Political-Geographic Scales of Environmental Injustice: Understanding the Flood-Affected Neighbourhoods on the Banks of the Kelani River in Colombo

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Abstract

Environmental injustice has become a detrimental reality in urbanizingdeveloping world. Branding of communities as 'encroachers' due to the absence of property rights has caused insecure rights to clean air, safe drinking water and live in a safe environment. This shows that the term 'property rights' is mis-defined as 'right to life'. The observable small geographic extent of the problem tendsthe decision makers to recognize that as a minor issue at neighborhood pockets but the author's reading argues such places as icebergs whichcover the unseen broader geographic context. This study emphasizes how the negligence of the broader geographic context made many decision makers fail to address the burning issues exists at these vulnerable urban pockets.

The research hasbeen built on the empirical evidences of two community groups which reside in frequentflood prone area as well as adjacent to a solid waste disposal site in the banks of Keleni River. This narrates the people's attempts to obtain their right to life through continuous attempts to cope, survive and adapt to environmental injustice. The revealed complexities of political-geographic boundaries urge to rethink the urban planners' perception of the scale and in that light to offer the duly importance to the issues of environmental injustice of the poor urban settlers.

Keywords: Environmental injustice, community response, geographic scales

1. Background of the study

In November 2013 I attended a presentationthat was made to a plenary of urban planners in Sri Lanka about the environmental injustice confronted by the flood-affected communities who reside on the Kelaniriver banks of Colombo. The first part of the presentation explained the ecological crisis raised by floods and solid waste dumping in flood prone areas, while the second part discussed the community responses to adapt to this ecological crisis and socio-political processes influencing their responses. At the end of the presentation, there were three questions pointed by the plenary of urban planners. First, do these people have legitimate ownership to property? The question directed to a conclusion which implies that absence of property rights can challenge their human rights as to live in a non-harmful environment. Second question was, whether they live in a planned settlement which is a decision of urban planners or in an encroached land which is a choice of the settlers. The question implied an answer as if it is an encroachment then that is a mere individual's decision and planners do not have a responsibility. The third question was 'That is a way of environmental activists to enlarge negligible issues as of a national importance. Being a planner, do you think these minor issues are of importance at any level of planning (i.e. national, regional and local levels)?'

This paper is driven by the last two questions which largely ignore the broader socio-economic context which forces flux of the individuals to take undesirable decisions about their place to live; and the influence of political-geographic boundaries to neighbourhood level issues which question the urban planner's nomenclatures of mere geographic scale. 'To fully examine equity issues [environmental injustice] we need a more systematic analysis of what constitutes an equity

problem (what parameter do we measure), what is the appropriate scale for examining equity (which spatial unit of measurement), and what time-frame should be considered in looking at the causes of equity or its' spatial consequences (Susan L. Cutter, 'JDanika Holm: and Lloyd Clark', 1996)'. In such a milieu, this paper attempts to explain how political geographic scales expand over the physical limits of neighbourhoods, referring the environmental injustice the realities of two selected neighbourhoods along the Kelani River, Colombo.

1.1. Environmental injustice as an emerging concept in the field of urban planning

A healthy living environment is a basic right of all the Earth's inhabitants, a right reaffirmed by the Rio declaration (UN, 1992). When applying this concept by the United Nation in global context it defines the right of enjoying a healthy environment for every individual and local community. Thus environment justice became one of the guidelines to public decision making (Susan L. Cutter, 1995, p 1)

Political ecology is the study ofconflicting social groups with different political powers projected on to a specific environment. Itincludes geographical scales that are simultaneously local, regional and global, a social scalethat ranges from individuals to larger social groups, and to the interrelationships between developingand developed countries(Hosuk Lee, 2009, p.33).

Thus, in what is certainly the mostwidely cited statement of the principles ofearly political ecology, Blaikie and Brookfield(1987) defined the field like this: 'The phrase"political ecology" combines the concernsof ecology and a broadly defined politicaleconomy. Together thisencompasses theconstantly shifting dialectic between societyand the land-based resources and also withinclasses and groups within society itself' (Blaikie and Brookfield, p.17).

'The field of environmental justice can provide a practical base for political ecology' (Hosuk Lee, 2009).Political ecology, an approach to, but far from a coherenttheory of, the complex metabolism between nature and the society (Johnston, Gregory *et al.* 2000). Political ecology becomes a study of different social groups with different political powers in a specific environment. These specific environments can be different geographical scales as local, regional and national levels. This social scale can be ranged from individual to large social groups. Moreover political ecology is also the study of marginalized people, environments, and regions (Hosuk Lee, 2009, p 35). In such context, political ecology has a direct relationship with environmental justice. Therefore, it has the ability to address the problems of environmental degradation and social marginalization for some certain levels with the bonding of environment justice. 'In addition, urban political ecology focuses more on justice issues. A just urban socio environmental perspective, therefore, always needs to consider the question of who gains and who pays and to ask serious questions about the multiple power relations through which deeplyunjust socio environmental conditions are produced and maintained (Swyngedouw and Heynen 2003).

Thus, when considering the said environmental justice and political ecological perspective with respect to the urban planning, it becomes a strong concern in successful planning.

1.2. political geographic scales and environmental activism

This research concerns the broader socio-economic context which forces a flux of the individuals to take undesirable decisions about their place to liveand the influence of political-geographic boundaries to neighbourhood level issues on environmental injustice face by low income minority communities. Scrutinizing such a situation calls for the need of comprehending the overlapping geographic scales.

The convenience of geographical scale within environmental justice movements has been addressed in a number of situations. 'The continuous reorganization of spatial scales is an integral part of social strategies to combat and defend control over limited resources anda struggle for

empowerment' (Swyngedouw and Heynen 2003).'Struggles over scale are not simply over who controls a given territorial unit, but about the scale at which that unit is defined (Herod 1991, 1997).'

Social movements scholarship highlights the ways in which scale inflects the environmental justice activism, and recent works in geography on the scaled politics of environmental justice activism lays important groundwork for closer examination of the practices that comprise a politics of scale....(Buell, 2001; Capek, 1993; Szasz, 1994; Sandweiss, 1998). Towers (2000), for instance, argues that the environmental justice movement is defined by scale, or more specifically by a tension between local scales at which grass-root protest over unwanted pollution takes place, and the broader geographic scale at which the discourse of environment justice is directed. (Holifield R, Porter M, Walker G: p,7)

It is by now widely recognized that 'geographic scale' is socially (i.e. politically,economically, and culturally) constructed. As Delaney and Leitner (1997) write: 'The common ground of this body of research is that geographic scale is conceptualized as socially constructed rather than ontologically pre-given, and that the geographic scales constructed are themselves implicated in the constitution of social, economic and political processes'(also see Marston 2000; Smith 1990).Scale has become increasingly important in studies of environmental justice, although the emphasis has most often been on the manipulation of scale as a political strategy for grassroot activists (Cutter, Clark, and Holm 1996; Kurtz 2003; Towers 2000).

Accordingly, it urges the need of rethinking the socially constructed geographic scales whenresponding environment activism. The following case study is an attempt to explain the political geographic scales of a neighbourhood community resides in flood prone areas of the Kelaniriver, Sri Lanka.

2. Environmental injustice issue of Kelani river bank settlements

Thedownstream of KelaniRiver which flows at the northern border of Colombo cityisdensely populated but severely affected by pollution, salt water ingress and flooding (Figure 3.1.).
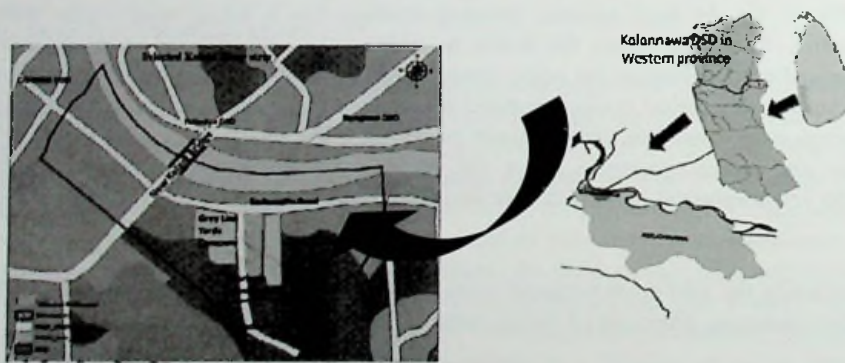

Figure3.1: Selected river strip to carry out survey

In this paper, the magnitude of the environment injustice that experienced by the settlers of Kelani River banks wasaddressed referring to the water pollution levels, frequency of flooding, air quality, noise level and access to sanitation. Accordingly, Sedawaththa was selected as the case study. This is an empirical study which gathered facts through an intensive field survey that includes direct observations, in-depth interviews, Key Informant Interviews and focused group discussions.

This stretch of the Kelani River is highly polluted and water users for daily needs are suffered the most. Many of the pollution sources such as saw mills, container yards, laundries are also located within the neighbourhood. There is a huge garbage dumping site next to the settlements and the polluted canal of Kiththampahuwa too flows through this site. The existing marsh is reclaimed by people to put up houses and aggravate the floods(Figure 3.2,3 and 4).

Figure 3.2: oiled mix black coloured water in Kelani River	*Figure 3.3: Laundromat. in river reservation*	*Figure 3.4: garbage dumping site in the marshy land and KiththampahuwaEla in the site*

Sedawaththa is a high density residential area where more than 700 families suffer from environmental issues. Many of them are known to be as under-privileged, less socially empowered community groups who settled in over congested poor quality housing. More than 80% of the dwellers are labourers who work for daily wages.

3. Community responses to Environmental injustice

3.1Environmental Injustice in Sedawaththa; community perceptions

Settlers in Sedawaththaexperiencereverine floodsthat occur twice a year and frequent flash floods that occur during monsoon rain. Height of the flood that occurfrequentlyisabout 1 – 2 feet but for a continuous rain his increase up to 3- 4 feetcompletely inundating the single storied houses.Flash floods at least exist for three hours whereasannual floods remain for about one week. Thehighest recorded flood which has occurred in 1989 is 12 feet in height and existed for two weeks. 4 feet flood is capable enough to fully destroy a single storied house constructed with temporary and discarded materials. That situation compelled people to be evacuated and they put up temporary shelters in non-flooded areas. Out-door labourers and their dependents are highly susceptible to flood because many of their daily income is low during rainy seasons as they find difficulties to do outdoor labour works in rain. Flooding in rainy seasons incurs additional costs to them in a situation where they find it is extremely unaffordable.

There are recorded post-flood health threats including mosquito borne diseases as Dengue fewer, Malaria and waterborne diseases. 'After walking in the flood, rashes appear in legs...this flooded water is really harmful' (GramaNiladhari, personal communication,2012). Overflowing sceptic tanks, mosquito breedinggrounds in marsh and garbage dumped open areas increase the threat of post-flood health hazards. The oil spilled surface water in KiththampahuwaEla which is blocked by garbage is also harmful to the community.

'this flood affects very badly for the properties too...'The oil which mixes with flooded water always remains in the walls as black and brown coloured patches...' (Government retired person, personal communication, 2012)

This community livesnearby an open-dumping yard of municipal solid waste over a long period of time. Nearly 20 -30 tons of garbage is dumped to the yard each day. Garbage dumping site makes the flood more unhygienic.There are plastic cups, bags, tyres, coconut shells which act as the breeding grounds for mosquitoes.Garbage dumping has caused to increase the number of stray dogs, flies and crows within the neighbourhood.

'There are some days that we can't go outside from the house because of the bad odour... We can't do anything. We stay inside the house by closing all the doors and windows...It is hard to control the mosquitoes even by using mosquito coils, nets and sprays. (Sumanawathi, personal communication,2012)

The frequent floods that spreads polluted water and the dumping site together has created an environmental crisis that threaten the lives of settlers. Amongst, how do they respond to the threats? Do they passive recipients?

3.2.*Environmental Injustice in Sedawaththa; Community Responses*

Local community make a range of range of efforts to cope up with the situation. Their responses can be seen at individual, family and community levels.

For the majority of people whose houses are single storied there is no other option than evacuating the house in a flood. '.....If we feel it is going to flood then we lift our furniture and leave from the house.....' (Kumara, Personal communication, 2012).

Community has a strong support from army soldiers to be securely rescued but sometimes it limits the options as where could they put up temporary safe shelters. Many of the government officials' responses are piece-meal solutions that allocated subsidized food and dry rations. GramaNiladhariis the mediator in the distribution of foodand dry rations yet there are some people who question the accountability.

'In flooded times politicians say that they sent aids but we never get them because they provide aids to the affected people by their representatives........ Only the people known by them will be received aids well. Others receive nothing.' In response, the GN officer mentioned that many of them are not registered citizens of the Sedawaththa GN who are not eligible for subsidies.

In some occasions, the dwellers make small interventions that reduce the lost. Dwellers are used to have mosquito nets and coils to minimize mosquito borne diseases. They apply kerosene oil on the floor (especially at the kitchen) to minimize flies and also cover food without letting to exposure to flies. These small scale interventions are exists among most of the housewives and they said that when somebody takes the first step to minimize the adverse situations, the rest join with that practice.

'There are plenty of times that we have gathered and cleaned the Ele (canal) by collecting 200 rupees from each family.' (Sriyani, personal communication, 2012).

'There are Buddhists, Catholics, and Hindus who live this neighbourhood...They have a unity. But the outer powerful influences, tries to demolish this situation. Those people get together in any case like flood. They help each other. I provide them a place to stay here when they become helpless' (Monk of the temple, personal communication, 2012). People have related to temple and it is always ready to welcome those who need helps with hospitality.

A multinational company which has a container yard in this neighbourhood has been mentioned in community discussions as the main polluter that discharge oil and other effluents that mix into flood.

In response to that point, a speaker of the company mentioned that 'We do not do anything to increase flood. That comes from the river and according to the way of building up those settlements. If something happens to them it is only due to the mixing of oil to the water. Our hands are clear and we have not done anything to trigger floods. We also clean this channel when they inform us about it by spending our own money.'(An executive officer of the Company, personal communication, 2012)

The garbage dumping site collects waste from Mahara and Peliyagoda local authorities and the site is operated by a private company.

In response the questions, a speaker of the company mentioned that 'We, as the owners of this property... have initiated this as a composting site of municipal solid waste. We offered some job opportunities to local people in segregating and drying waste. But later because of the inability of earning profits from making compost, we compelled to stop. The project caused a lost of 4 rupees for each 1kg of compost. Therefore, now we practice open burning of waste. We have a plan to improve this in a more efficient way in future.' (An officer of the Company, personal communication, 2012)

They further mentioned that they address all the problems which may arise through the site. Whenever the community complains about the problems of the site, then they take necessary actions to cover the garbage from soil and if the canal is blocked with the garbage then they clean it.
Do they really act on complaints of people or do not community make complaints?

They themselves tempt to complain who should take the responsibility of the damages like oil leaking, garbage disposal etc... But most of them wait for others to initiate the action though they willing to take-part.

'...How can we tell them? We don't have any connection with them. If somebody leads this then we also join them. We can't directly connect to the situation well. It is useless.' (Mr.Ranjith, personal communication,2012)

This is because of their less power to fight with other external influences. Therefore, most of the times the informal leaders of the community groups lead this but some dwellers say it is also useless.

'...Do you think it is only one time? We have informed this to them several times. (Complaints to responsible authorities)They don't do their job properly.' (Mr.Ranjith, personal communication, 2012)

The strong social cohesion within the neighbourhood has made them stronger in their response. When the situation is getting worse,community talk to the responsible government authorities.There are no formal organizations and when some actor/s of the community take the first step then others gather around him/them.

When we go to talk to the responsible people in the company regarding this; they promise to take action. Later they offer bribes to some of the people and disapper problems (Kumara, personal communication, 2012)There are some people who work in the container yard. Some of them have used to use this garbage site to find their main income of living.

'Most of those people are controlled by powerful hands of political animators. Therefore they think those people who have the power are the only one who can manage everything. Therefore, dwellers tempt to inform the situation to politicians rather than to the responsible government authorities. When we try to mediate and solve the problems with police or other responsible

authorities then the situation becomes worse. Therefore, we also sometimes face difficulties in solving the problems....' (GramaNiladhari, personal communication, 2012)

There are many complexities in this response in the presence of powerful political and corporate actors.

'Of course there are some people who only depend on this garbage site by *selling pieces of iron, metal*etc....(Income) But most of them are people who cannot earn enough to eat. And also the people who got addicted to drugs also try to find money selling whatever they find from this...Some of such people consider this waste hill as the top most asset they possess' (Ranasinghe, personal communication,2012)

The community is not passive recipients to the environmental injustice rather they do respond. However, their responses are tiered with number of actors; complex bonds in a wide social network.

5. Scales and counter-scale framing of the environmental injustice

According to the responses to the observations, it is clearly apparent that the people continuously attempt to create a healthy and safe environment in different manners. These responses are varying according to different levels of the organizing capabilities of the community as neighborhood level, local level, regional level and national level. Yet it is pointless to identify these responses without recognizing their connections over complex social networks and broader geographic boundaries.
These problems are linked with many factors beyond the neighborhood limits. Floods have been aggravated due to the changes in upper catchment and the pollution of KiththampahuwaEla is also out of the activities taken place in the neighborhood.

As some of these problems are bonded with the multinational level stakeholders they have high financial and political power which local stakeholders face difficult to challenge. Therefore, even the actors who can take the actions at local level become helpless in front of these high-handed authorities. Therefore, although the problem exists at a neighbourhood, its' roots go beyond. This situation has refrained many people from taking actions even though they want to act.As many responses are beyond the limits that the local stakeholders can play, the crisis remains unsolved and urgesfor a strategically planned spatial response.

6. Conclusion

The main objective of the research was to identify how political geographic scales expand over the physical limits of neighborhoods, referring the environmental injustice realities of two selected neighborhoods along the Kelani River, Colombo.

The research has been built on the empirical evidences of two community groups who reside inside an annual flood prone area and adjacent to a solid waste disposal site respectively. After a pilot survey, it was decided to collect the empirical evidences through observations, interviews and questionnaire surveys. But in the real situation it was much harder to achieve the target by questionnaires with the selected community. There it was accomplished by focus group discussions. And also depth information was able to be collected from key informant interviews, in-depth interviews and direct observations from community as well as from other key stakeholders.

The findings of the study revealed that with this existing environment they are struggling to carry out their daily rooting somehow. But many of them are not capable to avoid the occurrence of

floods and pollution although they make strong attempts to save their lives, assets and livelihoods being affected. Many such responses are small interventions, which are not significantly apparent but continuous.

This community is relatively weak in power as they represent the lower level of political geographic scale. This also has become a root to minimize their actions regarding the unfair situations in their own environment. Moreover there is a powerful political power which is strongly connected with the garbage dumping site. More than half of the community is adapted tothat and therefore community leaders lead the neighborhood according to their manner. However there are many powerful actors involved with them who suppress the community actions as external and internal powers from higher scale.

Nevertheless the responses of stakeholders are hard to identify through a clear cut boundary of a political geographical scale. Each of those responses is combined in different ways together in certain geographical scales as there is a relationship between lower levels of the community into higher community levels or due to lower political geographical scale in to higher political geographical scale. Thus the roots for the recipients' problems are sometimes going beyond the neighborhood level. Although the problems arise in the neighborhood it combines with local, regional and national levels. As a result of this the solutions may also goes beyond the lower level to the national levels.

These research findings partially answer the failure of the resettlement schemes made by planners for vulnerable urban groups as they all know that they are vulnerable still settled by choice and attempt to cope-up. And also being a planner these issues must be considered well without considering only on the specific frame level of planning. Which menace in a decision making process, the answers always laybeyond the limits we exactly identify. Most of the time it runs across the other levels of planning too. Therefore we need to focus on minor issues too at any level of planning.

This report has mainly focused on few aspects as the community response of the field of environment justice and their situation, political geographic scales frameworks of environmental justice and activismetc... Furthermore through this research it could be found out the way of solving urban environmental injustice problems of land use planning system with respect to political geographic scales. Therefore I would like to recommend examining the current planning guidance taking into consideration the geographical scales of physical planning. It also can recommend investigating of the best practices of community to achieve environmental justice. And also for the further examination from this research it has the ability ofexamination of social, political and geographical structures that may breedinjustice and associated problems in sustainable planning system.

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