# TRANSFER OF DEVELOPMENT RIGHTS AND CHALLENGES IN TURKEY

# Yusuf ÇİÇEK and Tayfun ÇAY, Turkey

**Key words**: development right, property right, receiving area, sending area, transfer of development rights

#### **SUMMARY**

The purpose of the paper was to introduce the concept of the Transfer of Development Rights (TDR) and its potential to be implemented in the country.

The concept of "Transfer of Development Rights" has taking place in the development plan notes of the municipalities and discoursed as a new planning as well as a solution tool for unresolved or long lead land development, land acquisition problems in the recent years across the Country.

TDR primarily relates to the securitisation and trading of the development rights on immovable property within the framework of certain rules and assumptions, which is more of a financial instrument. In that respect, it is also considered as an alternative tool for financing large scale residential and commercial investments in the country.

TDR can provide an alternative solution to the classical zoning application tools which are already being used in the countries mainly USA, while providing solutions for the protection of agricultural lands, wildlife and natural resources, environmentally sensitive areas and historical sites/values.

In this paper, the TDR concept is briefly described, historical development is addressed, and how to work and what could be the achievements are being summarized.

Furthermore, the status in the Country regarding TDR is briefly evaluated in terms of reasons that are been caused to study TDR, its potential to overcome current land related problems, performances of the parties and similar experiences that may support the concept development.

# TRANSFER OF DEVELOPMENT RIGHTS AND CHALLENGES IN TURKEY

# Yusuf ÇİÇEK, Tayfun ÇAY, Turkey

#### 1. INTRODUCTION

Transfer of Development Rights (TDR) has introduced in the country's legislation system with the Preservation of Culture and Cultural Heritage Law Nr. 2863 on 27 July 2004 which is being used for a decade as a successful planning and preservation tool in the United States.

TDR is built on the transfer of the current ownership and development rights in the areas under the pressure of land development nearby settlements namely agricultural, environmentally sensitive, ecologically important lands as well as forestlands and lands for cultural heritages to the areas specifically designed as new or to the areas expanded development density, and gained importance as a financial instrument.

To this extent, TDR is mainly subject to preservation in the developed economies and on contrary as an alternative to create financial resource or overcome of the impasses for restricted ownership rights by the state power.

As a model, it is implemented in two ways. General implementation is selling current development rights to the investor or developer to meet the density increase requirement for another project in a transparent market conditions and at fair value. In the second application, investor or developer meets the needs from the pool of TDR bank that established by the local government rather than buying directly from the individual right owners.

It is obvious that transfer of development rights would be an alternative for acquisition methods for public interest such as expropriation or land consolidation for the lands subject to protection and under the pressure of the development. Any right restriction over the ownership could be established upon compensation by the relevant authority, additionally any utilization and protection restriction in the name or in benefit of the public even it is legally valid are subject to transfer or misuse of the said rights if the gaining is more than actual usage over the ownership (Yamak, 2006).

## 2. TRANSFER OF DEVELOPMENT RIGHTS

In the free market economies of which the right of ownership is recognized, even if all the applications are carried out in the form prescribed by law, the basic reasons such as the inability to remove gaining anxiety and attractiveness, the search for more humane and liveable spaces, balanced sharing between the public and the rights holders of the resulting burden of development and regulation have revealed the transfer of rights model.

As a matter of fact, (Pruetz, 2003) one of the practitioners in the US, in his book states that "the powers of planning and expropriation of many local governments in protection of agricultural, historical and cultural values including environmental sites requiring preservation are often not sufficient due to political and social pressure and as well as financial problems...", it is stated that the transfer of development rights method "which is mainly an implementation model is adopted by many because of these reasons and that the immovable properties and values which are considered to be protected in the benefit of public by this method, are accepted on the basis of volunteering by excluding the cost element." (Dündar, 2010).

On the other hand, the emergence of the concept of TDR in the United States (Stinson, 1996) implies that a direct response to the changing priorities and primarily the three main reasons for the development of the TDR. First, many historical sites cannot make full use of zoning density. As a result, the potential value of the new building, which will be built on immovable property, is faced with the problem that these architectural values are destroyed if no protection measures are taken. In other words, preservation of historical values is one of the first priorities. The second is the demand for open spaces in which large cities and the suburbs are caused by crowded congestion. The increasing population density requires more open spaces to be produced; zoning right is a priority in the emergence of transfer. The third and final priority concerns the development of areas with ecological sensitivity. Sensitive areas, such as clean air, clean water, and fertile farming lands, that can provide high returns to property owners in a short period of time, will have to participate in the gain racing unless precautions are taken to protect them. In this case, the economic incentives for land use are restructured by TDR, bringing the issue to a deeper level. Thus, development is directed to other areas where harmful effects are minimized, away from immovable properties, which are high social and/or biological values that development can otherwise undergo from its predecessor.

With a close approach, depending on the inadequacy of other methods in the emergence of the concept, it is stated that many researchers suggest the transfer of the development rights method to prevent the failures of traditional land use protection practices (Tavares, 2003).

## 2.1 Historical Steps

TDR is a concept that combines the separation of development rights from the property ownership and the ability of the community to control development.

The European land-use policy included both concepts in land management. For example, in the United Kingdom, the government was empowered to acquire all land rights required for development through land use value and these rights expropriated according to the Country and Town Planning Act that enacted in 1947 and still in use with some minor changes.

The concept of TDR in the U.S. was introduced by Gerald Lloyd (1961). This concept was later developed by Chavooshian, Norman and Nieswand (1973), Costonis (1972, 1974), Rose (1975) and Carmichael (1975) (Patricia L. et al., 1999). Despite of various opinions in respect of

reasons of TDR emergence, the first known TDR implementation was made because of the skyscrapers in New York City.

The first serious and comprehensive zoning regime in the United States took place in 1916 in the context of New York City skyscrapers obstructing the sunlight of neighbouring properties. With the new zoning legislation applied, building heights and setback distances were arranged and the areas of incompatible usage were separated. However, this has been constantly criticized since the beginning of the practice, due to the injustices in the context of restricting the rights of others while providing additional rights to some landowners.

The idea of transferring development rights between immovables first appeared in the city of New York in 1916, under the American zoning regulations, and in 1961 the transfer of development rights began to be implemented literally. Since the beginning, developers have used TDR to build buildings that exceed allowed development density, but the TDR for preserving historic values has been put into practice since 1968. The priority given to preservation of historic buildings and to enhance quality in interlinked areas within the implemented TDR program. The Regulation permits landowners to sell their air rights to adjacent immovables, thus allowing for new height and setback distances. With the amendment of the Planning Commission in 1968, it was possible to transfer rights between independent blocks. (Hanly-Forde J., et al., 2011). Since the early 1980s, TDR programs have been increasingly implemented; but focuses on the effectiveness and development of applied programs today.

### 2.2 Transfer of Development Rights Model

Transfer of Development Rights (TDR); is described as a mechanism in which the community reduces or eliminates the zoning density in the areas it wants to protect and increase the zoning density in the areas where community wants to grow and develop (Pruetz, 2003).

Especially in the US and other developed countries, the model intended to protect agricultural and green lands in and around the cities. In this model, the immovable owner does not use his/her own right of construction but allows the right to be transferred for use another project by converting this right into cash in free and transparent market conditions in cooperation with the local government as shown in the Figure-1.

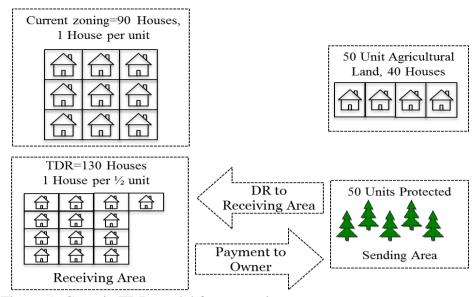


Figure-1, Generic TDR model for protection

The model is further explained with figures in the illustration above as transferring the rights to build 40 houses in an area of 50 units by increasing the density in the area which the rights to be transferred. By this transfer of rights, 50 units forest land is fully protected from development.

Within the context of TDR, two basic concepts are emerging, namely the "Sending Area", where development rights are limited or removed, and the "Receiving Area", which will meet the increased density due to transfer of the rights.

# 2.2.1 Sending Area

Sending Area is an area of one or more of the qualities listed below that will be construed to decrease or remove the development density from the site subject to protection.

Open spaces,
Agricultural lands
Environmentally sensitive areas
Forestlands
Restricted lands/Historical sites and buildings
Developed and tradeable commodity
Regulation governing the number of TDRs

## 2.2.2 Receiving Area

Regions determined especially for TDR with sufficient infrastructures and utilities will be able to attract the investors and create economic value, which can absorb the concentration of the

Transfer of Development Rights and Challenges in Turkey (9295) Yusuf Cicek and Tayfun Cay (Turkey) building in the sending region. In this sense, the following places and features are emerging as general characteristics of the Receiving Area.

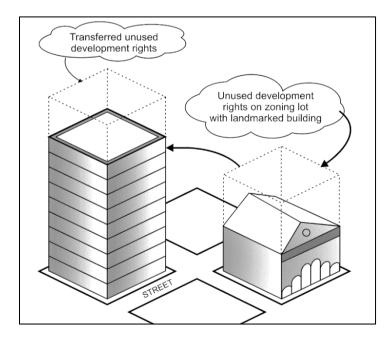
Cities, towns, neighbourhoods, Sufficient infrastructure to support increased development Sufficient market to attract investors/developers

#### 3. HOW TDR WORKS

In practice based on volunteerism, the landowners in the sending area sell the development rights to the developers to be used in the developed areas. Landowners earn revenue from these sales, while continue to own and use their lands, developers buy additional development rights which the zoning plans allow to build more residential and commercial buildings in the developed areas. Figure-2.

In general terms, the right to development is converted into additional floors or commercial areas, while in some programs into the revised recreational or green spaces in need. Receiving areas should have or be planned to have infrastructure and service capacities to meet the increasing density. As a result of the ideal implementation and operation of the TDR, parties will obtain benefits to fulfil their expectations. To this end, the investor or project developer will buy and use the TDR loan/certificate for profitable and highly developed investment.

As a natural and expected consequence of the practice, the TDR will be subject to free marketing between the property owners and the willing buyers, and will be in accordance with the expectations and objectives of the parties.



Transfer of Development Rights programs will make effective land use regulations politically more likely and easier to implement. At the same time, ensuring the effective participation of the public in all processes and informing activities will lead to a decrease in the resistance to these regulations. Similarly, the local authorities within the practice will be subject to political pressure in the arrangements they will make, particularly in the context of compensating for possible loss of rights of landowners in the sending areas.

Figure-2, TDR with density increase (Anonymous)

A well-planned and structured TDR program will reduce potential development change requests, particularly in areas where density increases are likely to occur, as investors will use the market to secure the development rights they will buy.

# 3.1 Implementation Requirements

As a program, the implementation of the TDR will be followed by an implementation cycle, as shown in Figure-3. In practice, the transfer object will be converted into a tradeable commodity from an immovable property or from a right established on immovable property and securitized.

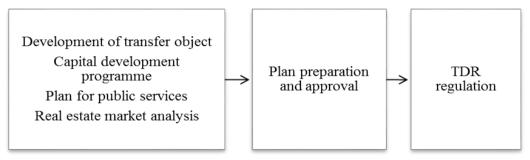


Figure-3, TDR generic implementation steps

First of all, determination of the TDR sending and receiving areas where the rights to be transferred and received is essential in order to attract the developers for investment and meet the density requirements in the potential development areas. In parallel, a program regarding to determination of the numbers of TDR certificates, how to trade them, development of utilities to create more attraction and the public investments to be followed within a well organised plan. Naturally, all these studies will be supported by studies that determine real estate market analyses and trends in the region to be developed.

The plan to be formed following background studies that will be generated by the participation of relevant experts, local administrators, landowners and all stakeholders will be presented to the management unit and approval authority (e.g. Municipality, Governorate) that will implement the TDR program. With the approval of the implementation plan, the transfer process of the rights will initiate.

The next step is the preparation of the implementation directive, which constitutes the legal basis of the program. During the preparation; existing legislations, successful practices, problems and solutions are also taken into consideration as well as the lessons learned. The program is passed on with the creation of the TDR regulations.

The studies and implementations that are made up to date on the subject reveal that there is not a single solution addressing everybody and every purpose and that the planned programs need to continually improve no matters how well they planned. Therefore, continuous monitoring and follow-up is necessary to identify the areas that need corrective and/or preventive actions of the implemented TDR program.

#### 3.2 Potential Benefits of TDR

The transfer of the growth and density to developed areas with public services and infrastructure will facilitate the creation of densely populated communities in a dynamic and economically sound manner. Redirecting growth to proper settlements will cause people to live near where they can work, or to reduce transportation traffic and to prefer less transportation, which has a direct impact on climate change.

With TDR, a bigger market will be created in terms of conservation and development as the community can itself provide, while farmers continuing farming activities and benefit from the natural resources.

The TDR programs help cities to grow smartly while maintaining important landmarks for their inhabitants. Investors can provide new housing and open spaces for local business opportunities by purchasing development rights from farmers or other landowners for the lands under protection.

Comprehensive planning for more intensive urban development in areas will lead to the creation of transportation systems, many shopping centres and services, establishments with access to the amenities such as green spaces and parks, which require less driving distances. It can also support existing plans in the sense of open space and parks, walking paths and transportation planning. Intensified zoning, using existing infrastructure advantages can be used to keep the development away from critical areas such as drinking water basins.

In summary, with the implementation of Transfer of Development Rights;

Developers/investors gain greater profits due to higher level of development.

Sending area owners have the potential of development while continuing to benefit from the lands freed from the development.

The Community can apply its conservation objectives, which are often difficult to implement, particularly irrespective of taxes and other traditional sources of funding.

Implementation of Transfer of Development Rights as its nature;

Can be used in small and large-scale zoning implementations.

A way to gain flexibility in the authorization procedures of complex and lengthy processes.

Applicable for both residential and commercial projects.

It is a permanent process which is supported by laws / regulations.

#### 3.3 Is it the Right Option?

It has been mentioned in previous chapters that the implementation of the Transfer of Development Rights requires primarily demand, a series of preliminary studies, decisions, planning and training. Increasing population growth and urbanization necessitate the use of different development tools. However, it needs to be well evaluated whether the application to be done will respond appropriately and serve it for the purpose.

Therefore, it is necessary to evaluate whether the transfer of the right of development is the right option for the planned region or place. Because, deciding on the application of the TDR in an inappropriate region may risk the success of the implementation. In order to determine whether the TDR is a right option, the following basic questions should be asked and all positive responses should be taken. After this phase, the success of the program will depend on how well the technical and legal framework is structured and follow the implementation process.

П	Is there an unmet market for higher density, especially in "Receiving Area"?
	Will Local Authorities and competent authorities support the zoning / density increase
	in the administrative environments?
	Can any incentive be determined for the program to be successful and resulted positively?
П	Can the development rights subject to transfer be priced in a way to encourage sellers
	and investors?
	Will residents recognise the program as a public facility?

# 3.4 Additional Education for TDR Programs

Communities, planners, real estate professionals, lawyers, appraisers and other interested parties, who are stakeholders of the TDR program, must be trained during the implementation phases. This training should be prepared with a specific plan covering many aspects such as program requirements, benefits, technical and legal background, and the processes to be implemented. The content of the trainings should be determined by the relevant experts to respond to the expectations of all stakeholders, as determined by the local conditions, the legislation and the purpose for which the program will be implemented.

The success of the program will depend largely on informing stakeholders in a timely and accurate manner and understanding the aims of the implementation in a correct way.

To this end, after the model has been designed, regular information meetings should be held for stakeholders, meetings should be repeated if necessary, and all stakeholders about the process should be kept informed by appropriate means of communication, including social media.

# 3.5 Management of TDR programs

TDR programs are more complex and costly comparing to implementation traditional zoning applications. Many issues such as program development, market analysis, technical and legal background, determination of bonuses and consequently density increases, establishment and management of the TDR bank will require additional workforce and also an administration mechanism.

In this sense, management of the TDR program; may be carried out by a body to be established in the local government or independently to implement the TDR program, including the specialists needed in terms of the size of the program and additional requirements.

### 3.6 Challenges to be Overcome

Development rights should be priced so as to encourage farmers and property owners to sell these rights and at the same time be acceptable to farmers. In this context, the selection of both the sending area and the receiving area should be done carefully and consideration should be given to all possible market parameters, current and future planning, priorities and development potentials in the securitization of the subject matter rights.

While the system is operated on a voluntary basis, it is possible to enforce compulsory registration by paying attention to all necessary legal and technical matters in cases where there is public interest and urgent protection measures are required. In this case, better management of the process is essential to the success and continuity of the implementation.

Similarly, it is necessary that investors who buy the development rights subject to transfer do not have any restrictive elements in front of their ability to convert such rights in the market conditions, and these rights must also be protected legally.

#### 4. SATUS AND CHALLENGES IN TURKEY

The issue addressed mainly in the context of urbanization and urban transformation mostly at academic level was first introduced in our legal system in the framework of the Law on the Protection of Cultural and Natural Assets in 2004 as mentioned in the introduction. The issue then began to take place in municipal development plans note as an alternative to land swapping and expropriation.

The concept "Transfer of Development Rights" has took place in the Decree No. 644/648 regarding to Organization and Duties of the Ministry of Environment and Urbanism issued in 2011. Furthermore, the expression "transfer of development rights to another area" was put into effect in 2012 with the Law Nr. 6306 on Transformation of Areas Under Disaster Risks.

Likewise, the term TDR has been included in the draft amendment of the Law on Land Development Nr. 3194, which has not yet been put into practice. In the draft, it is stated that especially if the owners of the immovable properties in the urban transformation areas are

willing to benefit from the TDR model, they will receive a certificate of their development rights. This certificate will be subject to conversion into cash immediately or hold for the valuation of the certificate and process in the TDR market to be established for trading of these rights.

This certificate can even be inherited. In this way, problems faced in urban transformation areas can be handled by market mechanisms. This situation will be solved by attaching the compensation values to the certificate in order to avoid the expropriation problems that have been experienced with large scale projects.

In that respect, rather than protection purposes, TDR emerges as an alternative for the aggrieved owners whose are not benefiting their ownership rights completely or partially due to restrictions put on the unimplemented land development plans or the suspensions on the protected areas in whatsoever reasons in the country.

Inability of providing lands to the owners against the lands allocated for the areas such as worship places, parks, roads, open spaces, etc., inability for expropriation due to lack of allowance or extremely high expropriation compensations and on contrary legal arrangements prevents the full use of basic most basic right originating from ownership. Therefore, our country still dominates the cases opened for this reason in the European Court of Human Rights.

As regards of the matter, enormous expropriation costs for the filed court cases upon decision of the Supreme Court of Law General Assembly dated 15.12.2010, on contrary of the previous decision on 07.11.2007 regarding to legal seizure of any land to be considered as actual seizure revealed that this situation is no longer sustainable.

As a matter of fact, the legislator has introduced very controversial new regulations with Law no. 6487 in 2013 in line with the views taken from the authorities authorized for expropriation concerning the legal seizure. In addition, for the implementation of relevant articles in the ongoing proceedings, the expropriation law has added a provisional article and set a precedent for a properly implemented application.

Finally, Article 33 of Law No. 6745 which was published in the Official Gazette dated September 7, 2016 is in line with the decision of the Constitutional Court of 2014. Constitutional Court's decision on 13.11.2014 about the cancellation of certain provisions of seizure without expropriations pushed the state for a new alternative.

A workshop regarding to transfer of development rights held in Ankara on 29.11.2014 under the leadership of the Ministry of Environment and Urbanization (Bank of Provinces), with the participation of related bureaucrats, business people, non-governmental organizations and academicians.

In the workshop; it is foreseen that the property owner of the restricted land, if the land is restricted more than five years, could apply to Capital Market Boards of Turkey (CMB) licensed institution or expert to determine the value of the subject property and the provision of development right with equal value in another area or development right certificate to be used in the market to ensure protection of the right. It is also anticipated that the secondary market of this certificate will be created and used as an investment instrument (securities).

Köksal Köse in his presentation stated that; "with this system, seizure without expropriation, unregistered gaining will be prevented, land development problems and aggrievances will be avoided while protection for the agricultural lands and open spaces in and fringes of the city to be ensured. The right of development, which will become a legally negotiable financial instrument with the TDR, will make an important contribution for funding construction sector, which is one of the items that constitute the GDP. Development Rights can be purchased, sold and transferred with the Transfer of Development Rights. When the system of TDR became operational; aggrievances will be eliminated, cities will be transformed into planned, modern, liveable and sustainable cities".

These statements may be true for an ideal system that is well planned, the infrastructure is tailored accordingly, and the legal regulations are made right, but it also raises questions about the extent to which our country will operate in its current conditions. Because, despite of the urban transformation projects in which investments are directed at a large scale, the desired acceleration is not able to catch in the urbanization. Therefore, where will always be a risk of buying the certificates by the investors in the receiving areas under the actual value which owners gathered by TDR and the owner who want to trade their certificates can not compete with the companies that dominate the market.

Again, in the reality of our country, as it is done in successful TDR programs, it is necessary to explain the system to ones involved correctly and the rights to be adequately protected. Precautions should be taken to reduce the risk of individuals who will operate the certificate on the zoning market, the sending and receiving areas subject to transferring the right of development should be selected in advance and correctly, the risky areas must be abandoned, the right of transfer should be used for conversion purposes in areas with damaged and distressed buildings, development density upper limits should not be forced or altered very carefully, historical values, green areas and forests must be protected.

# 4.1 Development Right Certificate

The "Real Estate Certificate", which was introduced on 27.03.2017, a well-established and actually implemented for the first time, especially designed for the urban transformation projects could be an example for the Development Rights Certificate.

The aim primarily targeted with real estate certificates is to provide financing to the construction sector for residential or commercial building projects. Secondly, when it is not possible to buy real estate with credit or savings, it is possible to transform the real estate with more than one

person by investing in long term investment and convert it directly into a real estate or to sell it on the certificate market to be able to gain. Another goal is to make it possible for investors to become sharers of the foreseen gaining from the real estate. It is possible to use low-cost financing in urban transformation projects and to invest or acquire immovables in terms of savings.

It has been rearranged with drastic changes to include the urban transformation in 2016 and finally in 2017 to ensure the validity of the property certificates specified by the CMB and the requirements to be complied with in the issuance of the Real Estate Certificates dated 05.07.2013. The results that will emerge in the coming days will also be decisive for the certificates of development right.

#### 5. CONCLUSIONS AND RECOMMENDATIONS

The legal and administrative background of the TDR should be prepared in accordance with the current legislation and the requirements of the country and the views of the stakeholders should be taken. Coordination and participation of relevant public institutions and organizations should be taken as basis in establishing the legal legislation. It is necessary to secure the rights of the immovable property owners who are trying to gain profit by selling the rights of development directly or via TDR bank to the investors and in the weak condition against the investors in terms of law and registered rights.

TDR programs should be associated with local coverage and protection schemes, which define sensitive areas with high value agricultural land. In other words, previous conservation plans in and around the areas where TDR programs are being considered should be included and considered in the scope of the study.

Regarding to development rights; special care should be taken to ensure that the coverage (density and amenities) of the area receiving the credits (bonus or development rights) from the sending area is balanced. In some applications, the development credits cause the value of the unit to fall because the sending areas are too large; many lenders have faced situations in which very few buyers find themselves. In the provision of the equilibrium stated here, it is necessary that the selection of the sending and receiving areas and the market researches must be done correctly.

It is necessary to design the zones to absorb the increasing density, in accordance with the locally preferred density and height limits. Additional development rights exported from the areas need to be recognized within the scope of all infrastructure and amenities for the residents of this region to create value for the area. While the increase in value expressed here creates an attractive environment for the investor, the income from selling the development rights also generates more income for landowners. In the area, additional zoning increases are offered to

the buyer as a residential or commercial option to address different demands shaped in line with market expectations.

#### **REFERENCES**

Aken J., Eckert J., Fox N. and Swenson S., April 2008, The Cascade Land Conservancy, Transfer of Development Rights (TDR) in Washington State: Overview, Benefits, and Challenges.

Balamir M., 1993, Aktarılabilir İmar Hakkı Kavramı ve Türkiye'de Uygulanması, Planlama Kavram ve Pratiğinde Yeni Yaklaşımlar, 177-189, İstanbul, İller Bankası 60. Kuruluş Yılı Kutlama Yayını.

Been, V., Infranca, J., 2012, Transferable Development Rights Programs: Post-Zoning? New York University Law and Economics Working Papers. Paper 314. (http://lsr.nellco.org/nyu\_lewp/314)

Bratton N., Swenson S., Carroll T., Aten H., Cascade Land Conservancy, June 2009. A Resource Guide to Designing Transfer of Development Rights Programs in Washington State 615 2nd Avenue, Suite 600 Seattle, Washington 98104, <a href="http://www.cascadeland.org">http://www.cascadeland.org</a>

Downs, S.R., 2007, Transfer of Development Rights: A Viable Rural Preservation Tools. A Thesis Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfilment of the Requirements for the Degree "Master of Historic Preservation" Athens, Georgia.

Duyguluer F., 2014 Yerel Seçimlerine Doğru, İmar (Sürecinin Yeni) Araçları. <a href="http://www.mimarlikdergisi.com/index.cfm?sayfa=mimarlik&DergiSayi=389&RecID=3295">http://www.mimarlikdergisi.com/index.cfm?sayfa=mimarlik&DergiSayi=389&RecID=3295</a>

Dündar, S., 2010, İmar hakları aktarımı İstanbul üzerine bir inceleme, Yüksek Lisans Tezi, İstanbul Teknik Üniversitesi Fen Bilimleri Enstitüsü, İstanbul

Ersoy, M. 2001, "Fiziksel Planlama Sistemimiz ve Doğal Afetler", Planlama, 3, ss.16-23.

Hanly-Forde J., Homsy G., Lieberknecht K., Stone R., 2011, Transfer of Development Rights Programs, Using the Market for Compensation and Preservation, Cornell University.

Kocalar A. C., 2012. Transferring of Limited Rights Model (TLRM) with the highest priority in the Theory of Development Plans. J. Civil Eng. Urban. 2(3): 122-130.

Mataracı O., Haznedar H., Şahin N., Bayraktar Ş., 3-6 Mayıs 2017, "Kentsel Dönüşümde Alternatif Bir Yöntem: İmar Hakkı Transferi", TMMOB Harita ve Kadastro Mühendisleri Odası, 16. Türkiye Harita Bilimsel ve Teknik Kurultayı, Ankara.

Mengilli-Işıldak, F., 2012, Koruma Alanlarında İmar Hakları Transferi ve ABD Modeli, Kültür ve Turizm Bakanlığı, Uzmanlık Tezi, Ankara.

Otto K., 2010, Smart Growth through the Transfer of Development Rights: A selection of TDR case studies with relevance for the preservation of farmland, open space and other natural resources in New Jersey.

http://www.njfuture.org/wp-content/uploads/2011/07/Case-Studies-in-Transfer-of-Development-Rights-8-10-Intern-report.pdf

Patricia L. Machemer, Michael D. Kaplowitz, Thomas C. Edens, 1999, Research Report 563, Managing Growth and Addressing Urban Sprawl: The Transfer of Development Rights, Michigan State University Agricultural Experiment Station and Cooperative Extension Service

Pruetz, R., 2003, Beyond Takings and Givings: Saving Natural Areas, Farmland and Historic Landmarks with Transfer of Development Rights and Density Transfer Charges, Arje Press, California

Pruetz, R. and Standridge, N., 2008, What Makes Transfer of Development Rights Works: Success Factors From Research and Practice, Journal of The American Planning Association, Volume:75, Issue:1, 78–87.

Radford, R. S., 1999, Takings and Transferable Development Rights In The Supreme Court: The Constitutional Status of TDRs In The Aftermath of Suitum, Stetson Law Review Vol. XXVIII, 686-699.

Report to the U.S. Environmental Protection Agency, June 2013, Regional Transfer of Development Rights in Puget Sound: A Regional Alliance of Puget Sound Counties, Cities, the Puget Sound Regional Council, Forterra and Department of Commerce.

Stinson J. D., Fall/1996, Transferring of Development Rights: Purpose, Problems and Prospects in New York", Pace Law Review, Vol.17, Issue 1, Article 6, 319-357. <a href="http://digitalcommons.pace.edu/plr/vol17/iss1/6">http://digitalcommons.pace.edu/plr/vol17/iss1/6</a>

Tavares, A, 2003, "Can The Market Be Used To Preserve Land? The Case For Transfer of Development Rights", European Regional Science Association 2003 Congress. <a href="http://www-sre.wu-wien.ac.at/ersa/ersaconfs/ersa03/cdrom/papers/292.pdf">http://www-sre.wu-wien.ac.at/ersa/ersaconfs/ersa03/cdrom/papers/292.pdf</a>

Theilacker, J., Transfer of Development Rights. http://conservationtools.org/guides/12-transfer-of-development-rights

Triedman, L., Caldwell C., Sangree E. and McCauley M., 2014, A Study of the Feasibility of a Transfer of Development Rights Program in Lewiston, Maine.

# http://scarab.bates.edu/community\_engaged\_research/17/

Yamak, T., 2006, İmar (Yapılanma) Haklarının Devri: Model-Uygulama Alanları ve Sonuçlar, Planlama Dergisi 2006/1, 63-73

Walls, M. and McConnell V., September 2007, Transfer of Development Rights in U.S. Communities: Evaluating Program Design, Implementation, and Outcomes. <a href="http://www.rff.org/files/sharepoint/WorkImages/Download/Walls\_McConnell\_Sep\_07\_TDR\_Report.pdf">http://www.rff.org/files/sharepoint/WorkImages/Download/Walls\_McConnell\_Sep\_07\_TDR\_Report.pdf</a>

T.C. Resmi Gazete, 2863 Sayılı Kültür ve Tabiat Varlıklarını Koruma Kanunu, 18113, 21.07.1983.

#### **BIOGRAPHICAL NOTES**

Dr Tayfun Cay is a Prof. Dr. of Geomatic Engineering at the Selcuk University of Konya, Turkey. He has been with Selcuk University since 1989. He completed his PhD study at Selcuk University (1994), in "Project planning and management in land consolidation activities" subject. He has an MSc from Selcuk University, Department of Geomatic Engineering (1989), and a BSc from Selcuk University (1987), in Geomatic Engineering. His research interests; Land consolidation, public works, cadastre law, project planning and management and GIS.

Yusuf Çiçek is graduated from the Karadeniz Technical University in Trabzon/Turkey in 1987 and obtained his master degre in 1990. He studied on data structures and contouring algorithms in Zurich Technical University. He has worked for private sector and government and took various engineering and managerial roles in the fields of photogrammetry, terrain evaluation, pipeline engineering, GIS, land acquisition, information systems, data management and authority liaisonn in Turkey and abroad. He is a post graduate student at the Selcuk University.

#### **CONTACTS**

Yusuf Çiçek Oran Mh. Hayri Çeçen Sk. No:33/42, Çankaya Ankara, TURKEY Tel. +90 536 4945783, +43 660 1670950 Fax + Email: ycicek@yahoo.com Web site:

Prof. Dr. Tayfun Çay Selçuk University, Engineering Faculty, Deapertment of Geomatics, Selçuklu Konya / TURKEY Tel. +90 332 2231944 Fax + Email: tcay@selcuk.edu.tr Web site: