



## Transfer of Development Rights (TDRs) as a Tool in Conservation of Heritage Structures in the Precincts of Amritsar city

Davinder Pal Singh<sup>1\*</sup>, Mahendra Joshi<sup>2</sup>

<sup>1</sup>Research Scholar, Department of Architecture, School of Architecture and Planning, Lovely Professional University, Phagwara, Punjab, India

<sup>2</sup>Professor, Department of Architecture, School of Architecture and Planning, Lovely Professional University, Phagwara, Punjab, India

\*Corresponding author's E-mail: [dav.interiors11@gmail.com](mailto:dav.interiors11@gmail.com)

Article History	Abstract
Received: 06 June 2023 Revised: 05 Sept 2023 Accepted: 05 Oct 2023	<p><i>Heritage structures play an important role in defining the essence of a city, possessing immense historical value that necessitates conservation. These heritage structures in the historic precincts are at risk of being demolished in developing countries undergoing rapid urbanization. Current legislative measures appear insufficient to prevent the destruction of such structures in the precincts. This vulnerability can be attributed to a general lack of understanding of their significance to the stakeholders, the absence of conservation incentives, and the limited development options available to heritage property owners. This paper examines into the concept of Transfer of Development Rights (TDRs), a potential incentive mechanism that could aid in the preservation of these architectural structures and precincts. The TDRs initiative is proposed as a viable option for heritage property owners, striking a balance between economic interests and preservation.</i></p>
CC License CC-BY-NC-SA 4.0	<p><b>Keywords:</b> Heritage Conservation, Transfer of Development Rights (TDRs), Urban Preservation</p>

### 1. Introduction

India has number of historic and architecturally significant structures. Because of their historical significance, these structures need to be conserved. Nonetheless, economic considerations, development pressures, and a lack of awareness about the historical significance of these structures, combined with limited options for stakeholders, have influenced decisions about their fate. As a result, Indian heritage buildings and their precincts are gradually disappearing and losing the character and value they possess. When most urban planners and administrators think of "urban heritage" they think of monuments, churches, temples, various religious structures, palaces, castles, fortresses, historic city walls and gates, and other institutional buildings (such as those used for education, science, administration, or social purposes). Unfortunately, this perception frequently excludes historically significant residential properties and other important structures in the precincts.

Most governments in the developing world have focused their attention over the last 40-50 years on the problems of the precincts by formal and non-authorized (informal) processes. Most of these housing areas typically grew quickly and were characterized by overcrowding, a lack of infrastructure, poor-quality construction, poor sites, and so on. The owners of heritage structures in Amritsar are dumping them primarily for economic and development reasons. The rate of urbanization is so rapid that building owners do not want to fall behind economically and financially. The high land and property values would provide opportunities for the owners to profit. Because of insufficient structural support and facility, it appears that creating new development is more feasible than maintaining existing buildings. The economic-conservation imbalance has become a factor that makes it difficult for owners to keep the building as it is (Canavan, 1993). Government intervention does have an impact on the preservation

of these historic structures. However, even in the presence of few regulations, the fundamental challenge of the economic versus conservation imbalance persists among owners.

A potential solution would be to devise an incentive scheme to encourage heritage property owners/stakeholders to preserve and maintain their structures without putting their finances at risk. It is worth noting the Transfer of Development Rights (TDRs) system, which is already in use in several major countries and cities, primarily in the United States, but also in Hong Kong, Australia and few cities of India also. This program seeks to protect farmlands, open spaces, historical landmarks and other buildings in the precincts (Transfer of Development Rights Programs, 2000). This paper seeks to investigate the feasibility, benefits, and challenges of introducing the TDRs concept in the context of Amritsar.

## **2. Materials and Methods**

This study aims to focus on the concept of "Transfer of Development Rights (TDRs)" and the historical perspective of TDRs application around the world. It also attempts to determine the potential benefits and challenges of implementing TDRs programs in the historic precincts in the context of Indian subcontinent. This study relies heavily on secondary sources. The information was gathered by surveying various literatures such as books, journals, newspapers, web-based articles, and so on.

## **3. Result and Discussion**

### **The Concept of Transfer of Development Rights (TDRs)**

The concept of Transfer of Development Rights (TDRs) is a market-driven strategy designed to encourage the voluntary shift of growth from areas where a community aims to limit development (referred to as sending areas) to areas where a community desires more development (referred to as receiving areas). Sending areas may include environmentally sensitive properties, open spaces, agricultural land, wildlife habitats, historic landmarks, or structures of historic significance/value in the precincts. Receiving areas, on the other hand, should be designated as suitable for additional development by public consensus due to their proximity to employment opportunities, shopping centres, schools, transportation hubs, and other urban amenities.

Transfer of Development Rights (TDRs) refers to the provision of additional construction space in exchange for the area given up or relinquished by the stakeholder. This extra construction space can be used by the owner or transferred to another party in need of the extra space, typically for a mutually agreed financial compensation.

"A system of Transferable Development Rights (TDRs) provides an alternative to traditional rezoning." A city creates preservation and development zones within this framework. Every stakeholder is granted development rights. Owners within the heritage conservation zones can then transfer their development rights to other areas of the city".

### **History of Developing the Concept of TDRs across the globe.**

The concept of transferring development rights between properties began in New York City with the adoption of the first American Zoning Ordinance in 1916. This allowed landowners to sell their unutilized air rights to neighbouring plots, allowing those plots to exceed the newly established height and setback regulations (Johnston and Madison, 1997). The city's Planning Commission incorporated TDR provisions into its Landmarks Preservation Law in 1968. Later, in 1998, the City launched a revamped TDRs initiative aimed at preventing the demolition or repurposing of live-performance theatres within the Broadway theatre district.

Many command-and-control regulations were criticized for being inefficient in the early 1980s. This prompted policymaker to investigate market-driven governance approaches (Henig, 1990). To ensure stable lobster populations, Australia implemented a tradable fishing permit system in 1986. During the first half of the 1990s, a system of tradable pollution credits successfully reduced sulphur dioxide emissions (a major contributor to acid rain) by half in the United States (Brown, 2001). Building on these accomplishments, the TDRs concept came to be viewed as a solution that used economic principles to address various societal challenges.

Montgomery County has the nation's most successful TDRs program, having permanently conserved more than 38,000 acres of farmland through its use. The TDRs program implemented by New Jersey Pinelands in 1980, on the other hand, is the nation's most extensive, covering a vast expanse of one million acres and allowing transfers across 60 distinct municipalities. By the end of 1997, land conservation through this program had expanded to 15,768 acres.

### **Traditional Practice of Conservation Program in India.**

The Ministry of Culture is in charge of preserving, conserving, and promoting India's cultural heritage. The Archaeological Survey of India (ASI) is the central agency responsible for archaeological research, preservation, and conservation efforts within this ministry. The Ancient Monuments and Archaeological Sites and Remains Act (AMASR) of 1958 and the Antiquities and Treasures Act of 1972 are the primary legislative frameworks governing heritage preservation. ASI designates certain monuments as having national significance under the AMASR Act, giving them protected status. Furthermore, various State Archaeology Departments protect monuments, and religious structures such as temples, mosques, gurudwaras, and churches are overseen by religious endowments and trusts. The Public Works Department is in charge of maintaining many urban historical sites. In addition, the Ministry has established National Museums to preserve, exhibit, and educate the public about Indian antiquities. Non-governmental organizations such as INTACH and the Aga Khan Trust are involved in documenting and restoring Indian heritage to supplement the efforts of state agencies.

In order to achieve these goals, the AMASR Act was amended in 2010, establishing prohibited and regulated zones of 100 meters and 200 meters around ancient monuments, respectively, to prevent encroachment and unauthorized construction. This amendment also resulted in the establishment of the National Monuments Authority, which is in charge of developing heritage bylaws for protected monuments. Recently, the government has attempted to involve the private sector in heritage preservation and tourism promotion. The National Cultural Fund was created to form partnerships with donors in order to preserve Indian heritage. Similarly, the Adopt a Heritage program encourages CSR funding for heritage conservation. All of these initiatives work together to promote heritage tourism. Future schemes such as Swadesh Darshan, PRASHAD, and HRIDAY aim to ensure the conservation and promotion of heritage.

Unfortunately, these efforts have not yielded satisfactory results, as a large number of protected monuments continue to deteriorate. India is gradually losing a portion of its rich cultural heritage as a result of the challenges associated with the protection of both protected and unprotected monuments. The ASI-enacted National Policy for the Conservation of Ancient Monuments, Archaeological Sites, and Remains (NPC-AMASR) has also fallen short of its goals. To effectively safeguard India's cultural heritage, it is critical to assess the existing framework's deficiencies and address the pressing challenges.

### **Brief historic evolution of Amritsar.**

If India has inherited enormous wealth of built heritage, State of Punjab in general and Amritsar city in particular has also followed the footprints of the great nation and state. With history spanning over 428 years, Amritsar has emerged as the premier city of the state of Punjab and is known as not only its economic but also religious and political capital. City of Golden Temple, also symbolizes the spiritual heritage of the people of Punjab. Presence of Golden Temple and Jallianwala Bagh has given a unique place to this dynamic and vibrant city of Amritsar in the history of the state and the nation.

Growing from a small village, Guru-Ka-Chak/Chak Guru Ram Das, focal point of Sikh faith, rightly called Sifti da Ghar (the Home of all Virtues), Amritsar today enjoys the status of a metropolitan city with population spanning over one million. Commanding a central position in North-Western India and gateway to the Middle-East, Amritsar enjoyed the status of a thriving trade centre in the Region in pre-independence era. However, post-independence scenario emerging from partition of the country made the premier city of the state as the border town, adversely impacting its economy, trade, commerce and population in numerous ways. It is said that more than 1/4th of the total buildings were damaged/destroyed during riots in the partition of India. Accordingly, Amritsar has suffered enormously due to its positioning on the border and hostile neighbours. Despite all hostility, city has not lost its grandeur, culture and position of power in the state. Being the home of Golden Temple and

Jallianwala Bagh it attracts large number of visitors on regular basis. Amritsar has always occupied a prominent place on the visitors list, both of dignitaries and ordinary mortals. It has emerged as an important tourist destination. Walled city with 12 gates has always been full of life with a typical culture of business and living. Considering the existing scenario of Amritsar there are large number of issues which are impinging on not only the rational growth of the city but also adversely impacting the heritage buildings and areas surrounding them. In order to protect such areas and to promote their development following agenda for action is suggested.

Manmade heritage in the Indian context has very narrow connotations as it is only buildings specific and not area specific. City spaces have been, by and large, excluded from the purview of the Act. Thus, in majority of cases individual buildings have been taken care of but city or urban spaces have been ignored. Major urban development laws like Punjab Municipal Corporation Act, Municipal Act, and Improvement Trust Act etc. are yet to be amended to include heritage as an essential ingredient of local development.

### **Implementation of TDRs in India.**

TDR in India has been successfully introduced in Mumbai, Ahmedabad, Bengaluru, Pune, Chennai and Hyderabad. Few of the case examples have been discussed as:

#### **Mumbai:**

Mumbai has a very high floor space demand; however, the city has limited prospect of horizontal expansion due to its linear geography and land constraints. This along with low overall FSI paved the way towards a successful TDR market in the city. The Maharashtra Regional and Town Planning Act, 1966 has a provision for granting Transferable Development Rights (TDR) against the area of land surrendered free of cost and free from all encumbrances. Accordingly, the TDR provisions are mentioned in the development control regulations of Greater Mumbai, 1991. The compensation in terms of TDR is permissible for- land under various reservations for public purposes, roads, heritage structures, housing for slum dwellers and redevelopment. With 3178 DRCs, MCGM has generated over 12.93 million sq.mt. area out of which only 0.5 million sq.mt of TDR is unutilized till date. The TDR prices are controlled by the market forces.

#### **Ahmedabad:**

The Government of Gujarat modified the Gujarat Town planning Act, 1976 which paved for implementation of TDR method. TDR is being issued for many purposes in Ahmedabad like slum rehabilitation, heritage conservation, and public housing redevelopment projects. It is notable that for development of trunk infrastructure, another VCF method – ‘Land pooling/ Readjustment method’ is successfully used in the State.

**Legal framework:** The Gujarat Town Planning and Urban Development Act, 1976 provides for a two-stage city planning process called ‘Development Plan–Town Planning Scheme’ mechanism.

**Planning process:** First, the Development Authority of a town or city draws up a statutory, decadal development plan (DP) for the town or city as a whole; showing where the city is expected to expand into the surrounding countryside. In these new expansion areas, the network of major roads and routes for trunk infrastructure is drawn up by the Development Authority. The expansion area is then divided into a number of smaller areas. The Development Authority then, takes up each of these smaller areas for the development of a Town Planning Scheme (TPS), which is a detailed land reconstitution, infrastructure development, and financing proposal rolled into one.

**Provision of infrastructure:** The planners identify locations and land area required for provision of public amenities and infrastructure in the TPS. This land area is calculated as a percentage of the total land area of the TPS. Each ‘original plot’ is reduced by this percentage which then becomes a ‘final plot’ to be allocate back to the landowners. Thus, each ‘original plot’ / landowner has to contribute the same proportion of land for the creation of public facilities.

**Value Capturing:** Public consultations are held with the landowners who then give up a part of their land to the local government, in exchange for better roads, water supply and other amenities. Taking 50

% of the increment in the land value from each plot and deducting the compensation to be paid for the land appropriated, the net demand or betterment charges are estimated. In this method, land does not have to be paid for and infrastructure, planning, administrative costs can be realized from the increments in land value.

Salient features:

- It is simultaneously a technical and legal mechanism.
- Benefits are shared and owners keep a substantial portion of developed land and increment in land value.
- Planning seeks to use the land market and not thwart it.
- Landowners are kept involved in the planning process and their grievances are heard and redressed.

### **Hyderabad:**

The TDR Policy was originally started in the year 2006 with the 'Revised Common Building Rules' issued by the State which were subsequently modified in 2012 and then in 2017. The guidelines for issue and utilization of TDR are specified in these rules.

TDR is being used mostly for infrastructural development as well as conservation of lakes, water bodies and heritage buildings. The TDR certificates can be used in the new developing areas where infrastructure is available, and it is generally avoided in the congested areas of the city. The TDR certificates generated within the Greater Hyderabad Municipal Corporation (GHMC) limits can be used in the Hyderabad Metropolitan Development Authority (HMDA) and vice versa.

Since 2006, more than 600 TDR certificates have been issued. The issuance of TDR certificates in Hyderabad is voluntary and not compulsory. GHMC has started also established an online TDR bank where digitized versions of TDR certificates are being issued. The platform has connected the buyers and sellers in a transparent manner. The transactions of TDRs can now happen in a way like that of stock market. With introduction and implementation of the new TDR Policy there has been an encouraging response from the real estate sector in the market.

### **Chennai:**

The state government has approved the use of transferable development rights (TDRs) to streamline land acquisition for infrastructure projects in Chennai, such as road expansions, new road construction, and the metro rail initiative. The Chennai Metropolitan Development Authority proposed this in the city's second master plan, which was unveiled in September 2008. TDRs enable property owners to transfer the development rights of their land, which the government has taken over for infrastructure purposes, to any other desired property within the Chennai Metropolitan Area. This strategy is expected to greatly simplify the land acquisition process for expanding key roads and bus routes, reducing traffic congestion in the city.

Properties that qualify for a 1.5 floor space index (FSI, which is a measure of how much built-up space is allowed relative to the land area) and are acquired for infrastructure developments will receive TDRs with an additional 50% FSI, according to the government's directive. This means that if a 1000 sq ft plot subject to CMDA development regulations (DR) has a 1.5 FSI (equating to 1,500 sq ft of allowed built-up area), when a TDR is issued, its virtual FSI will be raised to 2.25, allowing for 2,250 sq ft of built-up space. A property with a 1.75 FSI that is acquired will be granted an additional 0.5 FSI, for a total of 2.25 FSI in the TDRs. For plots with 2 and more FSI, an additional 0.25 FSI will be given while issuing development rights certificate (Times of India, 2009).

### **Potential Advantages of Introducing TDRs Programs in India**

The goal of this approach is to compensate for the reduced development prospects on plots containing monuments by funding restoration efforts. Naturally, the presence of government-owned land that can be exchanged within the framework of TDRs is a critical requirement. When introduced in India, transferable development rights (TDRs) programs have the potential to address a variety of urban

development challenges. TDRs are a market-based tool that allows property owners to transfer the development rights of their land to another location, typically from a low-density to a higher-density area. Here are some of the potential benefits of introducing TDRs programs in India:

- TDRs facilitate zoning implementation: While not a replacement for zoning, TDRs strengthen land use policies, making them more politically viable and simple to implement (Barrese, 1983). Local governments face less political opposition when landowners receive compensation for "forfeited" rights. Furthermore, an effective TDRs system reduces the need for zoning exceptions because developers rely on market dynamics rather than leveraging relationships with zoning boards to obtain additional development permissions. TDRs can encourage planned urban development by directing growth to designated areas, which can aid in the management of urban sprawl and the promotion of sustainable land use practices.
- TDR initiatives compensate property owners: TDRs are used by local governments to mitigate the economic consequences of land use policies, particularly to compensate landowners for potential perceived devaluation (Johnston and Madison, 1997). By using this strategy, owners can reclaim some of their property's diminished financial worth.
- Preservation of Green Spaces: TDRs can be used to incentivize landowners to conserve natural and green areas such as parks, forests, and agricultural land by allowing them to transfer development rights.
- Infrastructure Development: TDRs can be used to generate funds for urban infrastructure development. When landowners transfer their development rights to more densely populated areas, the government or developers can contribute to infrastructure improvements in those areas.
- Affordable Housing: TDR programs can be designed to promote affordable housing. Developers can acquire TDRs to increase the allowable density in specific areas, making it more economically feasible to build affordable housing projects.
- TDRs can be used to protect historically and culturally significant buildings by allowing property owners to sell their development rights to developers interested in preserving these structures.
- Reduced Land Fragmentation: TDRs can help reduce land fragmentation by encouraging consolidation of development in specific areas, which can lead to more efficient land use patterns.
- TDRs programs improve development predictability: Developers can benefit from the transparency and uniformity provided by TDRs programs (Pruetz, 1997). Instead of incurring the costs and uncertainties associated with obtaining zoning variances, developers can circumvent specific zoning restrictions by purchasing development rights from other property owners. TDRs, in the long run, can promote predictability in development within an area, particularly in areas with historical sites.
- Fiscal Advantages: Municipalities may benefit from increased property tax revenue as higher-density development occurs in specific zones as a result of TDRs. This additional revenue can be reinvested in public services and infrastructure.
- TDR programs can be used to protect environmentally sensitive areas such as wetlands, floodplains, and wildlife habitats by allowing landowners to transfer development rights to less ecologically sensitive areas.
- Property values in areas where TDRs are used may increase as a result of improved infrastructure, amenities, and reduced competition for development, benefiting property owners in those areas.
- TDRs provide flexibility in land use policies, allowing adaptation to changing urban development needs and priorities.

- **Community Engagement:** The implementation of TDR programs frequently involves community engagement and collaboration in planning processes, which can lead to more inclusive and sustainable development outcomes.

However, it is important to note that the successful implementation of TDR programs in India would necessitate careful planning, stakeholder engagement, clear regulations, and effective enforcement mechanisms to prevent misuse and ensure that the intended benefits are realized. Furthermore, the specific benefits may vary depending on the local context and how the TDR program is designed and implemented.

### **Potential Challenges of Introducing TDRs Programs in India**

While Transferable Development Rights (TDR) programs can provide numerous benefits, they also present a number of challenges when implemented in India. Addressing these issues is critical for the successful implementation of TDR programs in the country. Here are some possible challenges:

- TDR programs necessitate a clear legal and regulatory framework, which can be difficult to establish and administer, particularly in a country with diverse land ownership structures and regulations such as India.
- TDRs do not eliminate the need for planning: TDRs are only effective when combined with strong zoning laws and thorough planning. Obtaining political consensus on zoning issues, however, remains a challenge. As a result, the success of TDR initiatives necessitates unwavering dedication and the community's collective resolve (Lane, 1997).
- **Land Ownership and Fragmentation:** India has a high degree of land fragmentation, with multiple owners frequently having claims to a single piece of land. Coordination of TDR transactions and obtaining the consent of all landowners involved can be a logistical challenge.
- **Valuation and Pricing:** Determining the value of development rights and setting fair prices can be difficult. Ensuring that landowners receive fair compensation for transferring their development rights is critical to the program's success.
- **Community opposition:** Despite efforts to educate the public, securing regions open to high-density development (designated receiving areas) may be difficult. Many people believe that increased density will reduce property values and lower living standards.
- **The introduction of TDRs necessitates broader public awareness:** A diverse group of citizens, real estate experts, legal professionals, assessors, and urban planners must be familiar with the TDRs mechanism. Given that the success of such programs is dependent on community acceptance, local governments must promote the concept through various means such as mail campaigns, community gatherings, and advertising efforts. For example, the launch of a TDRs scheme in Santa Fe, New Mexico began with a full-day workshop (Pruetz, 2002).
- **Market Acceptance:** Many Indian property owners and developers may be unfamiliar with the concept of TDRs. Acceptance and understanding of TDRs in the real estate market can take time.
- **Speculation:** There is a risk of speculation and land hoarding, in which property owners hold onto development rights in the expectation of higher future prices, which can impede the intended purpose of TDRs.
- **Corruption and Misuse:** In some cases, TDR programs are vulnerable to corruption and misuse. Officials involved in the issuance of TDR certificates may be corrupt.
- **Enforcement and Monitoring:** Effective enforcement and monitoring of TDR transactions and regulatory compliance can be resource-intensive and difficult, particularly in areas with limited governance capacity.
- **Concerns about equity:** TDR programs can sometimes exacerbate inequalities by primarily benefiting large landowners or developers, leaving smaller property owners with fewer development options.

- Local communities may oppose TDR programs if they believe they favour developers over community interests, resulting in public opposition and implementation delays.
- Lack of Infrastructure: TDR programs may necessitate adequate infrastructure and urban planning capabilities, which may be lacking in some regions of India, making implementation difficult.
- TDRs involve the transfer of development rights from one area to another, which can lead to conflicts between the zoning and land use plans of different areas.
- TDRs initiatives may be more complicated and costly to implement than traditional zoning. Local governments are in charge of managing (or delegating management of) the market, monitoring and enforcing property deed restrictions, and assisting with the meticulous drafting of easement documents. To steer the market, local governments may frequently use instruments such as TDRs and banks.
- Developers may be resistant to TDR programs if they perceive them as adding complexity and costs to their projects, even if they offer long-term benefits to the community.
- Limited Data and Records: The success of TDR programs is dependent on accurate records of land ownership and development rights. This can be a significant challenge in India, where land records can be outdated or incomplete.
- Political and bureaucratic impediments: Political and bureaucratic impediments can stymie the implementation of TDR programs, particularly when they involve changes to existing land-use policies and practices.

To address these challenges, India must tailor its TDR programs to the specific needs and conditions of each region. Robust public engagement, transparency, and effective governance will also be required to ensure that TDRs contribute positively to the country's urban development and land-use planning.

#### 4. Conclusion

Amritsar's heritage structures and precincts are currently in disrepair. Across the country, demolition of historical structures, aging residential properties, and monuments continues, either through deliberate clearance and replacement strategies or through passive neglect that allows these sites to deteriorate over time. If this trajectory continues, the future looks bleak, with only remnants of the nation's rich heritage possibly remaining. In the midst of the push for urban modernization, there is growing concern about preserving historical land uses. As a result, there is an urgent need for a powerful conservation mechanism that strikes a balance between preserving history and accommodating economic pressures. TDRs could be a critical tool in this scenario. Although the initial implementation of TDRs in Amritsar (India) may face a number of challenges, these can be overcome with appropriate and timely interventions. Furthermore, the scope of this approach should not be limited solely to conservation efforts. It could also be applied to other infrastructure development initiatives.

#### References:

- Barrese, J. (1983). Efficiency and equity considerations in the operation of transfer of Development right plans. *Land Economics*, 59:2, 1235-241.
- Brown, L. R. (2001). *Eco-Economy: Building an Economy for the Earth*. New York: W.W. Norton and Company.
- Canavan, (1993, March). What is a TDR? Paper presented at the conference sponsored by the Land Conservancy of San Luis Obispo County, CA.
- Government gives nod for transferable development rights (2009, August 8). *The Times of India*. Retrieved April 20, 2012, from <http://articles.timesofindia.indiatimes.com/2009-08-08/chennai/2817613>.
- Henig, (1990). Privatization in the United States: Theory and Practice. *Journal of Political Science Quarterly*, 104(4), 649-670.
- ICOMOS. (1987). *Charter for the conservation of historic towns and urban areas*. Paris: ICOMOS. Retrieved January 18, 2010
- INTACH. (2004). *Charter for the conservation of unprotected architectural heritage and sites in India*. New Delhi: INTACH.
- Johnston, R. A. and Madison M. E. (1997). Landmarks to landscapes. *Journal of the American Planning Association*, 365-379.



- Lane, R. (1998). *Transfer of Development Rights for Balanced Development*. Boston: Lincoln Land Institute of Land Policy. Retrieved May 1, 2013, from [http://www.lincolnst.edu/pubs/pub\\_detail.asp?id=424](http://www.lincolnst.edu/pubs/pub_detail.asp?id=424).
- Pruetz, AICP, (1999). *Transfer Development Rights*. Paper presented at the APA National Planning Conference, Chief Assistant Community Development Director/City Planner, City of Burbank, California. Retrieved May 1, 2013, from <http://www.asu.edu/caed/proceedings99/PRUETZ/PRUETZ.HTM>.
- Punjab Urban Planning & Development Authority. (2010). *Draft master plan Amritsar, 2010–31. Mohali*. <[www.indiaenvironmentportal.in/files/plan%20report%20new.pdf](http://www.indiaenvironmentportal.in/files/plan%20report%20new.pdf)> Retrieved December 21, 2010