Designing culturally responsive built environments in post disaster contexts: Tsunami affected fishing settlements in Tamilnadu, India

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A R T I C L E   I N F O

A B S T R A C T

The focus of creating built environments without recognizing what is appropriate to a particular settlement is a common and frequent failure in many post disaster development projects. This paper has been developed to address the issues related to culture-space dynamics in post tsunami recovery process. Basing on the primary evidences from two fishing villages in Tamilnadu, Southern India, this paper develops key directions for designing culturally responsive and resilient settlements in post disaster contexts in specific to Tamil fishing settlements. This study concludes by highlighting the importance of 'connectivity' as a construct of cultural continuity that links approaches for designing built environments with a socio-spatial understanding of traditional settlements in post disaster reconstruction process. Such suggestions can eventually inform the theory and practice about the methodological ways to develop further guidance for designers in the long run.

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1. Background

Over a decade, built environment professionals working on disaster and development issues have noted concerns on the cultural issues in post disaster recovery processes [2,3,6,11,12,20,24]. In humanitarian shelter practice, development organizations have developed different participatory approaches involving communities in order to address cultural concerns in the post disaster development processes [1,2,10]. Barenstein and Iyengar [3] has reviewed the paradigm shift from 'vulnerable' self-built housing to 'safe' contractor-driven housing practices by assessing the development impacts from the cases of Marathwada rehabilitation in 1993, Gujarat rebuilding experiences in 2001 and the 2004 Tsunami reconstruction in Tamilnadu. Following upon a comparative review, they have advocated that tsunami recovery process in Tamilnadu has not adequately considered the value and

importance of owner driven process which had shown many positive and sustainable outcomes from the Gujarat experiences. On this regard it is worthwhile to question the relevance of owner driven approach with the fishing communities in Tamilnadu context. Firstly, it is not obvious from the point of development agencies in Tamilnadu that they have not thought about the relevance of the owner driven approaches in the recovery process. For instance, South Indian Federation of Fishermen Societies (hereby mentioned as SIFFS) have conducted extensive habitat mapping exercises with local communities in the villages of *Tharangambadi[1] and Chinnangudi* in Tamilnadu [16]. The outcomes of such habitat mapping exercises have also indicated SIFFS, that fishing communities have not shown much interest to participate in construction activities as they have felt that their skills are more relevant to fishing activities than building activities. In the case of Gujarat, many of rural communities from Kachch region

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[1] Tharangambadi, formerly known as 'Tranquebar' and Chinnangudi are the fishing villages in Nagapattinam District, Tamilnadu, Southern India. They were largely affected by the 2004 tsunami.

are craftsmen and laborers. Hence, it was easily acceptable for them to get involved in construction training programs and the reconstruction process which in turn has shown a scope for enabling their livelihoods. In Tamilnadu case, most of the people are fishermen and fishing economy is considered as primary base and therefore, people might not have had shown particular interest in construction activities. That is the reason many of the rebuilding programs in Tamilnadu have been constructed by external contractors. Nevertheless, it is significant to note that in some recovery practices such as Tharangambadi, communities were engaged in choosing the design alternatives and decision process (in terms of allocation) and also actively participated in the supervision of rebuilding process.

Unlike the pre disaster situation from the Gujarat rural cases, various social housing programs have already been implemented by the government initiatives in some fishing villages of Tamilnadu, prior to the 2004 tsunami. Such pre disaster housing initiatives in Tamilnadu may also bear influence in the transformation of fishing settlements. The image of many such fishing settlements is not to be seen just as a vernacular setting where people have built their own houses with local resources and skills, but it has to be imagined with the recently brought (pre disaster) contractor driven practices of building houses reflecting the aspirations of urban forms and character. For instance, in Tharangambadi village, *Meenavar* (fishermen) colony has been developed by uniform and standard housing models prior to the tsunami disaster and villagers to some extent were familiar with the impacts of such contractor driven uniform and standardized housing practices. Despite of having familiarity and living experiences with the previously contractor driven housing practices, communities still have chosen to the similar approaches. This indicates that there is not only communication gap between the development professionals and beneficiaries, but also knowledge gap on understanding the contexts of vulnerability, culture, and development of fishing communities.

2. Architecture and culture in post disaster contexts

The discussion on vulnerability and development recognizes that whether in pre-disaster or post disaster contexts, it follows that vulnerability gets transformed (either reduced or increased) with the nature of development performance and design inputs. Once a place has been chosen or provided for the beneficiaries, the production of an individual space begins [19]. Family, kinship and gender is a basic dimension in which an individual starts his journey to become a social individual in a geographic space. In the built environment context, Dovey [9] notes that habitus as the aspect of human behavior that causes culture to happen and he considers [9, p. 285] that it is embodied in people as well as their physical environments and subjected to constant change, but such revisions are always based on social practices in time. Neil Leach [17, p. 298] tries to point out Dovey's [9] understanding on changing habitus and states that it did not address any commonly accepted framework for exploring how people make sense of space and relate to it. Therefore, in order to

establish a schematic framework, Leach [17] develops a tentative theory of identification with space by bringing three discreet theoretical models. They include 'narrativism', through which spaces are demarked by narratives; 'performatives' refers to the spatial practices, through which spaces are demarcated by certain groups by a kind of social appropriation; and 'mirroring' where sense of identification with place can be developed and reinforced through repetitive performatives in other words habitual practices. From such theoretical aspects it can be understood that architecture offers a potential mechanism for inscribing the self into the environment and how the narrative and performative discourses tend to give meanings to the spaces in the everyday life. These take place in specific spatial and architectural layouts. However, such meanings are also subjected to change with the day-to-day needs and modernistic visions and demands of the people in the disaster and development processes. Such transformation is reflected in the evolution of traditional dwellings and settlements in the disaster and development context. The key role which choice (either tradition or modern) plays has complex and contradicting implications for the identity and construction process [7]. In a post disaster context, this transformation does not only depend upon development initiatives but to a large degree on the cultural setting of the affected settlements, which in turn has an influence on the development initiatives [11,23,24].

2.1. Personalization is a natural response to cultural deficiencies in built environment:

Pasupuleti's [24] study is an effort to bring a new insight by arguing that cultural dimensions of the affected communities are not effectively and sufficiently addressed in the current post disaster humanitarian and development processes. The analysis of his extensive primary research that was conducted in the 2004 tsunami affected fishing villages in Tamilnadu India, has unfolded the specific vulnerable impacts on the traditional built environments and the reasons for such impacts and responses in the post tsunami reconstruction process. Following such various impacts on the cultural environments of the affected communities there has been a shift in the villagers habitual practices, which are performed in specific places and the tsunami reconstruction process has shifted the location, practice, as certain activities are no longer possible in the relocation context and hence has had an impact on those rituals and daily practices. As a result, people started extending their homes, and making encroachments in the public spaces and in some instances communities have initiated double house concept of living in new houses and simultaneously using old locations for surviving their livelihood activities [23,24]. It is not for the first time that such extensions and encroachments in the built environment have eventually taken place. Such instances are evident in different post disaster response situations. It has been noticed from many scholarly works, that reconstruction in Tamilnadu has led to demolition or deterioration of massive undamaged houses [3,24] and the similar situations has been identified from Jigyasu's [11] study from Marathwada region. Jigyasu [11] and Ripin