

Land Use Management as Key Part of Metropolitan Governance for Sustainable Urbanisation

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1 Introduction

Management is the human activity of working together with the intention of accomplishing desired objectives. Land use management is the process of managing the use and development of land, in which spatial, sector-oriented and temporal aspects of urban policies are coordinated. Land use management covers the debate about norms and visions driving the policy-making and sector-based planning both in the strategic and operative time spans, as well as the spatial integration of sectoral issues, decision-making, budgeting, participation, implementation of plans and decisions and the monitoring of results and evaluation impacts. Sustainable urbanisation is a process and does not envisage blanket solutions or recipes for all the cities worldwide, especially if it comes to the transferability of models for sustainable land use management as a tool for urban development.

The sustainable management or land use in view of different cultural / planning framesets is the main focus of this paper. It is based on the experience of a European working group within the URBACT programme, funded by the European Union. These experiences of the working group on land use management for sustainable European cities (LUMASEC¹) are the core of the paper and are demonstrated by two case studies which show two different approaches of land use management in the European variety: the case of St. Étienne Métropole (France) working on the regional scale and with a focus on involving different stakeholders and the case study of an urban quarter in the city of Baia Mare (Romania) focusing the urban pattern. Based on these two case studies – and further research and additional case studies within LUMASEC – a model of intervention on different layers will be introduced in the current paper. The last part of the paper focuses the transferability of the model of intervention from a European perspective to the perspective of developing countries. This will be discussed by the help of a case study of the Jakarta Metropolitan Area (Indonesia), referred to as the greatest urban agglomeration within Southeast Asia, which is faced with the mega-urbanization of Jakarta-Bandung Region. An integrated development plan to manage this functional region is indispensable with regard to the increasing pressing challenges.

2 Case Studies on Sustainable Land Use Management

The Case of St. Étienne Métropole: The City And Its Urban Centre (France)²

St. Étienne is a city of 175.000 inhabitants integrated in a urban centre of 400.000 inhabitants. In the 19th century, St. Étienne had a flourishing heavy industry with mines, arms and iron factories which laid the foundation stone for the city's urban success. However, a huge economic crisis strokes the local industry from 1970 until 1990. These twenty years of economic decline had considerable social and urban consequences. Many households were affected by unemployment but the most severe social decline concerned people with a low qualification level. Especially migrants had to face these difficulties. The attractiveness of St. Étienne decreased. Large brownfields appeared with the departure of big firms. The high- and medium-income families moved from the city centre to the suburb to live in one single dwelling.

Ever since, the economic structure of St. Étienne has deeply changed. Although industry is still present, firms are now essentially small and medium size. Only 5.3% of the companies had more than 20 employees in 2007. A diversification of industrial sectors can be noted with the development of industries in the optical, design and biomedical department. The majority of

companies work for big firms located in other places but they increasingly develop high value processes making them less dependent. The reinforcement of the cooperation between St. Étienne and Lyon or other urban centres of the Lyon's metropolitan area is an important characteristic of the past decade. The metropolitan area of Lyon / St. Étienne has 1.200.000 inhabitants. Local authorities of the different urban centres develop common projects and policies (regarding transport, economic and spatial planning). The University of St. Étienne and the University of Lyon have founded a common Pole to reinforce their scope of lectures and to develop common research projects.

Spatial Patterns and Land Use Issues in The Region

In the urban centre of St. Etienne, large economic and urban brownfields needed to be recycled. Important land use actions have been implemented to accelerate the recycling of housing and economic brownfields. In 1999, a national public land establishment called *epora* has been created to accelerate the economic brownfield regeneration. *epora* was funded by *erdf*, national and local subsidies. This public money has permitted to find solutions for polluted lands and to sell them at very competitive prices to accelerate their regeneration.

In 2005, a new national public structure has been set up to accelerate the urban regeneration of the core city centre: *epase* is targeted on the redevelopment of central districts, for instance around the main railway station (St. Étienne Châteaueux), the old weapon manufacture (transformed into a design centre with university, high school, firms, retail centres, housing), and two old residential neighbourhoods (Crêt de Roc, Beaubrun).

Vacant habitations were pulled down in the social housing district located at the city centre periphery. These projects were funded by the National Urban Regeneration Agency (*anru*) with the support of local authorities. Rebuilding projects have permitted to offer new housing to families living in badly integrated buildings. The objective is also to attract new resident to these neighbourhoods like first owners households by proposing low cost, high quality housing.

On the other hand, urban sprawl must be limited because of its negative consequences on the development of the urban region of St. Étienne like e.g. the alteration of landscape quality, the increase of car transport demand or social segregation.

However, the implementation of highly effective operational tools has not lead to the ending of land use issues. Three main challenges remain:

- 1) To build an integrated land use strategy instead of having sectoral interventions. For example, the public agency in charge of the urban and industrial brownfields (*epora*) wants local authorities to adopt a cross-sectoral land use strategy. *epora* considers their actions as economically and operationally inefficient due to the lack of a global strategy. If local authorities disposed of a mid and long term strategy, the financial costs of their interventions could be reduced, whereas short term actions imply the exposedness to market trends and thus the acceptance of market prices.
- 2) To improve the linking of land use planning, urban planning and operational projects in order to be able to build up housing and to develop jobs in urban centres characterised by quality, diversity and density. To achieve this, the functional diversity of new programmes needs to comprise large-scale operations as well as land control measures on wide sectors. Without these standards, only diffuse projects will be delivered and often only residential plots without economic activities like shops.
- 3) To develop land use management on a large scale. Effects in the field of brownfield recycling depend on urban sprawl organisation or limitation. The space consumption has been important in the urban St. Étienne region even if the demographic context has not been dynamic (between 1999 and 2005, 440 hectares have been consumed by new urbanization). The price of land in recycled places will remain higher than in rural ones unless a limitation of new residential settlements in rural areas will be achieved.

Governance Approach for an Integrated Land Use Strategy on the Regional Level

The elaboration of an integrated land use strategy was at the heart of the Local Action Plan elaborated by St. Etienne Métropole, political institution of inter-municipal cooperation grouping 43 municipalities. St. Étienne Métropole is financed by business tax (called *taxe professionnelle*) as well as by national allocations from the government.

The methodology adopted was articulated around four steps:

- 1) The GIS analysis has permitted to locate the largest extension areas for economic and residential development and the main economic and urban brownfields. Satellite photos were used to define potential development land (in continuity with existing urban areas, proximity of public transport and infrastructures). The urban planning documents have been compiled with GIS to check if the potentialities defined by satellite could be urbanized or not.
- 2) An analysis of each area (in extension or in urban renewal areas) has been delivered by a team of architects, geographers and economists to determine its strategic character for the implementation of St. Étienne Métropole's policies. This work has led to the definition of prior-ranking geographic areas in terms of land use management: The strategic places where to develop mixed urban renewal projects (housing, activities, green spaces) with a high quality; the strategic new housing areas where to develop new urban forms (density, quality, diversity of housing, etc.); the areas concerned by land use conflicts.
- 3) Indices were attributed to each area selected as strategic in terms of tools to implement, budget and calendars. The Local Action Plan designated the places where St. Étienne Métropole should control their development: the tools and the procedures for the intervention of St. Étienne Métropole (spatial planning documents, development tools); the strategy for places where the control the municipal level is in charge of controlling the development of a project regarding contracts, financial subsidies and expertise.
- 4) The land use strategy involves the articulation of regulatory tools and financial resources. In a context of limited public budgets, the strategic approach is therefore based on an understanding of land markets (observation of land, monitoring of pending sales), an appropriate use of all existing tools (regulatory, financial, negotiation tools, agreements) and a formal framework for a partnership with local owners and operators acting on the territory (target agreement). The Local Action Plan also implies that local elected officials are aware of the various tools of action laid out in the land development factsheets illustrated with local examples. Through its strategic vision and its leadership role, St. Étienne Métropole as advisor of operational actors may well be the guarantor of a sustainable implementation of development planning.

Lessons Learned and Building Capacity

The Local Action Plan has permitted to reinforce the dialogue between the St. Étienne Métropole's services. It was an opportunity to develop inter-sectoriality within the local administration. The Local Action Plan has also permitted to develop the local GIS on land use aspects. Information about operational projects has been integrated into the GIS. A basis of strategic areas has been set up and will be updated by St. Étienne Métropole. The Local Action Plan has permitted to show at the local elected officials the necessity to adopt an integrated land use policy. However, the case study has also shown that challenges in land use management are still existing.

A lack of public-private partnership in land use management

The PPP with landowners is not fully developed in the governance process of land use. Sometimes a municipality succeeds in organising cooperation between property landowners concerned by a future urbanization. Politicians try to negotiate with landowners the calendar for the urbanization aiming at optimising the infrastructure project (roads, energy networks).

Three main reasons can be advanced to explain the lack of private landowner's mobilization. First, the landowner will not be the developer (this is a huge difference compared with England, for instance). Second, the heritage of a common representation in which public and private keep different functions is still vital in France. Decision making with private partners is not shared by public leaders (political officials or civil servants). Third, in small municipalities, the mayors know personally the main landowners and avoid making private business transactions with them.

A difficulty to implement strategic planning goals at an operational scale

The institutions in charge of regional spatial planning, but also the institutions in charge of operational actions, ask for a land use management but they fail to involve political local authorities. Of course, each political local authority agrees with the general principle to elaborate a global land use strategy. But the operational pressure leads to the fact that land use action to set up projects is given priority, instead of elaborating a global land use strategy. Land use is still seen as related to operational projects and not considered as a tool itself.

Moreover, due to the repartition of competences between different local authorities, no one feels neither the legitimacy nor the authority to take the leadership in land use management. All spatial and urban planning documents in France converge to fix quantitative and qualitative objectives about urban development, as well as new development areas. But very few are the planning documents which set precise objectives about land use management. The Housing Programme of St. Étienne Métropole (called Programme local de l'habitat, PLH) proposes tools and funding procedures to foster the development of affordable housing programmes in urban regeneration areas. At a larger scale, the local Master Plan (called Schéma de cohérence territoriale, SCOT) comprises a list of priority urban renewal projects with precise indications on urban design and densities, and suggests a public control to deliver them. Though, these examples of orientations in land use management for the implementation of the planning strategy are quite rare in the French urban planning context.

The strategic level should be the institution in charge of strategic spatial planning. The SCOT is a Local Master Plan covering a large area, permitting to address transport, housing and environmental issues. However, the body in charge of the SCOT, Sud Loire stays a young institution in St. Étienne's area. The SCOT has not yet been adopted and no such document has existed before. St. Étienne does not avail of any tradition in urban and spatial planning. The political leaders of SCOT do not dispose of proven project implementation strategies yet. Huge conflicts in interest still exist between them concerning housing or retail developments. The implementation of strategic orientations is not limited by a sort of "gentlemen agreement" any more: Instead, political officials involved in the SCOT Sud Loire refuse to contribute directly to the local plan development process at municipal level.

The Brownfield Regeneration Issues: The Example of Ferneziu Area in Baia Mare (Romania)³

The city of Baia Mare (138.000 inhabitants) is located in the central-western area of Maramureş County, on the middle course of Săsar River, at an average altitude of 228 meters. Maramureş is a geographical, historical and ethno-cultural region in northern Transylvania, along the upper Tisza River; it covers the Maramureş Depression and the surrounding mountains that form part of the north-eastern Carpathians. Baia Mare has been a mining town with related industrial areas for processing of copper, lead, silver and gold for a long time. After the revolution of 1989, the city's de-industrialization began. The result of this de-industrialization led to the total closure of the mines, but not to the total cessation of the related industrial processing of minerals. Although two large metallurgic factories are still producing, their production rates and impact on the environment now seem limited compared to what has happened since the war until the early 1990s.

It is not to be forgotten that Baia Mare is the place where one of the largest environmental disaster in Europe happened: the pollution of the Tisza River (a tributary of the Danube) in 2000, due to the overflow of an artificial lake (the disaster was provoked by the Esmeralda gold mine).

Throughout the past 15 years, Baia Mare has initiated a development that will bring the city towards forms of economy more strongly linked to services and new technologies (based on R&D), and especially address the serious environmental damage left from the cultivation of land mines, but mainly from the processing of minerals.

Baia Mare is also the place where the first example of a regeneration of a historic centre started, even before the blazoned redevelopment of Sibiu (city that became European Capital of Culture in 2007). The Millennium Project of Baia Mare was the first example of revitalization and requalification of a historic centre in Romania. This requalification was realized through economic activities related to events (cultural, economic, social) and leisure in the oldest and historical part of the town, but also through concrete refurbishment of key public spaces and buildings.

The Urban Patterns of the Ferneziu Area

The project area chosen in the context of LUMASEC is the area of Ferneziu in the north-eastern part of the city. The decision to intervene in this area is a relevant planning process started in Baia Mare about ten years ago with the definition of the Agenda 21, a process still alive that has defined other important milestones in the context of urban planning in the course of time.

This area is one of the most contaminated areas in Baia Mare because of a metallurgic factory working in the minerals transformation (lead processing). Town planners and other technicians have said for years that the state-owned Phoenix and Romplumb plants were responsible for most of the pollution here. However, being considered of strategic importance by the government, it has been difficult to address the issue although the Local Council expressed the will to do it. In the strategic plan designed in 2008 five areas has been chosen for regeneration. Ferneziu, and the annexed area of the company Romplumb, is one of these five areas. The major environmental issue is the soils contamination defined by the presence of heavy metals, especially lead and copper and other by-products. At the same time, paradoxically in a way, this industrial area is surrounded by an area of high natural and landscape value. Ferneziu, actually, is also the way to achieve the historical area of Maramureş, which is one of the most beautiful areas of Romania and Europe and a cradle of cultural identity. This added value linked to the beautiful landscape is determining areas of urban sprawl. Another major issue concerning the area is the bad status of mobility infrastructures: the area presents a need to rationalize the roads networks, in terms of completing and connecting the current net of streets, but also improving them by accomplishing elementary safety questions that can facilitate the access and the mobility in this part of the town. Moreover, there is the question of refurbishing and improving the social housing where the mining workers are still living. This housing stock lies in a very unfavourable neighbourhood and elementary urban functions and services are not in its proximity. The most dangerous situation is that most of the pollutant elements are not protected and through the raining water easily stream to the surrounding soil. Finally, for the same reason, there is the issue connected to the fine particles moved by the wind that cause pulmonary diseases.

Ferneziu sums up the key questions of many post industrial neighbourhoods: After the end of the industrial production and intense exploitation, a number of problems remain on the ground connected to the previous production processes and the financial impossibility to pay for highly expensive soils and water decontamination. Additionally, many workers have lost their jobs raising a number of social questions to face, and calling for administrative and economic measures to avoid the creation of clusters of extreme poverty.

Introducing a Governance Approach by Developing a Local Action Plan

Urban strategic planning is a continuous process in Baia Mare. This is an exception in the Romanian context where usually cities do not have mature strategies in the realm of town planning. This planning process began in 2000 when the Agenda 21 started with the support of UNDP. It then continued with the project CIVIC (Creativity, Initiative, Volunteer, Integration,

Communication) involving the Baia Mare local major communities in a continuous dialogue on following topics: Culture and Art, Architecture, Media, Religion, Education, Business, NGOs, Health, Sports, Youth, Tourism, Economic, and of course Urbanism. The last step of this course has been in 2008 the setting up of the Baia Mare Strategic Plan. This corridor will be characterized by a mixed functions system proposing places for tourism, research and training, sport and a neighbourhood centre. A strategy of sustainable development for the Ferneziu Area, as the one proposed by the Municipality of Baia Mare, must be the base of the local government, thus being both a process and a tool of a partnership with the entire community (based on an innovative way of using Urban Observatory – focussing on districts rather than on the entire city) and resulting in the implementation of real public policies. The Municipality and its partners consider this approach to be the best for a sound and proper development plan. Such a strategy should propose a frame for an economic development which must comprise also a social component and must in any case consider a rational use of resources in order to protect the environment. This has been the philosophy that led to the composition of the LUMASEC Local Support Group, composed by local communities and associations, local architectural offices, private investors interested in the area, international experts in town planning, and of course local politicians and civil servants.

Lessons Learned and Building Capacity

Investing in the design of innovative neighbourhoods offers the opportunity to test how creativity can contribute to the liveability of cities, and how the agents of the knowledge economy are influenced by such initiatives. The proposed transformation for the Romplumb area is based on ideas that depart from completely different concepts in comparison with those that have characterized the realization of such a large industrial complex in the past, highly polluting and completely detached from what is, and has been, the will of Baia Mare's inhabitants. It is also true that the conditions that allowed the construction of Romplumb, the industrial age, the Fordist production mentality, an authoritarian and centralized political system do not characterize the contemporary nature of Baia Mare and Romania.

The main problems to be addressed in Romania, in launching this kind of regenerative projects, are determined by all those external conditions that define the meanings of economies in transition: The productive environment which is no longer that of the industrial age, but the post-industrial one, which often failed to propose sustainable strategies for a sound urban development, even in countries with advanced economies in Europe. The main difficulties in launching these initiatives are linked to obtaining the financial capital to implement these changes, especially when there is a high level of soil contamination through pollutants not easily removable. Moreover, the low demand on the real estate market and the lack of private investments, especially in these past two years of economic crisis, have to be considered, too. The approach suggested to finance this project is that of involving all the actors of the LUMASEC Local Support Group, the local (in terms of municipal, regional, national) possible forms of financing, but as decisive idea to propose the project as one to bring to the attention of the European Union. A rough idea has been to ask for a JESSICA or another European Investment Bank's initiative, but the way towards this financial instrument is paved by many obstacles. JESSICA requires a mobilization of private capital, not easy to achieve in Romania, and the Romanian Government did not properly sustain and promote such initiatives. So, the main lesson learned is in the fact that, even if there is a strong mobilization of local communities and local political forces towards an idea for a different future, the inertias of the past, the remains of the industrial heritage, are very difficult to overcome when there is a weak public investment.

3 Layers of Intervention: A Model for Sustainable Land Use Management⁴

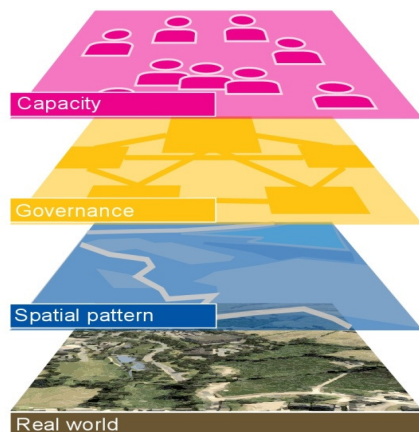
The two quoted case studies, the case of St. Étienne Métropole on the regional level and the case study of Ferneziu Area in Baia Mare on the communal level have shown interventions on

different layers. It is demonstrated that sustainable land use management acts in a multi-level governance structure between an operational project level and a strategic level of urban management. This means dissolving the often occurring conflict between short-term and long-term orientation within the planning process. Here, sustainable land use management improves the coordination of urban policy as well as public investments and public-private investments and the involvement of inhabitants and local stakeholders in common visions. This way, land use management can be a strategic asset to develop sustainable, attractive and competitive cities. Therefore, land use planning as an instrument of land use management or rather a tool to reach the broader aim of sustainable development is concerned with the formulation of policies and plans on the use and development of land.

Research on land use management in Europe shows that key factors for building up a land use management system are: the occurrence of urban sprawl and its negative impact in the ecological, economic and social dimension; the existence and increase of urban brownfields; the lack of attractiveness and competitiveness of urban structures; the demand for competition on investment and locations of European cities and regions. The URBACT working group LUMASEC addresses these issues through a land use management approach based on the sharing of knowledge regarding the achievement of a consensus on the need for integrated and sustainable land use management.

The need for an integrated approach is not only based on the daily necessity of managing urban land, it is also based on the effects of various new global challenges like urban sprawl, climate change and demographic changes, which cannot be tackled by a segregated methodology. Therefore, it is important to set up a management approach by intervention on different layers. Three layers - spatial pattern, governance and capacity - are the key layers of intervention of sustainable land use management. On a strategic level, each of these layers displays a section of the real world which has to be worked on before the different layers may later be integrated on an operational level. However, as the cases of St. Étienne Métropole and Baia Mare show, it is not possible to work within one layer without considering the others.

The figure shows the three different layers of intervention of sustainable land use management⁴. The result of the acting – and non acting – in the three layers are affecting the real world.



LUMASEC Layers of Intervention in Sustainable Land Use Management

The integrated LUMASEC approach deals with sustainable land use management within the three different layers and with their integration in order to achieve integration and sustainability. The approach is process-oriented with the aim of reaching a higher quality in land use management. For this purpose, it is important to analyse which stakeholders are involved on each layer and what kind of interests they have. All actors are interested in land, playing different roles and having different strategies. Usually, the typology of actors, or players, covers two different

profiles: the private and the public actors. Private actors are e.g. residents, entrepreneurs and speculators, property dealers and developers; on the other side, public actors are e.g. urban administrators, local bureaucracy, political representations, planning bodies, civic supplies, or police. The different stakeholders have only the power to implement sectoral approaches but integrated approaches can only be implemented in a group of stakeholders. The LUMASEC approach is an example for a possible strategic solution to the question of how to be integrative within the field of land use management.

Spatial pattern layer

Consequently, it is essential to be aware of the existing different data and processes as basis for the formulation of policies and plans on the use and development of land to reach the aim of sustainable development. Hence, working within the spatial pattern means to map existing patterns, getting an overview on development potentials and to be aware of traditional land use planning (e.g. building permits, spatial policies, etc.).

The brownfield regeneration by *epora* in the case of St. Étienne Métropole is one example of the intervention on the layer of spatial pattern. The analysis and the mapping within the posterplan in Baia Mare is a second example of action within this layer.

Governance layer

In general, spatial policies aim to influence stakeholders and their behaviour regarding land use, leading to a sectoral view on land use by the different stakeholders and their requirements and needs. Therefore, it is important to open up the stakeholders view to an integrative view on land use and coordinate and combine different sectoral requirements and needs on land use. For this reason, the question of stakeholder and scale is central within the governance layer. Integrated land use management is located on a new scale, the metropolitan scale and by that the need for metropolitan governance becomes apparent. Against this background, working within the governance layer means to outline existing structures, processes and tools of governance and the stakeholders involved. Land use management is driven by various decisions taken at different levels (local, regional, national) and in different sectors (public, private, civil society). Thus, being integrative implies to involve all stakeholders in the field of land use management, integrate and respect their tasks, roles, competences and principles to understand the mode of decision-making. The complexity of sustainable development results in the fact that a single stakeholder cannot reach this aim on its own. Win-win situations for single stakeholders and society or environment are based on interlinkages between the stakeholders. To define these specific interlinkages and to point out the specific win-win situation for a certain stakeholder – and to accept or balance disadvantage – is a key factor in managing land use.

The introduced LUMASEC Local Action Plans in St. Étienne Métropole or Baia Mare are examples of the government approach in the layers of intervention.

Capacity layer

Both the spatial pattern layer as well as the governance layer of land use management depend on the ability and skills to set the frame for the stakeholders to act in. The building up of this frame depends on the ability and skills of policy, administration, professional organisation and civil society. In the end it is based on the ability and skills of single persons within this process. So a wider approach on land use management is developing ability and skills for the aim of sustainable cities. This is the so called capacity layer in the LUMASEC approach on sustainable land use management: the capacity to act in inter- and transdisciplinary processes to reach the objectives within and across the different layers of intervention in sustainable land use management. Consequently, working within this layer means the development of empowerment and participation strategies of so far not or not sufficiently involved inhabitants and other (nonprofessional) stakeholders through raising of awareness and political backup for land use and its management. A continuous process of lessons learned is one good example how to build capacity. Monitoring and evaluation are supportive mechanisms to this process. With regard to

the new metropolitan scale, it is also important to build up professional competence on different levels to deal with complex problems and tools.

4 Transferability of the Layers of Intervention to Developing Countries

The various problems of land use management in developing countries pose a main challenge to administration and urban politics at present and in the future and should be directly approached. So far, urban planning and development approaches have been unable to produce an adequate outcome. Urban politics have to find solutions for pressing challenges in the fields of social infrastructure, sustainable environment and resource management, crisis prevention, participation, to name only a few. Compared to developed countries, cities and metropolitan areas in developing countries show sometimes similar phenomena (urban sprawl, population growth, migration, functional conversion), but characterised by different underlying structures, issues and processes. However, there are also other phenomena: proliferation of informal developments and slum/squatter settlements or haphazard and unbalanced urban land development. It has become evident that it is generally not reasonable to transfer approved western concepts to developing countries. Western style master planning systems failed to contribute to the actual implementation and land-use planning practice in developing countries and therefore failed to influence land development patterns in the rapidly growing urban centres. Possible solutions should be adapted and integrated to the specific political, socio-economic and cultural conditions and structures in each country. (Olima: 56, 58-61; Coy, Kraas 2003: 34)

The LUMASEC model for sustainable land use management is part of an integrated metropolitan governance strategy and so far has been applied in different pilot countries throughout the EU. As mentioned before, it is not possible to transfer a western style planning tool to a developing country without the recognition of the local institutional, socio-cultural and economic conditions. Therefore, to discuss if and how such a model can be useful for developing countries as well, the next section centres Indonesia as an example for urban land development, using Jakarta Metropolitan Area as a concrete example. It is important to bear in mind that it is an example and should not stand representatively for all developing countries.

The Case Study of Land Use Management in Jakarta Metropolitan Area⁵

Indonesia's urban land development policy

The first spatial planning act was passed by the Indonesian government in 1992 (Law 24/1992). After the fall of the New Order Regime, this regulation was no longer relevant because of the rapid fundamental institutional change. In particular with regard to the decentralization and democratization process, the former law did not fit anymore the other related legislation. Urban development is now a local authority affair and no longer under the central government control and direction and therefore should be planned and implemented according to the local needs by the local authority and communities. However, though the right of citizens in spatial planning is strengthened in an attempt to correspond to the more participatory system of government, the Indonesian planning system still indicates an incomplete adoption of the integrated-comprehensive approach (Firman 2010; Hudalah, Woltjer 2007: 293, 296).

Due to the fact that in the past urban spatial planning in Indonesia has largely been a top-down process, dominated by initiatives of both central and local government, “[t]here has been almost no negotiation process to build up consensus among various parties and stakeholders involved in urban development” (Firman 2004: 352). Furthermore, land utilisation in urban areas should be based on a spatial plan, however, in Indonesia spatial plans are intended and designed to control urban development in great detail. The new law incorporates the principle of accountability, stipulating that urban spatial plans should be made available to the public. The provincial administrative level and the district and municipal level should be the institution in charge, but in most cases, the shortage of qualified personnel makes it difficult. In addition, poor urban development management accompanied by incompleteness and inconsistencies in the

law and its enforcement lead to unintended impacts of land-use tools. For example, instead of controlling land-use development, land development permits have granted exclusive rights for land acquisition and have been considered as an obstacle to land development. The same applies to the presence of private developers: they are a necessary condition for urban development but only within a legal framework of the operation of the private sector. Another problem of urban land management in Indonesia is the lack of adequate data and information for planning and decision-making. "Land markets in Indonesia's cities, as in many developing countries, can be divided into formal land markets and informal land markets, to which the non-title ownership land of the poor households belong." (Firmann 2004: 353) Poor land administration in Indonesia is also a reason for the many fragmented and self-interested institutions involved. Especially in rapidly growing areas such as Jakarta Metropolitan Area, the problems of land administration are concentrated. (Firman 2004: 352-354)

Jakarta Metropolitan Area

In contrast to the general growth rate of the urban population, the Southeast Asian urban population is increasing. The urbanisation rate of Indonesia for 2010 lies at 53.7% and is expected to increase within the next decades. Jakarta Metropolitan Area (about 6160km²) is referred to as the greatest urban agglomeration within Southeast Asia. The area includes the core city of Jakarta and the adjacent cities of Bogor, Tangerang, Bekasi and Depok. 11% of the whole Indonesian population live in this region. Because of the industrial settlement, "gated communities" and important transportation axis, the boundaries between Jakarta and at least Tangerang and Bekasi overlap at this stage. Urban sprawl, population growth, migration, functional conversion, proliferation of informal developments and slum/squatter settlements, haphazard and unbalanced urban land development characterize also Jakarta Metropolitan Area. (Spreitzhofer 2009: 71-73) An additional challenge has occurred with the mega-urbanization of Jakarta-Bandung region during the past years. (Firman 2010)

The LUMASEC case studies give an example of the acting – and non-acting – in the three layers and how it affects the real world. With reference to Jakarta Metropolitan Area and Firman's (2010) analysis of the Jakarta-Bandung region (JBR), it is possible to give a short outline of the three layers in this case. In the spatial pattern layer, the region is characterized by the rapid spill over of Jakarta and Bandung City to the surrounding areas which has led to high population growth in the adjacent areas, but a decrease in the urban centres. The rapid development has caused several environmental problems in the region (congestion due to heavy flows of commuters between Jakarta and its suburbs; air pollution in some industrial areas; groundwater extraction). Since the 1980s, new towns and large-scale residential areas, many designed as "gated communities", have been developed. They are referred to as "dormitory towns" dependent on Jakarta and Bandung. Especially in Jakarta Metropolitan Area, new town developments have reinforced spatial segregation by lifestyle and income status in the area. Due to development of domestic and direct foreign investment in the Jakarta-Bandung region and the easy access to Jakarta, industrial estates are growing. New turnpikes between Jakarta and Bandung have worsened the traffic especially at the weekend. Large number of Jakarta's middle and upper class residents travel to Bandung for shopping and recreation. In general, a lack of adequate data information for planning and decision-making is central in this layer.

In the governance layer, the problems of mega-urbanization of the Jakarta-Bandung region deteriorate due to the above-mentioned decentralization process. The rapid and extensive decentralization combined with a lack of capacity of local government in land management has led to a fragmented and uncoordinated region. There is a tendency of most of the local governments in the Jakarta-Bandung region to exploit local resources, including water and land, in order to maximize their own income. A number of problems in services (including water supply and waste management) require cross-border cooperation within an integrated urban region to ensure sustainability. Furthermore, inconsistencies in the implementation of spatial plans by local governments due to private sector and individual pressure for profitable interests cause

uncontrolled land conversion. In addition, it can be assumed that the described general issues of Indonesia's urban land development policy (incompleteness and inconsistencies in the law; spatial planning largely as top-down process and incomplete adoption of the integrated-comprehensive approach; fragmented and self-interested institutions) also apply to the case of Jakarta-Bandung region. In the capacity layer, the shortage of qualified personal reveals the necessity of building capacity in the field of land use management in the region.

Examples from St. Etienne Métropole like the reinforced dialogue between different services, the opportunity to develop inter-sectoriality within the local administration, the development of local GIS on land use aspects, the demonstration of the necessity to adopt an integrated land use policy to the local elected officials are promising. However, also the case of Freneziu Area in Baia Mare is encouraging because it is an example of how creativity can contribute to the liveability of cities.

5 Conclusions

The different case studies have shown that sustainable land use management is not only a concern in European countries. Quite the contrary, the case of Jakarta Metropolitan Area or rather Jakarta-Bandung region demonstrates the urgent need of an integrated metropolitan governance strategy for land use management also in developing countries. However, as the case studies of St. Etienne Métropole and the Freneziu Area in Baia Mare reveal, different underlying structures, issues and processes (external conditions) lead to different outcomes of the same tool for urban development. In the case of Baia Mare, the lack of financial capital is decisive for the future implementation of their strategic plan. With regard to developing countries, the "inertias of the past" are a cross-cutting issue to the multidimensional phenomena of social change, socioeconomic conflicts, social fragmentation, increasing poverty and a growing informal sector. The awareness of this context in which urban land development takes place is important for the implementation of any tool. In the case of Indonesia, the main context is the decentralisation and democratization process, the inflexible and overly detailed land regulatory and legal frameworks, the incompleteness and inconsistencies in the law, the lack of adequate data and information for planning and decision-making, the fragmented and self-interested institutions and the shortage of qualified personnel. As part of the context, the political culture/s of a country is/are an important issue of the transferability from one country to another of every model aiming to formulate policies and plans.⁶ Because Indonesia is characterized by highly pluralistic cultures, in this case, one has to differentiate even from region to region.

Against this background it is possible to identify the potential of the transferability of the European LUMASEC model of different layers of intervention for developing countries. Tommy Firman (2010) mentioned the need of an integrated development plan to manage Jakarta Metropolitan Area together with Bandung Metropolitan Area in a more efficient and sustainable way: "It should be kept in mind that JBR is a functional region that should be managed as an inseparable one through an integrated spatial development plan." First and foremost developing countries are exposed to the various new global challenges which cannot be tackled by a segregated methodology and should therefore be supported in the development and implementation of integrated spatial development plans for sustainable management. Spatial planning as an adaption strategy to climate change is gaining more and more importance. In a first step, setting up a management strategy based on intervention on different layers helps to identify potential obstacles to an integrated land use management and ways to deal with them. In a second step, it offers a strategic solution of how to be integrative within the field of land use management with the aim to formulate policies and plans on the use and development of land to reach sustainable development. Certainly the second step is based on the successful completion of the first step, which includes the often slow and sluggish process to overcome the identified obstacles. However, the awareness of ownership and accountability is high if the different stakeholders are involved in this process, an important precondition for the second

step. A further advantage could be the possibility of capacity building through the process of lessons learned during the first step.

The LUMASEC case studies on sustainable land use management offer examples of use for an integrated approach to sustainable land use management. The case of St. Étienne Métropole and Ferneziu Area in Baia Mare demonstrated how different contexts can lead to highly diverse outcomes in the different layers of intervention. While the case of St. Étienne Métropole is an example for the successful acting in each of the three layers of intervention, the non-acting especially in the governance layer in Baia Mare due to the “inertias of the past” is an example for the this time negative effect on the real world. In Baia Mare, even though it seems at present that the strong mobilization of local communities and local political forces towards an idea for a different future fails due to the lack of financial capital, an integrative process towards sustainable land use management could be successfully initiated.

The introduced model of intervention on different layers for sustainable land use management as a tool for urban development impacts on two levels. On the operational level it can generate promising outcomes in the form of a Local Action Plan to adopt an integrated land use policy. On the strategic level, it serves as a tool to analyse underlying obstacles through an integrated process of lessons learned which in some cases can lead to an upgrade towards the operational level. From this perspective and against the background of adaption to the specific political, socio-economic and cultural conditions and structures in each country, the LUMASEC approach could be a successful tool for urban development in developing countries.

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¹ LUMASEC working group on the web: www.urbact.eu/lumasec

^{2,3} The description of the case studies are based on: Engelke et al 2010: "Sustainable Land use Management". Published by the URBACT working group LUMASEC in cooperation with CERTU

⁴ The LUMASEC layers of intervention on land use management are based on the interventions in spatial planning by Wolfgang Jung.

⁵ The Jakarta case study is based on the descriptions of Tommy Firman, a professor at the School of Architecture, Planning and Development at the Bandung Institute of Technology, Indonesia.

⁶ Hudalah and Woltjer (2007: 295) propose the following elements of political culture: origin/reflection, social structure, role of state, public decision making, public management, governance culture and state – society relation.