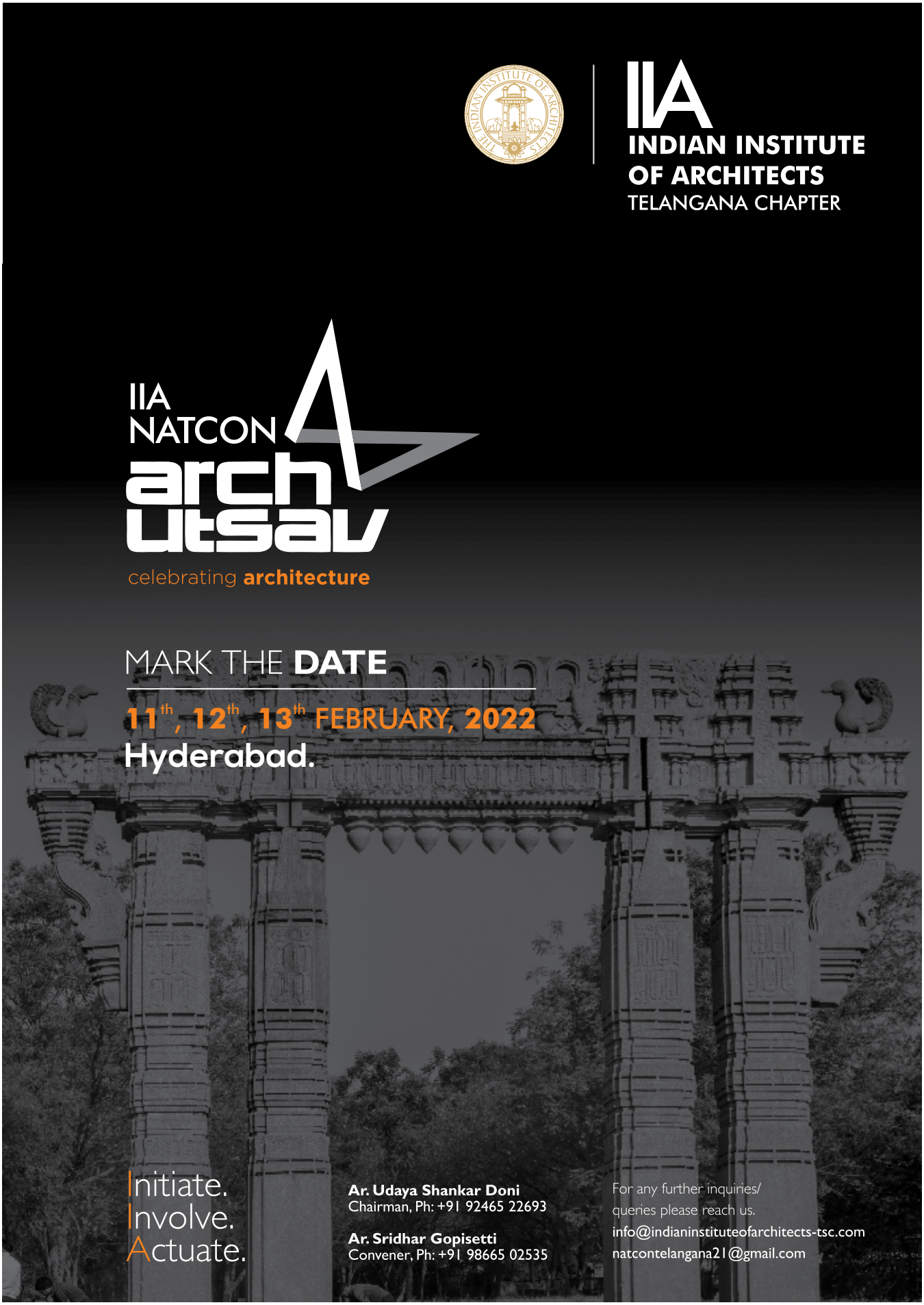
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HAMID MM


HAFEEF PK


GOUTHAM S


SANDEEP SHIKRE

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NARESH V NARASIMHAN


SIDHARTHA TALWAR


GURUPRASAD RANE


GURUPRASAD RANE


USHA RANGARAJAN

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R LATHA


SANJAY PURI

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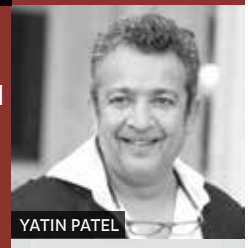
DEEPAK GUGGARI


CHARANJIT SINGH SHAH


UDAY ANDHARE

INTERIOR DESIGN PROJECTS - NON RESIDENTIAL ►►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ANJAN MITRA

INTERIOR DESIGN PROJECTS - RESIDENTIAL ►►


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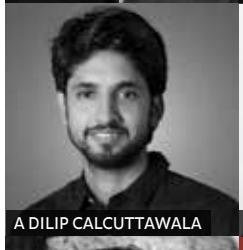
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VIKAS MV


RANJIT WAGH

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ANUJ G. KUMAR


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VARNA S DHAR

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BILEY E MENON


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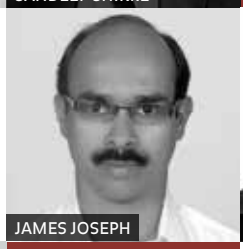
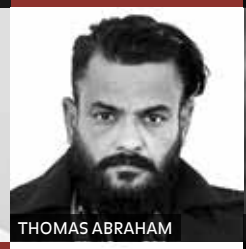
PRANAY DEEP


JAMES JOSEPH


THOMAS ABRAHAM


ALAN ABRAHAM


PIYUSH KAPADIA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NEWSLETTERDECEMBER

OBITUARY

Ar. Atul Desai

We report the Sad Demise of Ar Atul Desai , Past President of IIA.

Heartfelt Condolences

NEWS

Balkrishna Doshi honoured with the Royal Gold Medal 2022, the world's highest honour for architecture

Ahmedabad-based Balkrishna Doshi will receive the Royal Gold Medal 2022 by the Royal Institute of British Architects (RIBA), the world's highest honour for architecture. At 94, Doshi is being recognised for his career spanning seven decades, with over 100 built projects, across India. The Royal Gold Medal is "approved personally by Her Majesty The Queen and is given to a person or group of people who have had a significant influence on the advancement of architecture". The award will be presented to Doshi at a special ceremony in 2022.

RIBA President Simon Allford said, he has influenced generations of architects through his delightfully purposeful architecture. Influenced by his time spent in the office of Le Corbusier his work nevertheless is that of an original and independent thinker – able to undo, redo and evolve. In the 20th century, when technology facilitated many architects to build independently of local climate and tradition, Balkrishna remained closely connected with his hinterland: its climate, technologies new and old and crafts."

The Indian Institute of Architects, congratulates Ar. B V Doshi for this recognition and is a proud moment for the Architect's Fraternity in India .

Walk for Arcause

Ar. Gita Balakrishnan will embark upon a 1700 km walk from Kolkata to New Delhi to raise awareness on the role good design can play in changing lives through the campaign aptly titled Walk for Arcause – Architects for a Cause and for the Cause of Architects. The focus will be on the difference architects and designers have made, through their holistic interventions, in different spheres of life. Conversely, this walk will be is an opportunity to identify action areas through interaction with communities in villages, towns and cities along the way and throw them open for designers to act. The overall intent of Walk for Arcause aims to bring the focus on architects in the social realm and on Architectural Social Responsibility.

The Indian Institute of Architects, is supporting this social venture.

The Design fraternity would be able to engage with this mammoth venture, by contributing their messages and reflections via blogs that help spread awareness. Some of the members would join the walk in certain sections of the route while others will join the walk virtually through an event on the HDOR (Hundred days of Running) App.

To know more about Walk for Arcause or how you can engage, do visit:
www.walkforarcause.com

Keep a watch on the following Social Media handles listed below:
Facebook: https://www.facebook.com/walkforarcause
Instagram: https://www.instagram.com/walkforarcause/
Twitter: https://twitter.com/gita_ethos

IIA-Haryana Chapter

ARCHITECTS MEET and PANEL DISCUSSION, PANCHKULA

IIA Panchkula Centre organised an Architects Meet on 4 December at Red Bishop Resort, Panchkula. A panel discussion was held on the topic Architectural Practice - The Road Ahead. The panellists included Ar. Madhu Garg, Dr. Aradhana Jindal, Ar. Sanjay Gupta and Ar. Nitin S. Kumar, moderated by Ar. Punit Sethi. In his introduction, Ar. Punit Sethi remarked that in the last five decades, since the enactment of The Architects' Act, 1972, the architectural profession has seen a tremendous transformation in the wake of the economic and technological progress made by our country: there was a vast difference in the way architecture was practiced through the '70s - '90s and as it is today. It has become multi-disciplinary with significant increase in the use of technology; stringent compliance of various codes and norms. Even our role as designers of the built environment is not limited to buildings any more, but expected to address national and environmental issues. The Council of Architecture recently released a new Manual of Architectural Practice which deals with various aspects of changing paradigms of architectural practice. It is imperative that institutions like IIA help the fraternity, through constant dialogues and discussions, to chalk out the roadmap for the future.

Ar. Madhu Garg opined that architecture and architects, both don't function in isolation but continue to evolve. Architecture has been a bespoke service and shall continue to be so. Ar. Sanjay Gupta felt that architecture isn't bespoke anymore. It has become very objective and a 'one size fits all' type of vocabulary is emerging. Ar. Nitin S. Kumar also agreed with this viewpoint and was of the opinion that architecture may not last long as a bespoke profession, as technology is now the new 'boss'. Dr. Jindal was of the opinion that architecture will always be customized to suit the needs of individuals and society. Chandigarh, she said, is a good example of a unique solution in a given context.

Addressing questions about dominance of technology and changing paradigms of communication, Ar. Nitin said that online communication does seem to be here to stay, but it is artificial and is taking away from the real interaction among architects and clients. Since architecture is 'real' so should the communication. Talking about changes that one can foresee in the constitution, structure and functioning of architectural offices, all panelists agreed that architectural practices have to become multi-disciplinary collaborations. Ar. Madhu Garg stressed that architects must maintain their integrity and creativity as processes and procedures become more stringent. The younger generation of architects will continue to establish small businesses and carve out specialist careers that run alongside the primary profession. Dr. Aradhana Jindal emphasized the need for educational institutions to also focus on the changing trends and incorporate them in their pedagogy.

The panel discussion was followed by an interactive question and answer session. Members felt that a series of such discussions would help address the subject comprehensively. The Architects Meet, attended by members from Haryana, Chandigarh and Punjab, was followed by a fellowship dinner.

(From L to R): Ar. Nitin S. Kumar, Ar. Sanjay Gupta, Dr. Aradhana Jindal, Ar. Madhu Garg and Ar. Punit Sethi.

IIA-Karnataka Chapter

The installation of the new Executive Committee of IIA Vijayapur Centre was held on 28 November at Hotel Pleasant Stay, Vijayapur. Shri. Vijay Mekkalaki, Commissioner Vijayapur Municipal Corporation was the chief guest of the event which was presided over by Ar. B.R. Mohan, Chairman IIA Karnataka Chapter. Shri Krishna Kolhar Kulkarni, eminent historian and researcher was felicitated for being awarded the Rajayosthva Prashasti by the Karnataka government for his outstanding contribution towards history and literature.

Along with the installation event IIA Vijayapur Centre also hosted the 4th Executive Committee Meeting of IIA Karnataka Chapter. All the executive committee members and chairman of all IIA centres were present in the meeting.

Installation ceremony of IIA Vijayapur Centre held on 28 November.

Ar. B.R. Mohan, Chairman IIA Karnataka Chapter at the installation ceremony of IIA Vijayapur Centre held on 28 November.

IIA-Kerala Chapter

Inter-Centre selection trial matches where conducted on 11 December to select the team representing Kerala for the national sports event of IIA.

An inter-Centre cultural meet has been planned for 23 January 2022. In this regard, a pilot meeting was organized with IIA Kerala Chapter Office Bearers conducted by the host centre IIA Palakkad Sub-Centre on 12 December 2021.

Meeting of the IIA Kerala Chapter Executive Committee was held on 9 October, hosted by IIA Calicut Centre at Malabar Palace, Calicut. The Executive committee interacted with Sri P.A. Mohammed Riyas, Honourable Minister of Public Works Department and Tourism, Government of Kerala- flagging off the visits to public projects in Calicut on 10 October. "Experience- A Walk with the Architect" was an event organized by IIA Calicut Centre, hosting IIA Kottayam Centre on 9 October and both IIA Kottayam Centre and IIA Executive Committee members on 10 October. *The Gender Park* by Space Art, Yahvi and *Malabar Head Quarters* by Stapati Architects were visited on the first day. *Freedom Square* by De Earth Architects, *Samudra* by *Satkriya, Udayam* by TWOI Architects and *GHSS Karaparamba* by DAC Global were visited on the second day.

CRICKET IIA 2021

The Inter-Centre Cricket Tournament of IIA Kerala Chapter was organised by the Sports Committee headed by Ar. Amshunath Radhakrishnan at Rajagiri Cricket Ground, Kochi on 20 - 22 November 2021. The event was inaugurated by IIA Kerala Chapter Chairman Ar. L. Gopakumar by handing over the team jersey to the respective captains. A total of eight teams participated in the tournament :

i. *Thrissur Titans (IIA Thrissur Centre)*
ii. *Palakkad Warriors (IIA Palakkad Sub Centre)*
iii. *Quilon Cricket Collective (IIA Kollam Centre)*
iv. *Calicut Kings (IIA Calicut Centre)*
v. *Kannur Raptors (IIA Kannur Centre)*
vi. *Trivandrum Monks (IIA Trivandrum Centre)*
vii. *Kottayam Tuskers (IIA Kottayam Centre)*
viii. *Kochi United (IIA Cochin Centre)*

After neck to neck competition on the first and second day, *Thrissur Titans, Calicut Kings, Kochi United and Quilon Cricket Collective* reached the semi-finals. The final match was played between *Kochi United and Quilon Cricket Collective* on 22 November. *Quilon Cricket Collective,* a team of ardent cricket lovers who kept the love for cricket alive through years, won the *IIA Kerala Premier League Trophy.*

The following individual trophies were achieved by the below mentioned players.
Star bowler of the tournament- Ar. Amshunath (Kollam)
Star batsman of the tournament- Ar. Deepak Divakaran (Cochin)
Man of the series- Ar. Shaheer (Calicut)
Young player of the tournament- Ar. Afin Sabjan (Kollam)

We extend our gratitude to the title sponsor of the tournament, Trojan Plywood and co-sponsors, *Tostem Windows, Nitco Tiles, Beautile, Volte Electricals* and *Kerovit* by Kajaria. The much awaited tournament post the pandemic blues was indeed a booster for the cricket enthusiasts of IIA Kerala Chapter.

IIA-Maharashtra Chapter

All Centres of Maharashtra strongly protested against the brutal attack on Ar. Jitendra Bhandari of Karad by holding a Black Day on 25 Nov. by wearing black ribbons. Social media status was updated in this regard and newspapers and other media gave a wide coverage to this outrageous incident.

IIA Pune Centre

The Centre took an initiative towards a dialogue between IIA and educational institutes. A programme was held on 3 December at PYC Club where about 50 people attended. The principals of the architecture colleges of Pune were invited. Senior IIA officials : Ar. Prakash Deshmukh- IIA Past President, Ar. Sandeep Bawdekar - Maharashtra Chapter Chairman and Ar. Pravin Pagar - Vice-Chairman were present. The process and benefits of of obtaining Institutional Membership of IIA were discussed. This symbiotic relationship between the academia and the profession was explored for future mutual advantage. There was a immediate response from the college Principals about wanting to take this membership.

The Pune Cricket Team who had won the trophy jointly with other Centres in the recently held MHIIAPL at Kolhapur, presented the trophy to the IIA Pune Centre. The team members were felicitated on this occasion. Wealth Managers (India) Pvt. Ltd. had sponsored this event.

(Clockwise from top left) Ar. Jayashree Deshpande, Past Chairperson, Pune Centre; Ar. Sandeep Bawdekar, Maharashtra Chapter Chairman; Ar. Mrinalini Sane, Jt. Hon. Secretary, Pune Centre; Dr. Anurag Kashyap, Principal of BNCA, Pune; Ar Prakash Deshmukh, IIA National Past President, at the IIA Institutional Interaction event.

IIA EC members met the newly-appointed Director of Town Planning, Maharashtra State, Shri Avinash Patil, to welcome him on behalf of the IIA Pune Centre on 14 December at Central Building, Pune.

Badminton selection process for forthcoming IIAPL is being held in Pune in December.

IIA Nashik Centre

Past President IIA, Ar. Prafulla Karkhanis was felicitated by IIA Nashik Centre on 24 October, and given the IIA Nirmiti Lifetime Achievement award 21 and a citation was conferred in the presence of renowned architects Madhav and Meera Deobhakta as chief guests.

IIA Lonavala Centre

The newly-formed Centre has been active in setting up various committees and sub-committees. On World Architecture Day, the Centre Chairman, Ar. Vishwas Kotkar, Ar. Sunil Yadav and Ar. Mahesh Bhusari visited the IIA head Office in Mumbai and greeted its staff members. The office bearers also attended YAF at Ranchi in October. A Sports Committee ensured attendance at the Kolhapur event of MHIIAPL held in November. A success party was organised on 8 December.

IIA Navi Mumbai Centre

World Architecture Day was celebrated on 4 October with a cake cutting ceremony and tree plantation at the premises of IIA Belapur, Navi Mumbai Centre with 35 members. The ensuing picnic continued strengthening fellowship among members.

Picnic enjoyed by Navi Mumbai members

IIA Kalyan-Dombivali Centre

On 13 November, the 31st Foundation Day of the Centre was celebrated with a landscape design competition for 4th & 5th year architecture students. The eminent jurors were Ar. Rajoo Pradhan, Ar. Suvarna Sathe and Ar. Swati Dike. Out of 10 shortlisted entries, Ms Mrunmayi Bante and Mr. Tejas Shirode won the 1st and 2nd prizes respectively.

The Office Bearers also met with the KDMC Commissioner to discuss issues faced by architects there.

IIA Nagpur Centre

The 13th edition of Prof. S.A. Deshpande Studio Design Competition for 4th year students was held online in September. The final jury for the topic, "The Man with the Umbrella", was held in November. On 8 October, Ar. Paramjeet Singh Ahuja talked about the importance of Contracts and Agreements with Clients in the T-Talk series. On 29 October, a workshop on UDCPR was held to minimise the gap between interpretation and implementation with Mr. Sanjay Saoji, Former Deputy Director Town Planning, Maharashtra and Mr Sunil Marale, Jt. Director Town Planning Pune.

IIA Thane Centre

Senior architects - Ar. Arvind Manohar Khare, Ar. Arunkumar Thakkar, Ar. Shashikant Deshmokh, Ar. V.V. Modak and Ar. Ulhas Pradhan – were felicitated for their contribution to Thane region at Hotel Satkar Grande on 29 October. This get-together of about 60 architects was sponsored by Seager Parking.

IIA-Gujarat Chapter

Executive Committee Meeting

IIA Surat Center, organized their EC meeting along with IIID Managing committee meeting at Silver Waves Resort, Daman on 11th Dec 2021. Around 30 members including the advisory members from both the institute joined this trip with their families after long and stressful Covid months which gave them an opportunity to interact with each other. The trip also included fellowship lunch and excursion to Jhampore Beach. The Beautiful weather, lovely venue, and the enthusiastic members elated the evening meeting. This one and half day trip was a must needed getaway trip for everyone.

11th December 2021- Executive Committee Meeting , IIA Surat Center along with Managing Committee Meeting , IIID Surat Regional Chapter ... Brain-storming session for forthcoming program of both the institutes in presence of Chairman IIA – Ar. Jignesh Modi and Chairman IIID Mr. Rupesh Kapadia

Auction event of Ball Bat Tournament 2022

As part of the annual event, IIA Surat Center with the support of IIID Surat Regional Chapter organizes two days of Cricket matches under the Name of 'Ball Bat Tournament and Family Game', every year in the month of January. As part of the 5th season of the event an Auction Event was arranged on 19th Dec 2021. 10 Team owners bid for 13 team players each including a senior player and a female player. The event was hosted by Ar. Vishal Shah, Ar. Deepak Sahajwani and Ar. Nilkanth Burkhawala. The Audience was greeted by the Chairman IIA Jignesh Modi who introduced the audience to the working committee and rules and regulations of the

Auction. The event had an overwhelming response from the members with almost 200 participants. The event was sponsored by Vraj Digital tiles.

The Auction money raised will be used for organizing scholarship programs and knowledge series programs for the students of the design institutes in Surat. The tentative date of the 2-day Ball Bat Tournament is scheduled on 22-23rd January 2022.

The entire event was conducted by Ar. Vishal Shah, Ar. Deepak Sahajwani and Ar. Nilkanth Burkhwala

IIA-Tamil Nadu Chapter

The Arithmetics of Architectural Practice

IIA Chennai Centre organised an online event on 18th September 2021, in which the Guest Speaker, Ar.Mural Murugan made a presentation on "The arithmetics of Architectural practice". The presentation covered topics such as running a practice, fees, staff selection & payments, workflow management, consultants etc. The Presentation was followed by a panel discussion on the same topic. The panelists were Ar.Sujitha Arvind, Ar.Ramji, Ar.Arun Raja Mohan, Ar.Vivek Kumar & Ar. Prashanth C R. The session was moderated by Ar.Kurian George, Chairman - IIACC.

Photography Club & Sketching Club of IIA Chennai Centre

IIA Chennai Centre has launched 'Clique' (Photography Club) and 'Graphite' (Sketching Club) through which Architects and Students of Architecture will come together and explore the Architecture of Chennai through Tours and Workshops.

The First Photography & Sketching workshop was held at The Government Museum Egmore on 9th October 2021. The event was organised by IIA Chennai Centre along with IIA Tamilnadu Chapter. The mentors for the Photography Workshop were, Ar.R.Saravana Raja (Creative Head, Design Manthra), Ar.R.Gurunathan (Principal Architect, UA Design Studio), Ar.K.Prasanna Pandian (Principal Architect, Arch-infinitum). The mentors for the Sketching Workshop were, Ar.Balaji Venugopal (Design Chair, MEASI Academy of Architecture), Ar.Rijesh Karuvanthodi (Practicing Architect based in Chennai). The workshop had around 100 participants which included Architects and students of Architecture.

IIACC specially thanks Ar.C.J.Kosalraman (EC Member, IIA Tamilnadu Chapter) and Ar.Nanda Devi (EC member, IIACC) for putting in their time and efforts in organising the wonderful event.

All about the Pantheon Buildings - The Egmore Museum Complex

As a precursor to the Photography & Sketching workshop, IIACC organised an online presentation by Ar.Sujatha Shankar (Imm. Past Vice Chairperson of IIACC, Member of the Governing Council and EC of INTACH) on all about the Pantheon Buildings, the Egmore Museum Complex. The online webinar was held on 8th October 2021 and was well attended by several Architects and students of Architecture.

In search of possibilities - Prof.Durganand Balsavar in conversation with Ar.Kurian George

The education of an architect provides several creative possibilities for future prospects. The holistic, transdisciplinary education exposes architects to design, construction, liberal arts, film-making, governance, urban design and imagining future cities, environment and many other related disciplines.

The conversation between Prof.Durganand Balsavar with Ar.Kurian George, explored the many possibilities that are emerging, for the practice of architecture. The conversation was of interest to students curious to know about architecture education, young architects to explore new avenues, academicians and everyone interested in the shaping of the natural and built environment. This online conversation was held on the 9th October 2021 amidst the Members of the Executive Committee of IIA Tamilnadu Chapter. Prof. Durganand Balsavar is presently the Dean, Saveetha College of Architecture and Design.

Meeting with CMDA

Members of IIA Chennai Centre participated in the CMDA's Meeting on Single Window Online Planning Permission Application - User Acceptance Testing, held at CMDA. The Members attended two Meetings in this regard, the first one being held on 17.11.2021 and the subsequent one held on 09.12.2021. The Members had the opportunity to have a discussion with Shri. Anshul Mishra (Member Secretary - CMDA) and gave their feedback on the present modules and several other inputs on various aspects of the approval processes. A detailed report is also being sent to CMDA and the same will be made available in the next issue of Architecture Chennai.

IIATNPL 2021

The Indian Institute of Architects, Tamil Nadu chapter organised the IIATNPL'21 a three day sports meet for the IIA members of TN, during 17,18,19 of December 2021, under the leadership of Ar. T.Loganathan, chairman, IIA TN chapter, and convenership of Ar. R. Vijay Anand, EC Member, IIATN Chapter, and guided by AR. Yuvaraj B., Secretary, IIA TN chapter.

The event was hosted by the IIA Madurai centre, under the chairmanship of Ar. N.M.S.Shiyam. The three day sports extravaganza was well attended by 154 architect sports persons including 10 women participants, representing 7 teams. They were Royal Chennai Champs (RCC), Pacing Chennai Comets (PCC), Salem Singhams, Madurai Kaalais, Kovai Noyyal Knight Riders Trichy Warriors, and a new entrant Delta veerans from tanjore. The teams participated and competed for trophies in Cricket, Badminton and Table Tennis.

The Cricket matches were conducted in Turf ground at NPR College, Natham. The Badminton and Table Tennis matches were conducted in Race Course Indoor Stadium, Madurai.

In Cricket the GOLD category winners were RCC, Chennai and runners were Salem Singhams. The SILVER category winners were PCC, Chennai and runners were Madurai Kaalais. The BRONZE category winners were Kovai Noyyal Knight Riders and runners were Trichy Warriors. Tanjore Delta Veerans were awarded the Spirited Participants Trophy.

Salem Singhams were winners in Table Tennis doubles.

PCC, Chennai were winners in Table Tennis Men's Singles.

Madurai Kaalais were winners in Table Tennis Women's Singles and mixed doubles.

The DIAMOND sponsor for the event was Avathar Ceramics from Madurai. The other team sponsors were Anuj Tiles, Indiana Floors, Archidply, RRkabel, Lakshmi ceramics.

The IIATNPL'21 was well competed with true spirit of sportsmanship and fellowship among the architects fraternity of Tamilnadu. The IIATNPL'21 turned out to be a memorable event for the participants and hosts.

World Architecture Day Initiative

IIA - Social Responsibility Committee (IIA SRC) celebrated World Architecture Day, at the Thoothukudi Meelavittan Library. On behalf of IIA-SRC, Ar.Mohammed Hayas provided the sponsorship amount of Rs.1000/-, books for studednts, Architecture awareness notice to chief LibrarianThirumathi Ajeetha Natchiyam. To combat the Covid Situation and spread awareness, IIA-SRC provided masks and sanitisers. Further, there was a discussion on Architecture for the general public.

International Students Conference

International Students Conference on Research in Architecture

D.Y. Patil School of Architecture, Lohegaon, Pune in association with Maharashtra Association of Schools of Architecture (MASA) and BoS of Pune University is organizing an International Students Conference on Research in Architecture in March 2022.

The conference aims at inculcating a culture of research in architecture and encouraging students to understand the values of inter- disciplinary relationships. The conference will provide students at B.Arch., M.Arch. and Ph.D. levels a platform to present their nascent ideas and get feedback from experts for their research.

Details at:
https://www.dypatilarch.com/assets/img/isc/RIA-FLYER-POSTER-FOR-ABSTRACT-03-JAN.jpg

Registration link:
https://docs.google.com/forms/d/e/1FAIpQLScG_F7XOLYAsvdYqzhh3u-jzGY1-6N1-d0CR3n0EfPkSvGIew/viewform?usp=pp_url
Previous E-Proceedings can be seen at: https://adypu.edu.in/national-student-conference/

Aurovilian gets award at U.N. climate conference.

In a rare honour, Suhasini Ayer, architect from Auroville, was presented with the Green Solutions Award during the on-going COP26 summit, the United Nations Climate Change Conference in Glasgow, for the Humanscapes Habitat project of creating an affordable and sustainable housing hub in the universal township. The project got the award in the Sustainable Construction category at the climate summit. A press note from Auroville, meanwhile, said Humanscapes Habitat was an applied research and demonstration project of Sustainable and Integrated Urban Living for benchmarking in habitat as a course correction for a sustainable and harmonious mode of development. The habitat project has integrated five goals as part of the sustainable human settlement mission that include designing a sustainable built environment with solar passive building design coupled with efficient functional space layout.

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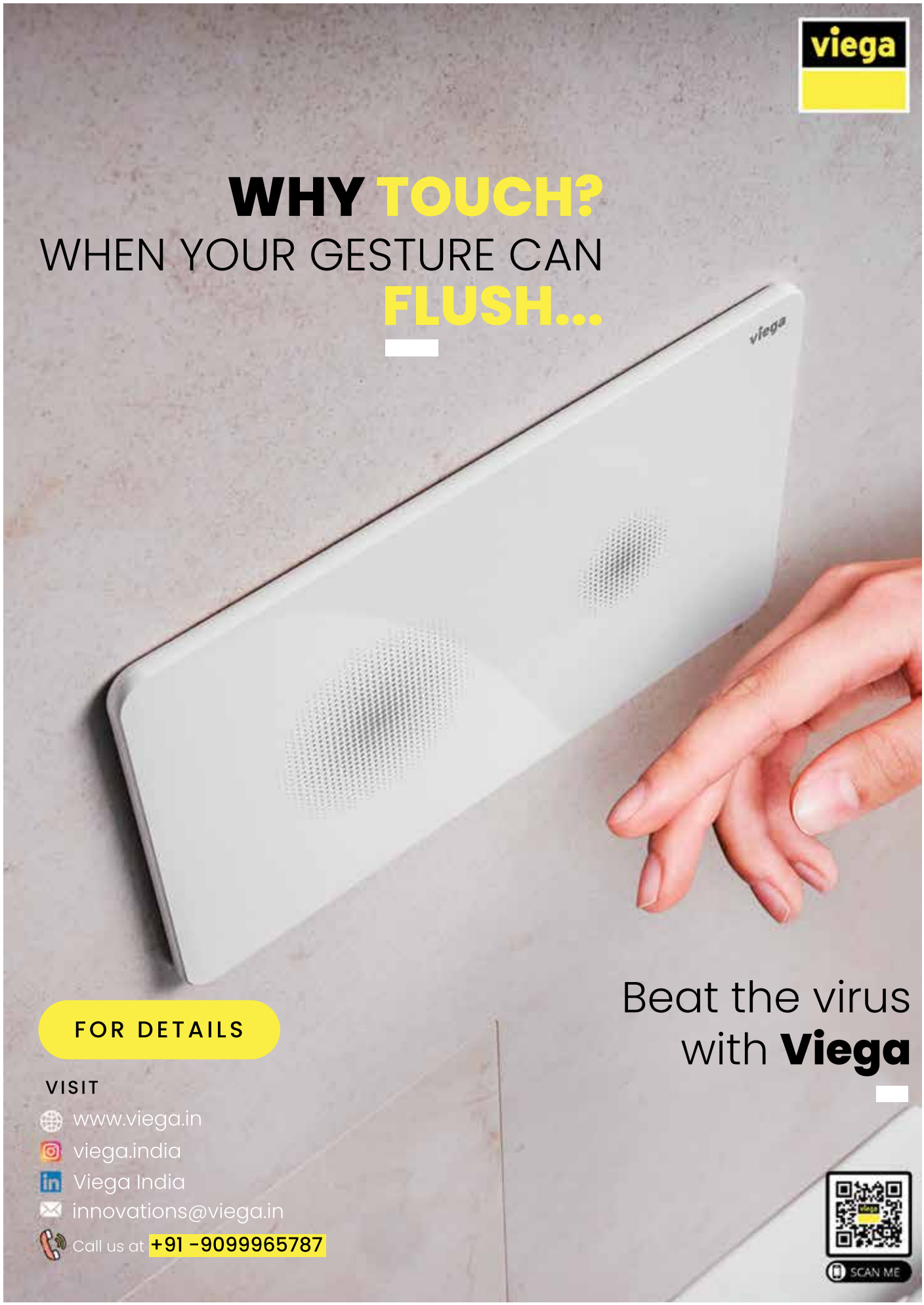
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