

To code or not to code? Investigating the urban-rural transect and other Smart Code instruments in the territorial development context of Albania. Case Study: city of Shkodra

keywords / urban-rural transect, form-based codes, Smart Code, land development, comprehensive integrated approach

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Abstract

Following the subtle tendencies of 'europeanization' of planning traditions in EU member countries, Albania has seen some drastic changes in the way it approaches spatial (territorial) and urban planning. The level of normativity has increased, and the responsibility to establish norms and standards is shared between the central and local governments. Even though the system is supposed to be more flexible, it adopts various concepts of the post-New Urbanism planning framework, including zoning, form based codes, etc. These concepts are part of a unified framework widely applied in the US states, called Smart Codes. This paper aims at investigating these morphology-based tools in the case of Shkodra city, as a way to discuss on the need for coding and normativity in land management.

Tackling the discourse of normativity in land management

One of the most unsettling questions of modern planning, that has emerged in recent decades, especially in the face of housing informality and planning for resilience, is: 'Do standards make planning practices rigid and inflexible? Do they do more harm than good?' According to Kevin Lynch (1981), normative theories of urban design can help us 'to know a good city when we see one', by creating the best urban environment. This is why, throughout city development history, normative planning has been present, in implementation and, in some cases, in theory also. Urban indicators are one of the most common and widely-used tools in worldwide planning practice. It is important to underline that there was a considerable paradigmatic shift that occurred in the planning process, from the 60's and 70's, when the approach was technocratic and rational, to the mid 70's, where planning was seen as a political discourse, and finishing with the 90's, where this approach was taken

into extremes.(Pissouris, 2013) All these aspects emphasize the relation between forms and codes in spatial planning, and confirm the fact that, albeit it is rather 'refused' by the theoretical discourse of the last decade, normativity is still a very important aspect of spatial planning systems, especially land development.

Furthermore, we can differentiate between 2 conceptually different contexts in planning, namely in Europe and in the USA. In the latter, post-modern planning is focused thoroughly on New Urbanism principles in the last 30-40 years. This movement emerged as one of the most comprehensive theories on planning, encompassing both formal characteristics (following concepts like 'Collage City' by Rowe and Koetter, or 'Wholism' by Alexander); and environmental ones, like 'livable streets' from Jacobs and Appleyard, and 'Urban Quarter' by Krier. The 'strength' of this approach lies in the fact that new urbanists believe it is important to match the physical development characteristics of a place within the appropriate typology

	PLANNING APPROACH	PLANNING LEGISLATION	PLANNING STANDARDS	DEVELOPMENT STANDARDS	LEVEL OF PLANNING	APPROACH
Italy	urbanist tradition	Legge Regionale Piano municipio	● ● ●	● ● ●	region/province/commune	Highly standardised
UK	land use planning	Local Development Framework Unitary Development Plan	●	○	town	Negotiation process/ Development based on permits given case by case, not development standards
Finland	comprehensive approach	Land Use Building Act Building Ordinance	●	●	municipality	Not rigid / principles of planning and design
Germany	comprehensive approach	Bauleitplanung Bebauungsplan	● ●	● ●	federal / state/ local government	Rigid system / multilevel planning
France	regional economical development	Plan Local d'Urbanisme Carte Communale	● ●	●	regional / local government	Urbanism oriented but with tendencies towards negotiations
Croatia	urbanist orientation	Law on spatial planning	● ●	● ●	national / local	Adapting to Sectorial Laws (Coastal) / Energy efficiency
Macedonia	urbanist orientation	Law on Spatial and Urban Planning General urban development plan	● ●	● ●	national / local	Numerous planning instruments / EU influence
Russia	urbanist orientation	Land use zoning ordination Detailed planning	●	●	national / local	New Legislation similar to USA / not applied yet
USA	New Urbanism/ Mixed	Zoning Plan	○	●	local	Strict zoning performance / incentive zoning
Brazil	Mixed		○	○	national / local	Not rigid / not applicable / doesn't address informality

Tab 1 / Use of planning and development standards in different planning traditions, Europe
source / author

for that place (Bohl, 2000). This means to fully coordinate spatial typologies with development standards, in a bilateral way. This can be only achieved in a very ‘unified’ development model, as it is represented by the typical American city. In this case, the principles of New Urbanism argued against the massive suburbanization and expansion of cities.

Obviously, in Europe this was not the case. Not only do European cities have completely different challenges in terms of urban form, but they also don’t refer to an integrated approach to land development. The reason behind this is obvious: planning is considered a process that is closely linked to a country’s history, institutional culture, legislative system, etc. Thus, even though the EU issues specific mandatory directives on sectorial issues, like water management, common agricultural policy, etc, the approach to planning is more flexible. The only unified instrument that regulates planning in EU is the European Spatial Development Perspective, which merely suggests principles for sustainable planning. Land development is even less regulated/unified, with instruments varying from Euclidian zoning and development regulations, to flexible zoning and well-established negotiating processes in land development. This is also linked to the categorization of spatial planning traditions from EU Compendium of Spatial Planning (CEC, 1997) into 4 models: land use planning, urbanist tradition, regional economic development and comprehensive integrated approach. Table 1 gives an overview of how rigid

land development and normativity can be in European countries, based on their planning tradition. Therefore, it is needless to say that it is challenging to develop a comprehensive model for land development in European countries, as it is suggested by the New Urbanism approach.

Smart Code, as the new frontier of form based codes

Smart Code is an integrated land development ordinance, created by Duany Plater-Zyberk in 2003, with the aim of having a more ‘new urbanism’ oriented legal model of city development. Essentially, it is a form-based code that incorporates Smart Growth and New Urbanism principles. But what does the term ‘form based code’ refer to?

Form-based codes are a land management instrument used in the USA that falls into the category of zoning, but also differs considerably from conventional zoning. This coding system divides the territory into different districts based on the character and intensity of land development, as well as the desired urban form. Zoning usually regulates only land use, and development standards (maximum building height, distances, FAR, coverage ratios, etc.). But form based codes regulate things that are not typically part of zoning, such as the design of streets, sidewalks, and other public spaces, which conventionally would be regulated by subdivision manuals, or public work manuals. Thus, Form based codes bring all these manuals together, in an integrated document that addresses



Fig1 / A typical urban-rural transect, divided into zones
source / SmartCode 2003, Duany Plater-Zyberk & Company

land use, development indicators, provision of public/non-profitable services and subdivision regulations. The integration ensures that these documents are coordinated and coherent with each other. (Marshall, S., 2011)

Thus, also Smart Code is a unified development ordinance, but it addresses development at all scales of design, from regional planning down to the single building. This extended, comprehensive approach, which incorporates integrated ideas of how parts of a city should be linked to each other, in addition to how each part should be developed, stems from the concept of the Rural - Urban Transect. (Center for Applied Transit Studies, 2016) This makes Smart Code a very innovative instrument compared to separated-use zoning, thereby able to integrate a full range of environmental techniques. The ideology behind Smart Code, as envisioned also by New Urbanism theories, relies on the fact that expected/desired outcomes are based on known/successful patterns of urban design. Therefore, the document is very efficient in terms of preparation and implementation, and was adapted by more than 50 cities in the USA, since its development in 2003.

The Smart Code is a model code, a template, with metrics designed to create a generic medium-sized American city structured into walkable neighborhoods, which require a mix of land uses and public spaces with a sense of enclosure. Moreover, it emphasizes the need to set regulations on urban form, rather than on

land uses (thus, it is a form-based code). The zoning principle within the Smart Code is designed to create harmonious habitats ranging from the very rural to the very urban.

According to this concept, Transect Zones are divided as follows:

T1 Natural Zone consists of land in natural state, or unsuitable for settlement due to topography, hydrology or vegetation.

T2 Rural Zone consists of sparsely settled lands in open or cultivated state, like woodland, parks and open space areas, with typical farmhouses, agricultural buildings or cabins.

T3 Sub-Urban Zone consists of low-density residential areas, adjacent to higher density zones that include some mixed use, with irregular roads that accommodate natural conditions.

T4 General Urban Zone consists of mixed-use but primarily residential urban fabric with a variation of single-family and row-houses, defining medium-sized blocks.

T5 Urban Center Zone consists of higher density mixed-use buildings that accommodate retail, offices, row-houses and apartments with a tight network of streets and buildings set close to the sidewalks.

T6 Urban Core Zone consists of the highest density and height, with the greatest variety of uses, and civic buildings of regional importance, typically associated with downtown (Duany Plater-Zyberk & Company, 2003)

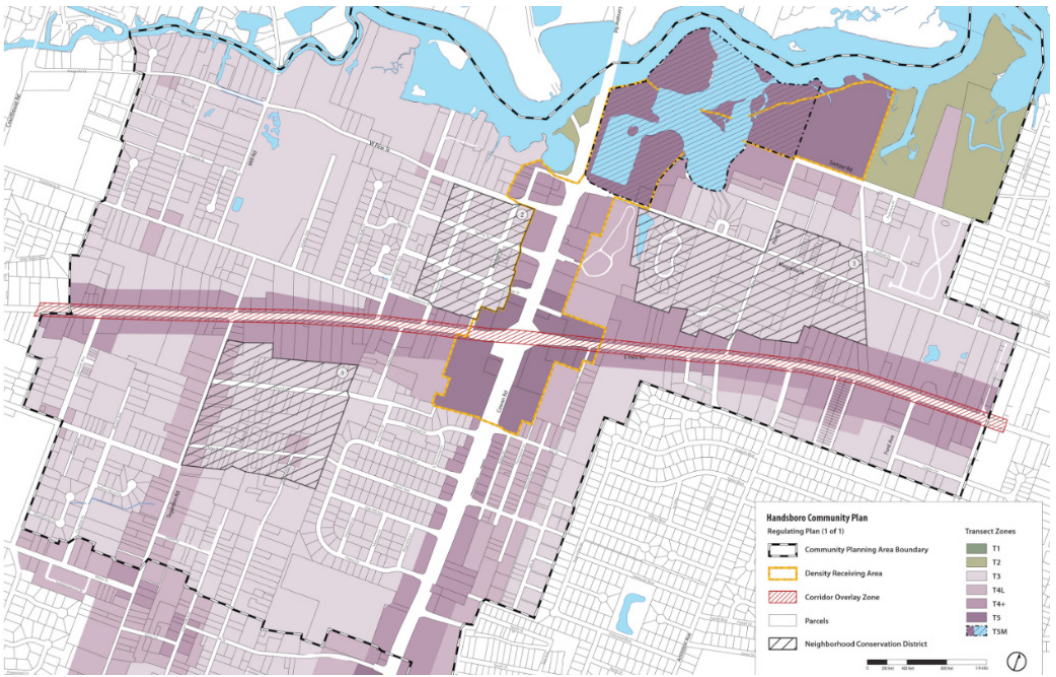


Fig2 / Example of transect zoning in Handsboro Community Plan, 2008
source / Handsboro Community Plan

The shift in planning approach in Albania from a land development perspective

Can we find traces of this concepts in the Albanian planning legislation? Having a strong "urbanism oriented" approach towards city development, Albania has traditionally adapted regulations on urban scale, such as norms for public space, norms for commercial areas, intensity conditions, etc. In terms of land development, the concept of division of territories into urban groups, blocks, complexes, and neighborhoods, where each was part of the other and contained extra public/private services, was a theoretical way to control the city through form. Nevertheless, these concepts were rarely adapted, especially after the fall of communism: cities became more mixed, unprofitable land-uses were not provided by the financially-weak municipalities, and the inner migration processes caused disbalances that were not predicted previously.

After 2009, a new law¹ was introduced, which had a more holistic approach to planning, taking into consideration the newly established private property regime, economic and social aspects, larger scale overviews, etc. This was accompanied by a refined model of land development instruments, which encompasses elements of zoning, form/based codes.

The General Local Plan (GLP) is the main local planning instrument, which defines all proposed interventions, development scenarios and investments for the next 15 years. Accordingly, it divides the municipal territory into structural units, which constitute the smallest scale where land development standards and norms can be applied. The structural unit is the equivalent of a zoning area. For each structural unit, the GLP determines a number of standards, as follows:

- Existing situation: land use categories, FAR PCR, PPCR and RCR, existing population²
- Proposed land use categories and subcategories / proposed functions / allowed, prohibited, and conditioned activities
- Proposed Spatial Typologies / proposed Interventions in the unit / proposed phasing
- Proposed Development standards: FAR, PCR, PPCR, RCR, max. height (in storeys and meters), min. development plot area, min. distance
- Proposed Planning standards: Projected population, No. of users, Parking area, Green area
- Use of innovative instruments (when applicable): use of Transfer of Development Rights, of Bonus FAR, of Detailed Local Plan, etc.

1 / Law No. 107, dated 31.7.2014. On Territorial Planning and Development

2 / In this paper, the used development indicators represent the following:

FAR = floor area ratio: Ratio between built area and buildable plot area.

PCR = plot coverage ratio: Ratio between ground cover area and buildable plot area

PPCR = public parcel coverage ratio: Ratio between area of all public use parcels (excluding roads) and the total area

RCR = road coverage ratio: Ratio between the road surface and the total area

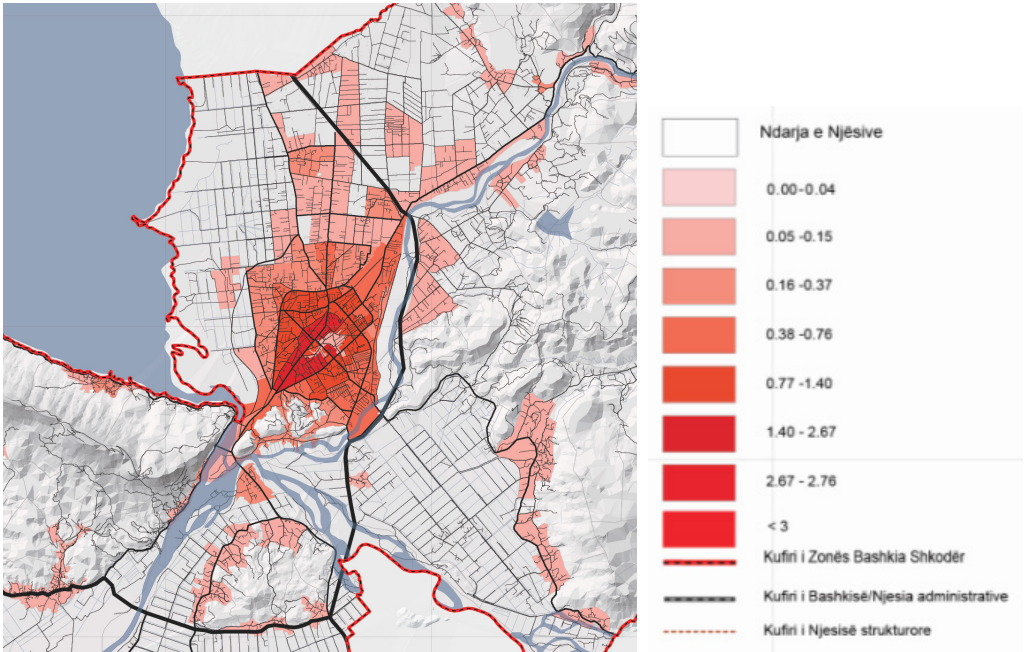


Fig3 / Example of division of territories in structural units: Fragment from General Local Plan of Municipality of Shkodra, map of distribution of proposed FAR per structural unit
source / Municipality of Shkodra, Polis University, Metropolis, Arizona State University, 2016

As it is obvious, the GLP contains a unified document of regulations (ordinance) that addresses proposed land use, typology, development standards and planning standards, as well as indications on innovative instruments,

Nevertheless, the GLP does not provide pre-determined spatial typology categories, and the link between the existing spatial typology zoning, and the division into proposed structural units, is not fully articulated. Structural units can have one or more proposed spatial typologies, respective to their character.

In the Albanian context, studies show that it is very difficult to link spatial typologies and urban form with development indicators, such as FAR, PCR, etc. This is mostly because new development rarely occurs in unbuilt areas. The most predominant typology of areas in Albanian cities are the ones with a mixture of tower typologies, with longitudinal buildings and single houses. In these cases, FAR values vary from 2.5 to 4, CPR from 50-80% and density 20-50 buildings per ha³. These values indicate considerable gaps, which means that 'unified models' are hardly adaptable in these contexts

Replicating the Urban-Rural Transect to Shkodra city

The Albanian legislation doesn't propose any land management instrument resembling the urban-rural transect.

Nevertheless, the GLP of Shkodra provides with some principles similar to the form based codes: the division of the territory into structural units is done in a way that ensures more flexibility in setting standards. The proposed land use for each unit is mostly mixed, with indications of main categories. There is obvious tendency to limit the areas of informal expansion and to protect agricultural land. Anyway, the adaptation of the transect concept in the city of Shkodra would be very difficult, as illustrated in the following part.

The image below shows the layout of Shkodra city, as framed by the buildings. The only information visible is the height. Given only this attribute, and disregarding the actual development indicators in the area, or the existing division into structural units, this study tries to divide the territory into T-zones, as designated by Smart Code (in 7 main categories).

It is clear that, given the existing typology of the city, and the development dynamics (both in the center and in the suburbs), it is very difficult to have a gradual transition from one zone to the other. This is true with many Albanian cities, where development pressure has led to development in density in the core, and development in sprawl in peripheral natural and/or agricultural land. In terms of using the Smart Code as a managing instrument in this context, the effort would be pointless.

3 / For reference, see 'Territorial Typologies in Albania', Policy Document, Planning and Local Governance Project, USAID, with the contribution of the author, Toto, R., et al.

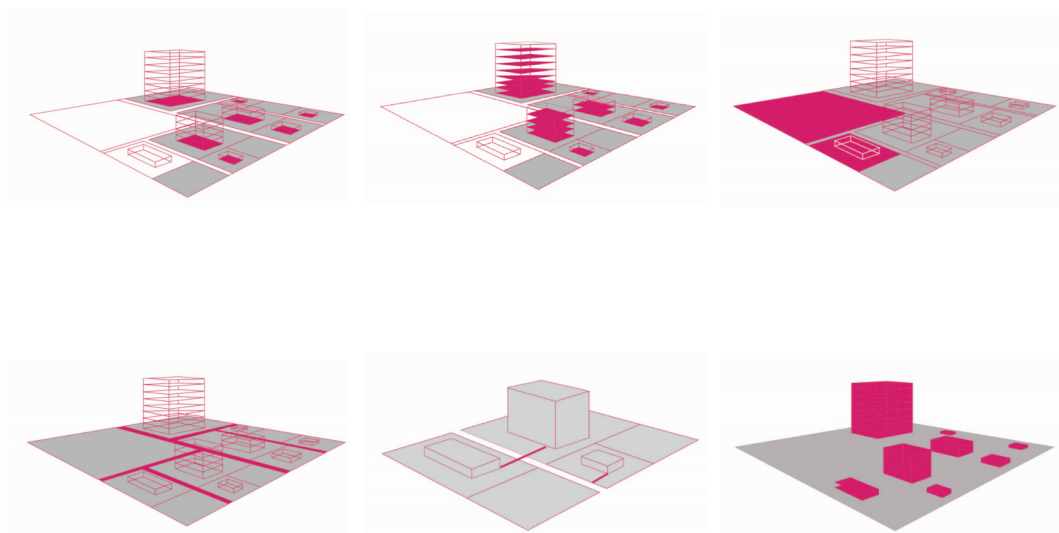


Fig4 / Representation of development indicators in the Albanian legislation (from top left to bottom right: PCR, FAR, PPCR, RCR, distance, density).
source / author

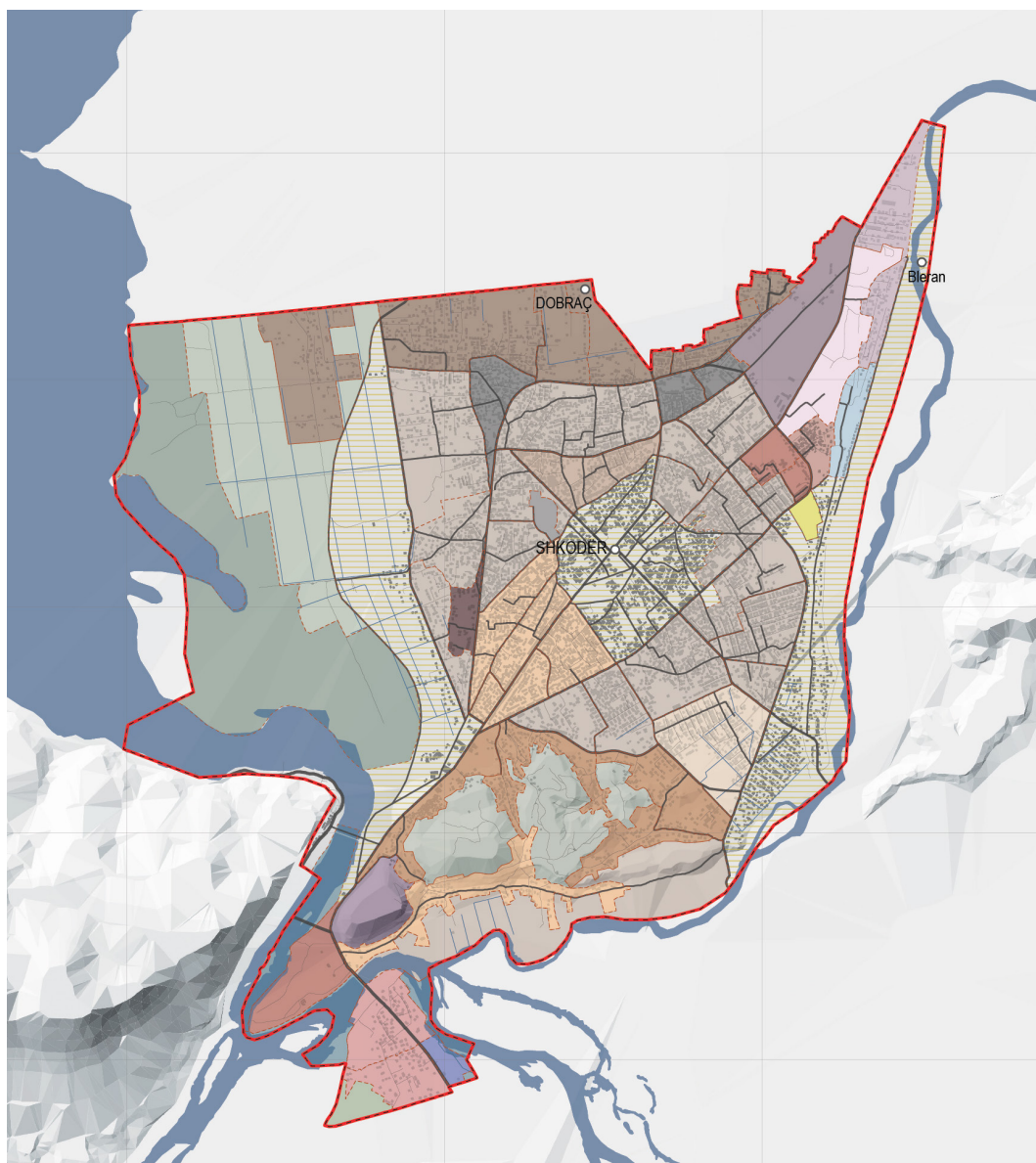


Fig5 / Fragment from General Local Plan of Municipality of Shkodra, map of 3 main proposed subcategories of land use per structural unit
source / Municipality of Shkodra, Polis University, Metropolis, Arizona State University, 2016



Fig6 / Map of building height in the city of Shkodra
source / author based on Municipality's data (2016)

The issue of property relations is also very delicate in this perspective: if you designate a 'sharp' border between two consecutive T-zones, and appoint high FAR to one, and lower FAR to the other, in order to create a 'fair' urban environment in terms of density, then properties in one of the T-zone will profit more. This situation is emphasized in the scenario of Shkodra (and any other Albanian city, for that matter), where there is obvious discontinuation between T-zones. Then the different development parameters would create major disparities, and in turn, speculations in real estate. In other words, this would replicate the problems of the 'containment paradigm' (a.k.a. the use of yellow line as border of urbanised area), but in larger scale – not only for the division of urban and suburban, but for every unit inside the city.

Following is an interpretation of the characteristics of each of the Transit Zones that can be replicated in the context of Shkodra:

The transect in Shkodra can be divided into 4 main categories (out of 6 provided by the Smart Code model) and 1 category of special use. This means that all zones ranging from T2 to T4, which contain mainly single houses, row-houses, low density, medium density, open spaces, etc., are merged into one entropic urban-agricultural-natural composition.

The urban center differs in typology from the 'typical center', in terms of building typologies. Medium density row houses

are substituted by longitudinal buildings, mixed with single family buildings, and towers.

One other identifying element, is that the special district, which is supposed to be secluded from the residential areas, is situated very close to the center of the city in the case of Shkodra.

As far as the T1: natural zone goes, in Shkodra's case this mostly encompasses areas prone to flooding, and without any rendimental agricultural potential. This overview shows what is also obvious from site observations: the shift from natural to urban core is not fluent.

Thus, it is very difficult to fully identify the transect areas in the city of Shkodra, based solely on the principles of typological and formal characteristics specified in the Smart Code. If we take into consideration the fact Transect Zones in the Code are given specific development indicators because of their inherent character, and are sub-categorized in a very detailed way in various Sub-T-Zones, then the discussion for Shkodra becomes very complex.

To code or not to code? Final thoughts

The issue of normativity in city planning can be regarded as challenging, nevertheless it is unavoidable to ensure provision of public goods and fair distribution of value captured from land development.

Smart Code is a very easy instrument to help draft land development regulations.



Fig7 / Possible division of the city of Shkodra into T-sections, as indicated by Smart Code
source / author

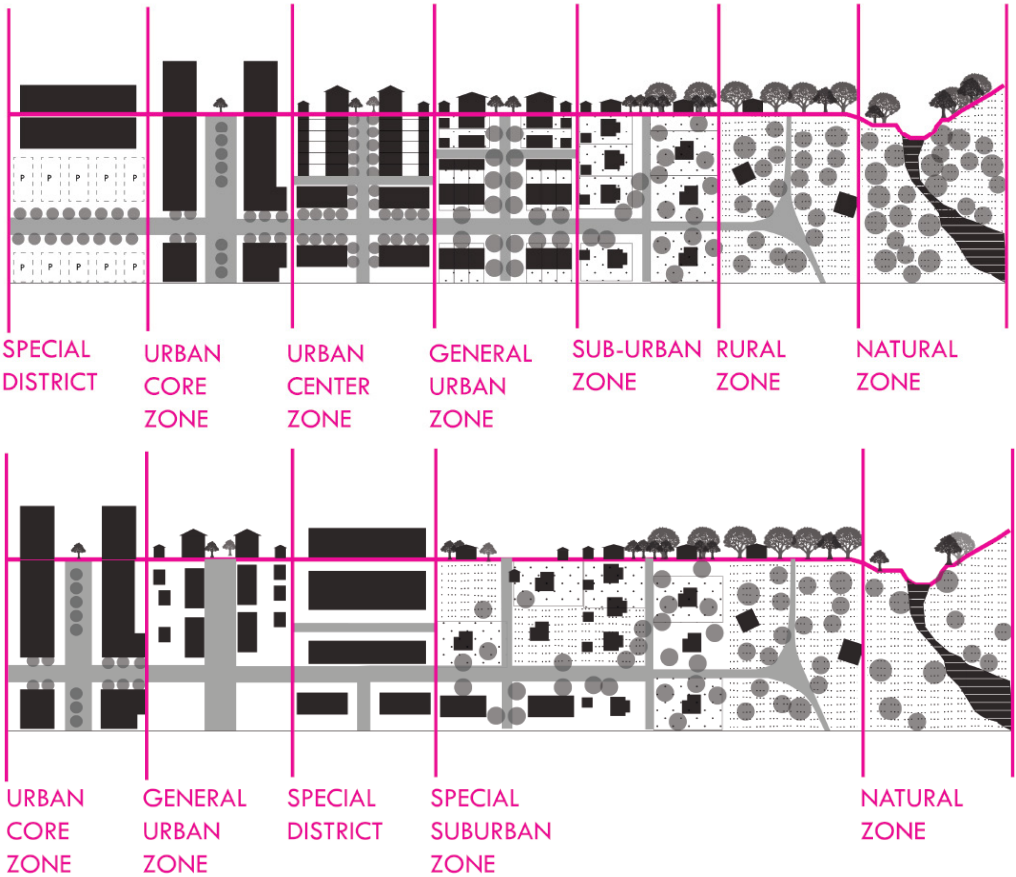


Fig8 / Comparative diagrams between the ideal transect as proposed by Smart Code, and the transect zones as can be found in Shkodra city
source / author based on Duany Plater-Zyberk & Company (2003)

Nevertheless, conventional zoning cannot be substituted in the whole territory. Given that Smart Code is supposed to be implemented in existing or potential walkable neighborhoods, all areas that do not fall under this category, cannot be successfully addressed by Smart Code (i.e. industrial areas, military areas, suburban

areas outside the city, etc.) These models encourage repetitiveness in urban form, and are based on the assumption that whatever density/typology/land use works for a city, will work for another one as well. This is very difficult to replicate in the Albanian context.

The concept of the urban-rural transect addresses in an integrated way the question of 'where the city ends'. Transect studies help define the border between urban-rural, and the differences between urban, suburban, peri-urban areas.

Nevertheless, transect concepts don't take into account polycentric tendencies in cities, especially in terms of land value. Even though the land development system in Albania is based on a wide array of standards, if they are not correlated to a given typology (spatial and building typology), then the outcome will be oriented from the developers, rather than from the city. Thus, models of typologies of space and building should be introduced more thoroughly in the Albanian legislation, both as mandatory or non-mandatory.

The division into structural units (as used in Albanian legislation) is by far the most successful method of zoning for the Albanian context, which, if used wisely, can be both flexible, as well as easy to implement. Nevertheless, there is significant lack of capacities of local authorities to implement the division of territories into structural units in a 'smart' way. This can cause, at the best, loss of large opportunities for development in certain areas, where the division of structural units, the appointment of unrealistic standards, etc., prevents development instead of encouraging it; and, at the worst, stepping back to the patterns of informal development, or corruption. Therefore, the situation calls for more 'standardized' models of division into manageable zones. They cannot be 'borrowed' by other models, but designed locally according to these enhanced models, and implemented in a timely way, through a series of trials and revisions. This way, the territorial dynamics and the citizen needs can be fully articulated in planning documents, and respectively implemented.

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*Fig1 / Bird view of the city peripheries
source / Eranda Janku*