HIGH-SPEED RAIL IMPACTS ON SHANGHAI S URBAN FRINGE COMMUNITIES: AN INTEGRATED APPRAISAL FROM SOCIAL SUSTAINABILITY AND ENVIRONMENTAL JUSTICE PERSPECTIVES

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1 Introduction

High-speed rail (HSR), the advanced rail system normally operates at a speed of new tracks or 200km/hour on conventional tracks, is advocated as an effective tr with dwindling energy supplies, severe air pollution, and increasing traffic con of this transit system includes: increasing traffic efficiency; improving spatia logistics connections; promoting regional equity and economic coordination; and alternative to air transportation in regions where geography allows competitive railway (GutiØrrez, J. 2001 Givoni, 2006; Albalate and Bel, 2012). For China, H essential considering the country s massive population that needs efficient trav regions demanding for equal connection, and the state goal of city-region integr by rail upgrade (Takagi, 2011).

On July 1st, 2004, China s Ministry of Railway developed a Middle- and Long-term Plan and announced investment targets through 2020 (Fridley, Zheng, and Aden, 20 components include:

- Total operational railway track of 120,000 km with a 50% share of rail elect double-tracking;
- 12,000 km of dedicated high-speed passenger railway tracks with speeds of 20 above;
- Four north-south and four east-west high-speed passenger rail networks to li hubs; and
- Three regional intercity rail networks.

China s interest in HSR construction is rooted in the desire to improve the connection and economic productivity. Although there are sound economic incent development, given its very recent implementation and controversial impacts, fur the quality and problems with HSR development should be undertaken. Different fr lens of spatial-economic impacts and accessibility analysis (Kim, 2000; Chen Chen, 2012; Chen, 2013; Jiao et al., 2014; Shaw et al., 2014), this study sheds perspectives of HSR impacts at a local community territorial scale by inves excluded, marginalized, and disadvantaged groups of population (i.e. farmers, el who live with HSR s daily operation in Shanghai s urban fringe. The research un everyday life has been affected by the HSR projects, utilizing an integrated co linking social sustainability and environmental justice. Guided by this integra research will answer three major research questions: (1) What are the major communities in Shanghai s urban fringe? (2) Who are the main recipients of th and how has their every day life been affected? (3) What political institution procedure have led to the current situation?

The rest of the paper is organized as follows: first, a literature review of ar framework will be provided to lay the theoretical foundation for analysing HSR

and social impacts on surrounding neighbourhoods. The next section will introduc
area and present our research methodology. Then the research findings and ar
presented in three sub-themes: (1) the unfair distribution of environmental bur
inequity in compensation arrangements; (2) procedural concerns for environmenta
social inequity in relation to public consultation inadequacy and social exclusi
institution manifested by local pro-growth governance. Finally, a conclusion
research findings and offer policy implications.

2 An Integrated Conceptual Framework

Since the Brundtland Report of Our Common Future (WCED, 1987), there has been a
literature devoted to the general topic of sustainability. The 1992 Rio Decla
suggests that sustainable development keep the balance and achieve certain trad
pillars of sustainability, namely ecological, economic, and social sustainab
considerable academic and political attention has been paid to the discussio
development, social dimension of sustainability is the least conceptually exp
practically under-implemented among the three pillars (Littig and Grie ler, 200
Dillard, 2009; Cuthill, 2010). In addition, comparatively insufficient studies
theoretical connections and interplay among the three pillars of sustainable dev
Grie ler, 2005; Bostr m, 2012).

Just sustainability proposed by Agyeman and his colleagues (Agyeman, Bullard,
2002 and 2003; Agyeman and Evans, T., 2003; Agyeman and Evans, B., 2004) con
further exploring the social dimension of sustainability and advocates an int
framework that link environmental analysis with anthropocentric concepts. They
recent years, environmental justice campaigns globally are being reformulate
sustainability, and vice versa (Agyeman and Evans, B., 2004, pp.160). Para
egalitarian conception of sustainability (1999), their definition of just sustai
common ground between human rights and environmental issues and highlights fo
concerns on: quality of life, present and future generations, justice and
allocation, and living within ecological limits (Agyeman, Bullard, and Evans, B.

Based on the just sustainability discourse, we aim to structure an integrated co
connecting social sustainability and environmental justice in assessing HSR in
communities. There exists an area of theoretical and practical compatibility bet
an integrated conceptual framework can provide a more inclusive approach to as
changing built-environment affects people s daily life.

2.1 Conceptual Origins and Definitions

Social sustainability is an open and contested concept (Bostr m, 2012) that a
develop schemes to define it. Based on an experimental research in Australia
identified an interdependent and self-reinforcing relationship between four k
social sustainability: (1) social capital that provides a theoretical start
infrastructure that provides an operational perspective; (3) social justice and
ethical imperative; and (4) engaged governance that provides a methodology
together . Littig and Grie ler (2005) extended the fairly vague notion of needs
report to a linkage of political pragmatism and social theory. According to the
sustainability is about a quality of societies , and it signifies the nature
mediated by work, as well as by relationships within the society (p.72).

Similar to social sustainability, environmental justice has multiple definitions
Environmental Protection Agency (2008), Environmental justice is the fair
meaningful involvement of all people regardless of race, colour, national orig

respect to the development, implementation, and enforcement of environmental la
and policies . Bryant (1995, p.6) referred to environmental justice as the cul
rules, regulations, behaviours, policies and decisions to support sustainable
people can interact with confidence that their environment is safe, nurturing
Looking beyond time and space, Stephens et al. (2001) maintained that to guarant
justice is to ensure a healthy environment for future generations and to ensure
one region will not cause negative externalities for other people s health. Fo
the responsibility of carrying on this value requires us to transcend individu
vision (Beckerman and Pasek, 2001; Beckman and Page, 2008).

2.2 Conceptual Common Ground

Among the definitions provided by governmental officials, grassroots associatio
scholarships, we can find common ground between social sustainability and enviro
The overlaps indicate an opportunity for incorporating the two concepts in acces
on local communities.

Anthropocentric Perspectives: both social sustainability and environmental jus
anthropocentric perspective. Until recently, eco-centric models have dominated
sustainable development and environmental issues. Heavily influenced by e
movements, these models highlight the negative impacts of human interventio
environment and emphasize the need for more efficient use of resources. The ad
centric models reflects people s anxieties about environmental collapse, limite
and threats to biodiversity. In contrast to an eco-centric model, an anthropoce
more on impacts of natural or built environments on human beings. Caring for h
relationships, life quality issues, as well as environmental impacts on huma
sustainability analysis often takes an anthropocentric perspective (Littig and G
Lloyd-Jones, and Allen, 2010). Different from ecological justice, environmental
mainly focus on the justice concerns of people, regardless of their social, e
background (Low and Gleeson, 1998; Agyeman and Evans, T., 2003; Schlosberg, 2007

Substantive and Procedural Characteristics: Both social sustainability and e
justice concepts include substantive (what) (i.e., equal right, justice, and
procedural (how) (i.e., meaningful involvement, social inclusion; citizen
characteristics. Bell (2004) held that environmental justice has both procedur
components. A substantive component of environmental justice underscores a fair
sharing of environmental burdens (e.g. harm and risk) and benefits (e.g. resourc
To achieve that, three questions need to be answered: (1) Who are the recipients
distributed? and (3) What is the principle of distribution? Procedural perspecti
justice includes the pursuit of justice for all people regardless of their back
meaningful involvement of these people in decision-making process (U.S. En
Protection Agency, 1998; Bell, 2004; Schlosberg, 2004). As a concept with pri
social equity, as well as equal access to resources, participation and soc
sustainability has both substantive and procedural characteristics. (Manzi, Lloy
2010). A critical aspect of social sustainability is social justice and equity
This substantive perspective provides an ethical foundation when formulating so
policy or strategy, and when implementing operational initiatives (Cuthill, 201
substantive characteristic of social sustainability cannot be guaranteed without
enforcement. Additionally, Bostr m (2012) pointed out how procedural aspect
sustainability affect its substantive aspects ought to be pondered through a lon
which is also true for environmental justice.

Two Inter-related Political Dimensions: The major actors involved in the two co
both perceived in two inter-related political dimensions (Littig and Grie ler,
Jones, and Allen, 2010; Bostr m, 2012). On the activist level, individuals a

capitalize on social sustainability and environmental justice to pursue politic
mobilization, and rightful resistance. On the government level, these concepts a
policy guidelines to ensure that no public action would disproportionately
specific social group (Agyeman and Evans, B., 2004). Social sustainability is
tackle the relationships between individual actions and the created environment
between individual life-chances and institutional structures (Jarvis et a
Environmental justice exists along with intense interaction between political au
root forces.

2.3 Conceptual Significances for the Chinese Context

In recent years, the Chinese leadership has made sustainable development an impo
recent Five Year Plans. The central governments strong promotion of sustainab
policies and environmental protection is buttressed by a renewed public
consciousness, a newly formed domestic environmental civil society, and ar
international aid (Lam, 2006, pp. 362). Witnessing frequent natural disasters a
outcomes, Chinese are increasingly concerned about the environmental conditions
places. However, concepts such as environmental justice and social sustainabili
ordinary Chinese people, and grass-roots social mobilization has not included
their campaigns.

In China s planning system, economic growth enjoys priority. The concerns for s
justice have not been explicitly raised and addressed in planning implementatio
makers believe that sustainability and justice could be achieved later (Wu,
pointed out that Chinese scholars have been conspicuously absent in addressing
of social and environmental justice. For example, the existing discussions o
impacts in China mainly focus on the spatial and economic aspects. Few of them
the scope to include work that critically analyses social and environmental in
surrounding neighbourhoods and further explores how the growth-centred in
construction has affected the socially excluded, marginalized, and disadvanta
integrated conceptual framework that connects social sustainability and enviro
imperative for assessing China s growth-oriented urban transition driven by
projects such as high-speed rails.

In Shanghai s particular social, economic, and political context, the empirica
examine the applicability and power of integrating social sustainability and en
in analysing HSR impacts on nearby neighbourhoods. In particular, it examines
socially excluded, marginalized, and disadvantaged who live with HSR s daily
Shanghai s urban fringe.

3 Case Study and Methodology

Informed by an integrated conceptual framework of social sustainability and envi
employ a case study in Shanghai s urban fringe. The reason we focus on urban
because this particular geographical setting is the most contentious location
where competition for land has been intensified and social conflicts have fre
2009; Hsing, 2010). In urban fringe, low land acquisition compensation rates ar
scale infrastructure development (Dai et. al., 2013). In the case of Shanghai,
HSR stations are located in central city and two of them are sited in the city
(Figure 1).

The case study fieldwork was conducted from June to August in 2012 in two v
Shanghai-Hangzhou HSR line. The data collection method included participant obse
surveys, and in-depth interviews. As residents perception of HSR might vary
socioeconomic circumstances, we chose two villages for comparison. With about 8

in an area of 2.88 square kilometres, Xuejia Village is located in Songjian
undergoes the fastest economic development among all the suburban districts i
2013). The majority of young people have left the village for better job opport
centres, and the remaining elders take care of their household plots. During th
industrial parks have been developed near the village, attracting an influx of
rent rooms from the villagers. The other case study site Weixing Village
approximately 600 households in an area of 3.27 square kilometres. Almost all
local residents with rural household registration status (hukou) (Jinshan Arc
village shares some similarities with Xuejia Village such as the out-migration c
However, the economic development of Weixing village is slower than that of X
Jinshan district, where Weixing Village belongs to, is one of the three district
subway connection. The Weixing villagers think their village might be the poores

The structured questionnaires were completed through face-to-face interviews. Th
were designed to identify what social groups form the recipients of the HSR s environ
social impacts. The surveyed households were asked to provide each family member
education attainment, household registration status (hukou), residency time,
monthly household income. This was followed by more detailed household intervie
village members perceptions of and reactions to the HSR operation from the pers
sustainability and environmental justice. In total, we collected 30 valid qu
which 10 local households were from Weixing Village, 10 local households from X
and 10 migrant households from Xuejia Village. The selected households are locat
areas closest to the rail tracks, with the assumption that the closer the resi
tracks, the more visible and remarkable the HSR s perceived impacts might be.

Figure 1. Research Sites in Shanghai s Southwest Urban Fringe (Source: Authors

4 Findings and Analyses

4.1 The unfair distribution of environmental burdens and the social inequ arrangements

We found the co-existence of the unfair distribution of environmental burdens a in compensation arrangements after the HSR construction. This is certainly not s rapid urbanization always prioritizes economic pursuit, compromising its social influences (Ma, 2007; Wu, 2015). The Shanghai–Hangzhou HSR service runs 177 tr (including 128 trains from Shanghai to Hangzhou and 49 trains from Hangzhou to the beginning of the HSR operation, residents in Xuejia and Weixing Villages h from various sources of disturbance including noise caused by passing trains, v electro-magnetic interference, flashing-headlight pollution, and increasing ai Among those negative externalities brought by the HSR, noise is the most sever dwellers. The sound waves produces a sound pressure level (SPL) that is gene decibel A-weighting (dBA). The rapid approaching of a high-speed train is accom increase in noise. Commonly, sounds of approaching vehicles carry a sense of co greater annoyance than receding sounds (US Federal Railroad Administration, 19 Japanese Ministry of Environment promulgated regulations to control HSR nois surrounding areas. Tested from the nearest residential areas, the maximum SPL o be no more than 70 dBA. In China, the relocation red line for HSR construction households whose residence units are within 30 meters from the rail centrel relocation to avoid severe noise disturbance. In our cases, the majority of hou lines still have to endure the noise because the distance of their housing unit over 30 meters. Table 1 is a sample of SPL results obtained in Xuejia Village meters from the rail centreline. When an HSR train is passing by without slowi over 80 dBA, which is not safe for human beings according to the Japanese standa

Table 1. Maximum HSR Sound Pressure Level at the Distance of 90 Meters

Test #	Time	Type of Operation	Decibel (A-weighted, dBA)
1	15:32	Passing by	83.1
2	15:35	Passing by	83.1
3	15:42	Passing by	83.7
4	15:49	Passing by	82.9
5	15:51	Slowing down for Station	65.8
6	15:55	Slowing down for Station	65.7
7	15:57	Slowing down for Station	68.0
8	15:59	Slowing down for Station	66.0

Source: Authors.

Two social groups shoulder the environmental burdens, especially the noise caus local elders and the young migrants. They both have limited social and economic difference between the two social groups is that the local elders have lived years while the average residency length for migrant household heads is about Without convenient transportation and adequate urban facilities, most local you and Xuejia Villages prefer to move to city centres. As the economic situation better than Weixing Village s (in terms of average monthly household income per the elder population situation is more remarkable in Xuejia Village. The other s from HSR disturbance is migrant workers and their families. Different from the l 70 per cent of the migrants are young or middle-aged adults. Many choose to live because rent is much cheaper than that in urban centres, landlords are friendly, industrial parks are close by.

Education levels of the surveyed adults over 18 years old are lower than those
Half of the local dwellers have only obtained primary education or even lo
interviewed migrants have obtained higher education such as a university degree
typically farmers and workers in nearby factories. Male migrants are usually
physically demanding or dangerous lines of work, most notably in construction. F
either in factory production lines or in service industry. The per capita month
urban residents in Shanghai is 3,349 yuan (around $536), and the per capita
income of rural residents in Shanghai is 1,450 yuan (around $232) in 2012 (S
Yearbook, 2013). The average of the surveyed households (rural in our cases)
abovementioned rate, which indicates that the recipients of environmental injus
sties comprise an economically marginalized social group.

Table 2. Demographics of Surveyed Households

Socioeconomic Attributes / Household Type	Age Distribution (%)				Education Attainment of Adults over 18 (%)			Residency Length Average for Household Head (Years)		Average per capita Monthly Household Disposable Income (Yuan)
	0–20	21–40	41–60	>60	Primary & Below	Middle & High	University			
Local Households (Weixing Village)	9.8	26.8	29.3	34.1	54.4	40.5	8.1	13	30.9	27
Local Households (Xuejia Village)	10.5	18.4	42.1	29.0	50.0	47.1	2.9	15	25.3	25
Migrant Households (Xuejia Village)	30.3	48.5	21.2	0	25.0	75.0	0	2	0	1170

Source: Authors.

Mohai, Pellow, and Roberts (2009) provided socio-political explanations for
environmental injustice in social or economically marginalized communities by ar
industry and government do not want to generate controversy or experience delay
plans, they try to avoid confronting communities with abundant resources. Poo
therefore, become a preferred target for environmental burdens. Lacking soci
political resources, village members are vulnerable to the current environmental

Besides the environmental burdens, affected residents also complained about th
compensation arrangements. China s Ministry of Railways sets 30 meters as t
compensation and relocation arrangements, which led to social inequity within t
For those who lived within the 30-meter areas, they were able to enjoy the benef
Xue used to believe that her family might never be able to move into an expan
central area of Songjiang district. Along with other relocated families, they
developed neighbourhood that is close to the Songjiang district centre. The
difference to the life of her family. Her daughter no longer needs to spend muc
between her company and home. She felt quite grateful to the HSR construction ar
life quality was truly improved.

However, the HSR compensation is unevenly distributed. Very few households were
Xue family. In the meantime, the compensation for agriculture land is much
residential properties. Some interviewees stated that the compensation for fam
was around $ 160 U.S. dollars per mu (1 mu is equivalent to 666.7 square meters
whose family agricultural plots were expropriated for HSR construction felt th
treated compared to their neighbours whose housing unites were expropriated. Mo
relocated and non-relocated, the current HSR seldom benefits the village m
preferential price policy. One of the major complaints from HSR users in China i
and beyond the affordability of a majority of passengers in the country (Chuang
The village members are reluctant to take the expansive train and actually ba
service.

The co-existence of social inequity and environmental injustice severely harms
within the communities. Village members can be divided into three camps: (1) th
compensated and relocated to nearby new towns or urban district centres; (2) those wh
the rail tracks and still suffer from the negative impacts of HSR without any
those who live farther away from the rail tracks and care much less about
illustrates how the change of built-environment, in the context of China s cu
urbanization, has resulted in unequal and unfair societal consequences.

4.2 Procedural concerns for environmental injustice and social inequity i consultation inadequacy and social exclusion

As discussed in the section 2.2, besides substantive meaning, both social
environmental justice concepts are closely related to procedural analyses. In ou
the environmental injustice has been reinforced by the social exclusion, signif
sustainability. Faber (1998, p. 14) emphasized, the struggle for environmental
distributing risks equally but about preventing them from being produced in
remarkable fact of limited procedural justice lies in the public consultation i
are involved in the decision making process, they are more likely to be support
and implementation (Potapchuk, 1996). Wu et al. (2010) revealed that Chines
reluctant to arrange negotiation that involves various stakeholders because t
negotiation slow down urban development. The state dominance in mega urban pro
public consultation is more at the stage of policy implementation rather than p
2015). Lack of community participation prevented the HSR project in those villag
being endorsed by the local residents. Ms Zhang mentioned that she had never he
project until one day when she saw large trucks carrying construction materials
while for Mr Xun to understand what was going on, No one ever asked our feeli
uncertain about the potential HSR impacts at its early construction stage. It w
the whole process of HSR construction, there was no meaningful and transpa
participation. Mr Zhu concluded three points regarding the decision making
construction was conducted without any hearing process in the communities; (2)
arrangements and negotiations were not open to the public; and (3) the final com
not released to the affected communities.

Manzi et al. (2010, pp. 10) maintained, The general idea of social exclusion i
social, political and economic processes erect barriers that prevent specifi
participating fully in the society in which they live. The effects of these ba
conjunction of material poverty and the processes that define particular group
barriers also prevent people from improving their circumstances through their ow
protests, as a response to social exclusion, are not tolerable in China. From t
numerous stories about how the local authorities set barriers that discouraged
from protecting their rights. To counteract villager resistance, local governmen
deployed public security, and required village committees to intimidate or plac
Mr He shared a story of his petition for relocation:

> Our family went to Yongfeng Sub-district Office many times to consult abo
> decision. Our house is very close to the rail line, just three meters over the
> time we went there, the officials asked us to write down our case and then pe
> home and wait for the result. For half a year, we frequently visited the Office
> at the fact that nothing would happen. One day, my son and I declined to leav
> our discontent. The officials contacted my factory to call me back. My son was
> the Office by the security guards. When he came back home, I saw wounds on his

For the grassroots, social exclusion is somehow doomed because civic social r
sufficiently strong to fail the launch of urban mega projects in the name of pu
the land-related rural protests are increasingly frequent and violent, peasant
largely fragmented and localized (Hsing, 2010). In our case study, village membe
cautious in expressing their discontent with the HSR project. They were afrai
proactive in resistance, they might be deprived of the potential compensation bene
they were afraid of being punished if they participated in resistance activitie
organized protest against the HSR s negative impacts was rarely over ten people
jurisdiction boundary. Scattered expressions of discontent persisted but lac
insufficient to draw media attention or impose any significant pressure on lo
situation was even worse with the absence of clearly articulated regulations and

The social exclusion was not only perceived by local residents, but also by
families who lived in the villages. Agnew (1987) pointed out three elements of p
and sense of place. A place has a physical location that includes the materi
relations, and a sense of place that represents people s emotional attachments.
research, we assumed that the migrant households did not have strong attachment
might not care much about the HSR impacts as the locals did. However, such
oversimplified. The migrant families we interviewed were worried that they woul
other places because of the HSR construction following their landlords volunt
arranged relocation). Originally from Anhui Province, Mr Li earned his life by c
recycling. His family had lived in Xuejia Village for many years. His two grand
the village. He felt gratitude to his landlords and regarded the village as his
interview, Mr Li expressed his emotional attachment to the village and concerns

> Being a scavenger is not easy. Fortunately, my family is not looked down here.
> annoying, but we migrants are more worried if local households will move away.
> need to leave this peaceful village. Renting a place in suburban regions is g
> difficult nowadays. Construction and relocation are everywhere.

Similar to He s situation, many migrant families had lived in the study areas fo
and considered the places as their second hometowns. However, rapid infrastru
urban fringe forced them to move more frequently in recent years. Constrained b
they were not entitled to any compensations or subsidies. Worrying about being a
short notice without government support, the migrant families we interviewed
sense of social exclusion. When asked to make choice between leaving the place
HSR s daily disturbance, most of them intended to stay.

4.3 Political institution manifested by local pro-growth governance

Local pro-growth governance has driven the discussed social unsustainability
injustice. The devolution of state power to lower-level governments and the in
from fiscal decentralization have combined to push local authorities to advoca
economic activities with high revenue returns. Local officials play an entrepr
making activities. Eaton and Kostka (2014) argued that Chinese local government
growth-centred administrative manner without long-term vision is similar to t

maximizing and rent-seeking behaviour of the roving bandits described by Man
Chuang s study (2014) about the local government s bureaucratic absorption mech
farmers from their lands portrayed how local cadres came up with strategies to
growth development. Tricky land expropriation conducted by local authorities i
interviews such as the following one.

> In 2000, we heard that our Cangqiao Town would become a sub-district next yea
> village residents hukou would change from rural to urban status. The village
> came and asked us to sign for returning our lands to the village collective.
> after the procedure we would soon become urban residents and receive social we
> district. We agreed. On one hand, our young generations work and live outside
> don t have enough labourers on our lands. On the other hand, the promised wel
> us believe that we would be taken care of by the government. Ten years later,
> came to our villages. As our previous lands were already acquired by the vil
> rented to individuals who were either village committee members or outsiders, we we
> the recipients of the land expropriation compensation and what we received w
> along with all sorts of annoying disturbances from the trains.

Land rights transfers in urban periphery are very profitable for cities (Dai et
China s Land Administration Law, 70 per cent of land lease premium goes to muni
and 30 per cent to the central finance (Land Administration Law, Article. 5
conveyance fees, land lease fees, and sales or business taxes that local offici
developers and users make up a significant portion of local revenue. Ong (2014)
government maximizes construction land quota by relocating farmers from their si
rise apartments. In our study, we found compared with former village houses, new
relocated farmers have minimized open space and green areas for the purpose o
costs (Figure 2).

Figure 2. Two relocation sites: Yongfeng Garden for relocated residents in Xueji
Garden for relocated residents in Weixing Village (right). (Source: Au

Ms Mei, one of our interviewees, wanted to show me a creek at the northern edge
we reached the site, there were only just construction trash and grasses
Embarrassed, Ms Mei emphasized that the creek was there before. Along one side
highway was built in 2005 and a high-speed rail was constructed along the o
Compared with this landscape change, the disappeared creek is probably not remar
The changes that have occurred in our village in recent years make me feel the
me. In our experience of places there is a close attachment, a familiarity tha
being known in a particular place. It is such attachment that constitutes our
familiarity that it involves is not just detailed knowledge, but also a sense of
place (Tuan, 1974; Relph, 1976). Unfortunately, the local pro-growth governa

disturbed the local dwellers deep attachment to their places, an important y
socially sustainable society.

5 Conclusions

City development is not merely about concrete and glass. People s perception a
equally important. Even when only a small group of citizens suffers from urban d
means that they should be taken for granted for the wellbeing of the rest. Ba
conceptual framework combining social sustainability with environmental just
illustrates how the HSR construction has negatively affected the daily life of t
and disadvantaged such as farmers, local elders and migrants who live in subu
integrated conceptual framework helps to have an inclusive understanding of the
and political institution of HSR development in suburban neighbourhoods.

Social equity coexists with the distributive justice concern. The environmental
by social exclusion, impeding social sustainability. Lack of meaningful public
hinders the achievement of environmental justice. Such procedural deficiency in
is exacerbated by the social exclusion of rightful resistance. The pro-growth lo
the major institutional drivers behind social unsustainability and environmental

Finally, it is worthy to note that the purpose of the research is not to offer a
framework, but to help generate more innovative and better-developed discourse
environmental appraisals. Urban transformation and its outcomes can be under
tripartite analysis of the control of environment, the power involved to enfor
institutional flows that direct the process.

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