



TOWARDS A SPATIAL POLYCENTRIC APPROACH FOR SUSTAINABLE LAND ADMINISTRATION IN SYRIA:

SOCIAL AND ECONOMIC RECOVERY AND POST-CONFLICT RECONSTRUCTION STRATEGIES

RESEARCH PROJECT ON LAND GOVERNANCE IN THE ARAB REGION

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TOWARDS A SPATIAL POLYCENTRIC APPROACH FOR SUSTAINABLE LAND ADMINISTRATION IN SYRIA: SOCIAL AND ECONOMIC RECOVERY AND POST-CONFLICT RECONSTRUCTION STRATEGIES

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GLTN and the Arab Land Initiative - GLTN is a multi-sectoral alliance of international partners committed to increasing access to land and tenure security for all, with a focus on the poor, women and youth. The Network's partners include international rural and urban civil society organizations, research and training institutions, bilateral and multilateral organizations, and international professional bodies. In 2016, GLTN Partners, led by UN-Habitat and the World Bank, launched the Arab Land Initiative to promote equal access to land, peace, stability and economic growth in the Arab region through good land governance and transparent, efficient and affordable land administration systems. The Initiative aims at empowering land champions from the region by developing capacities, increasing collaboration and promote innovation, learning and sharing of best practices. It also supports the implementation of land gender-responsive and fit-for-purpose land tools and approaches at national and local level. The Research Innovation Fund is one of the streams of work of the Arab Land Initiative..

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ABBREVIATIONS

ACSAD	The Arab Centre for the Studies of Arid Zones and Dry Lands
DESA	United Nations Department of Economic and Social Affairs
ESCWA	United Nations Economic and Social Commission for Western Asia
FAO	Food and Agriculture Organization of the United Nations
FELA	Framework for Effective Land Administration
GDCA	General Directorate Cadastral Affairs
GLTN	Global Land Tool Network
HLP	Housing, Land and Property
IDPs	Internally Displaced Persons
LA	Land Administration
LAS	Land Administration System
MAAR	The Ministry of Agriculture and Agrarian Reform
MLAE	Ministry of Local Administration and Environment
MPWH	The Ministry of Public Works and Housing
MSEA	Ministry of State for Environmental Affairs
PICC	Planning and International Cooperation Commission
RPC	Regional Planning Commission
SDGs	Sustainable Development Goals
SIA	Syrian Investment Agency
SYP	Syrian Pounds
UN-Habitat	United Nations Human Settlements Programme
UNHCR	United Nations High Commissioner for Refugees
WFP	World Food Programme
WHO	World Health Organization





EXECUTIVE SUMMARY

This research aims to identify the appropriate approaches and solutions for sustainable land administration (LA) in Syria to enhance land tenure security, peacebuilding, economic and social recovery, and long-term reconstruction strategies. Traditionally, LA in Syria has been based on cadastral activities related to land tenure and land information management. Undoubtedly, LA has notable, mutually reinforcing, impacts on conflict and urbanization, which are likely to intensify during times of war, threatening homes, livelihoods and food security. It should be noted that the question of housing and land administration in Syria has to consider the large informal sector, present in all governorates, which poses substantial difficulties concerning social and economic development. Furthermore, land governance has always been referred to as a key to achieving the Sustainable Development Goals (SDGs) and associated targets. Thus, an improved land governance system is sorely needed for the recovery and reconstruction phase, in line with the SDGs and 2030 Agenda. It forms an essential tool to improve recovery responses, post-conflict reconstruction strategies, and avoid the mistakes of past practices. New and innovative solutions for Syria that deliver tenure security for all people and support peacebuilding processes are required today.

The research aims to answer the following questions:

- How can a polycentric spatial development approach improve LAS in Syria?
- How can polycentricity control urban development, reduce informal settlement and contribute to achieving balanced sustainable development at the national and local level?
- How can spatial planning and polycentric development ensure food security, economic and social recovery, and well-being for the Syrian people?

Today, the situation in Syria is very complicated and necessitates innovative solutions that enhance food security and well-being for the population during these trying times. The project has three key outcomes and three main outputs.

The project will pursue the following outcomes:

Outcome 1: Achieving an efficient, transparent, accessible, competitive and accountable governance and LAS in Syria.

Outcome 2: Safeguarding property rights for both

Syrian men and women, which will contribute to higher levels of food security, health and welfare, and thus assist economic growth and sustainable livelihoods.

Outcome 3: Enhancing conflict prevention and strengthening peacebuilding processes.

The overarching outcomes will be reached through the following three specific outputs:

Output 1: Improving the theoretical and practical application and organizational effectiveness of LAS by using a spatial polycentric planning approach.

Output 2: Enhancing the institutional and human capacities of national entities and professionals, to ensure resilient LAS by supporting local systems and bridging transitions.

Output 3: Increasing technical expertise and institutional capacities for land development control, to reduce informal settlements and contribute to balanced sustainable development.

To achieve the main objectives and answer the research questions, we started with a desk review, covering scientific journals, international reports, previous studies, and research related to spatial planning for LA and the polycentric model. A benchmarking, comparative and evaluative approach followed the review, based on international and benchmarking studies to highlight LA strategies adopted in countries that have a similar context like Syria. The benchmarking identified key land governance indicators to determine which governance process need to be improved in Syria.

Following a Fit-For-Purpose approach for better LAS, a situation analysis of land administration was conducted for the period before and during the crisis (legal, spatial and institutional) for urban, peri-urban areas and informal settlements. Moreover, the stakeholder mapping and analysis – covering formal institutions, private sector, UN, NGOs and non-formal community and land management actors and services in Syria – revealed multiplicity of authorities and lack of a clear strategy for land administration, use, tenure and development. The duplication of work and lack of coordination and correlation between national entities at horizontal (sectoral) and vertical (national, regional and local) levels are the key challenges. The legal and institutional challenges were analysed, and the main options for an effective and efficient land

administration system, based on the green cities approach and ensuring food security, were explored based on the following:

- Integrated land planning, urban/rural, green cities and urban agriculture;
- Land investment;
- Implementation and monitoring;
- Land administration assessment.

Lastly, a polycentric urban model for spatial planning was proposed for the post-conflict recovery phase, as an approach that can help improve LAS by optimising the land use aspect. The model focuses on three levels (national, regional and local). For the national and regional levels, the model depended on previous studies made by national and international organization on the future urban development framework for Syria. For the local level, the model focused on the city of Lattakia as a case study. The current Master Plan was compared in terms of land use changes with a potential plan along the proposed approach. The comparison was extended to anticipated future land use changes to the Master Plan, and the proposed polycentric approach. The conclusion suggests an approach to evaluating land

governance in Syria through indicators, using a land governance assessment framework for a better optimization of land use.

This report provides a comprehensive framework and methodology for sustainable land administration based on a polycentric approach, with a special focus on post-conflict recovery. The results inform the elaboration of a general guideline that could be adapted by policymakers in Syria as well as in countries that share a similar context. The conclusions indicate that polycentric development is a suitable approach to enhancing LAS, as it improves the land use system and planning by providing a systemic framework for urban growth and better population distribution, and thus balanced sustainable development, while conserving land cover. The concept of "garden cities" addresses SDGs through its polycentric social structure. Large-scale urban agriculture is not new in itself; it is visible in many major cities such as Montreal, The Hague, Detroit, Shanghai, and most recently Paris, where the largest urban farm in Europe opened this year, spanning 14,000 m². Today, the concept shows many advantages linked to the global COVID-19 pandemic. The idea is to foster environmental and economic resilience for the Syrian cities of tomorrow through a new polycentric planning system based on spatial planning and the Agropolis approach of garden cities.

1.1. Problem Statement and Research Questions

The conflict in Syria has entered its tenth year with no political solution in sight. The escalating complex political situation has worsened the plight of the Syrian people. The continued violence disproportionately affects vulnerable groups like children, women, the elderly and the disabled. Acute security threats, lack of basic services and deteriorating living conditions have diminished the community's ability to cope with the crisis. The conflict has claimed an estimated 400,000 lives, with over half of the population forced to leave their homes. Since 2011, more than 6 million Syrians have been displaced within the country, while more than 5.6 million have fled abroad, mostly to Lebanon, Turkey and Jordan (UNHCR, 2020).

Adding to the tragedy of the conflict, Syria is in the

grip of a severe economic crisis, which aggravates food insecurity and poverty. Rising food and fuel prices and depreciating informal exchange rates are making it very difficult for families to meet their basic needs. Over the last six months, 1.4 million Syrians became food insecure, joining the 9.3 million Syrian already facing precarious food conditions. This rapid increase was mainly due to the COVID-19 lockdown measures and the freefall of Lebanese economy (WFP, 2020). These events led to skyrocketing food prices – more than 200 per cent in less than a year. Now, the basic food basket costs SYP 76,000, which is 20 times more than before the crisis. To cope with this catastrophe, Syrian households were forced to adopt cruel measures, from cutting meals to selling assets. Yet, according to Corinne Fleischer, WFP Country Director, they “have already been through more they can handle; they have exhausted their saving and often fled their homes and now face a downward spiral into poverty and hunger” (WFP, 2020).

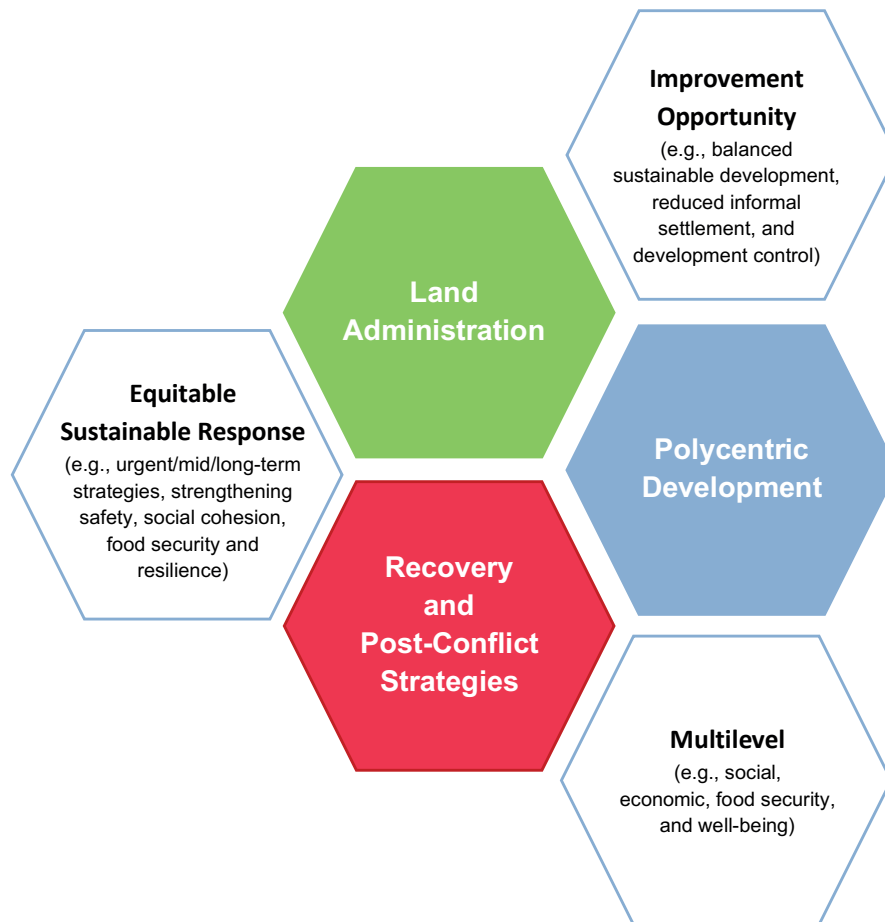


Figure 1: Conceptual framework.

Studies and reports point to land governance and management, ownership and land rights as issues that are essential for humanitarian operations in Syria. With the current focus on relief operations, addressing land governance issues must also be considered in each effort, as they shape the effectiveness and longevity of humanitarian action and long-term recovery (NRC, 2016). Land administration and property issues are increasingly creating challenges for the immediate operational work of humanitarian actors. Moreover, there is a growing recognition that these topics will pose a critical challenge for the future stability and recovery of a post-agreement Syria. Along with recognizing economic and social crises and the urgency of humanitarian needs, land administration is a central entry point to tackle food security, human needs, and economic and social recovery plans. Addressing LA, urbanization, planning, taxation, and development control will contribute to restoring and strengthening the rule of law, will ensure a more equitable and sustainable response, and will ultimately protect, support and strengthen the safety, social cohesion and resilience of those impacted by the crisis (see Figure I). The research aims to answer the following questions:

- How can a polycentric spatial development approach improve LAS in Syria?
- How can polycentricity control urban development, reduce informal settlement and contribute to achieving balanced sustainable development at the national and local level?
- How can spatial planning and polycentric development ensure food security, economic and social recovery, and well-being for the Syrian people?

1.2. Objectives and Scope of the Research

This research aims to identify the appropriate approaches and solutions for sustainable land administration in Syria to enhance land tenure security, peacebuilding, economic and social recovery, and long-term reconstruction strategies. Traditionally, LA in Syria has been based on cadastral activities related to land tenure and land information management. Undoubtedly, land administration has a notable impact on conflict, urbanization, and vice versa. This impact is likely to intensify during war times and threaten personal safety, livelihoods and food security. It should be noted that the challenges regarding housing and LA in Syria are occurring amid a large informal sector, present in all governorates, which poses particularly important difficulties concerning social and economic development (Maya and Baudoui, 2015). Furthermore, land administration has always been seen as key for achieving SDG targets (UN-Habitat, 2017). Thus, an improved LAS is needed for the recovery and reconstruction phase, in line with the SDGs and 2030 Agenda. It forms an essential tool for improving recovery responses, post-conflict reconstruction strategies, and avoiding the mistakes of the past. New and innovative solutions for Syria that can deliver tenure security for all people and peacebuilding processes are required today.

The land administration concept proposed by UN-Habitat (2016) is based on three fundamental, interrelated principles (see Table I). Accordingly, each country's land administration should work with four elements: land tenure, land value, land use, and land development. These four land administration functions are different in their professional focus and should be undertaken by a mix of professionals: surveyors, engineers, lawyers, appraisers, land economists, planners and developers (Enemark, 2009a).

Spatial framework	Legal framework	Institutional framework
<ul style="list-style-type: none"> - Visible (physical) boundaries rather than fixed ones - Aerial/satellite imagery rather than field surveys - Accuracy related to purpose rather than technical standards - Demands for updating and opportunities for upgrading and ongoing improvement 	<ul style="list-style-type: none"> - A flexible framework designed along administrative rather than judicial lines - A continuum of tenure rather than just individual ownership - Flexible records rather than only registers - Ensuring gender equality in land and property rights 	<ul style="list-style-type: none"> - Good land governance rather than bureaucratic barriers - An integrated institutional framework rather than sectoral silos - Flexible ICT approach rather than high-end technology solutions

Table I: The key principles of the Fit-For-Purpose approach. Source: UN-Habitat (2016).

Hence, integrated spatial land-use polycentric management is a key tool for recovery, peacebuilding and reconstruction strategies in Syria and achieving SDGs. In planning, sustainable development means balanced development, and this can be achieved by a comprehensive spatial planning approach. Many studies refer to polycentricity as the new term for balanced development because it “is related to many factors (as for example to the development of any kind of activities) as well as to a lot of aspects of the spatial development: social, economic, environmental aspects and so on” (Angelidis, 2005, p. 2). Thus, polycentric development is a comprehensive approach that helps reduce urban in-migration by developing areas outside of cities and providing decent jobs and livelihoods. It stops the urban expansion of build-up area by enhancing the connections between the centre and sub-centres and on a larger scale between governorates. Therefore, land administration can be considered as a reliable indicator of polycentric urban development (Wu, 1998).

The concept of garden cities is worth exploring within the proposed research, as it addresses SDGs through its polycentric social structure. Large-scale urban agriculture is not new, as witnessed in many major cities such as Montreal, The Hague, Detroit, Shanghai, and most recently in Paris, home to the largest urban farm in Europe (14,000 m²) (*Le Monde*, 2019). The concept shows many advantages in light of the COVID-19 pandemic. The idea is to foster environmental and economic resilience in tomorrow’s Syrian cities by a new polycentric planning system based on spatial planning and the Agropolis approach, as seen in garden cities.

1.3. Methodology, Tools and Activities

1.3.1. Methods

To achieve its objectives, the research follows a mixed methods approach (see Chapter 3 for more details):

Desk review: Literature review of scientific journals, international reports and previous studies, related to spatial planning for land administration and the polycentric model.

Benchmarking, comparative and evaluative approach: Review of international and benchmarking studies to study the polycentric land use planning systems adopted in other countries.

Situation analysis: LA state of play in Syria (legal, spatial and institutional) for urban, peri-urban areas and informal settlements, identifying key challenges and opportunities for effective LA.

Stakeholder mapping and analysis: Formal institutions, private sector, UN, NGOs and non-formal community and land management actors and services in the country.

Perspective approach: Evaluating LA in Syria through indicators of the LA assessment framework.

1.3.2. Data

A survey with stakeholders was conducted to collect primary data, along with the secondary data sources used for analysis and mapping. Secondary data was collected from the Central Bureau of Statistics and other official institutions in Syria, in addition to studies and reports of international organizations. The precarious situation on the ground and COVID-19 travel restrictions prevented direct contact with national authorities. Despite the numerous online attempts, we did not receive feedback from any state entity, which is a big challenge. This report provides a comprehensive framework and methodology for sustainable land administration using a polycentric approach, with a special focus on post-conflict recovery. The results contribute to developing a general guideline for policymakers in Syria and countries with similar contexts.

The report is organized as follows: Chapter 1 provides a research background and benchmarking to highlight land use polycentric planning systems. Chapter 2 presents a review of the land administration systems and stakeholder mapping in Syria, with a focus on past and current challenges. Chapter 3 covers the potential for a spatial polycentric model in Syria through a land governance framework. Finally, the concluding Chapter 4 summarizes the main findings of the research.

1.4. Land Administration Is a Key Tool for Social and Economic Post-Conflict Recovery

Land always represented a crucial part in the life of humanity. It “plays a vital role in the breeding and survival strategies of many living species. The history of human settlement has been dominated by national and international conflicts—men and women may kill or may be killed in fights over the boundaries of their nations or of their individual properties” (UNECE, 1996, p. 10). Hence, land symbolizes security to people, and LA came to regulate and satisfy the human need to reach this type of security. Informal LAS can be considered as the most common system among all countries. Environmental changes, population growth, crisis, and wars (and its effects of

destruction, displacement, and informal settlement), and many other factors have always threatened these informal systems.

Spatial information regarding land, with its infrastructure, resources and diverse environments (mainland and marine environments), forms a critical tool for making informed decisions about economic, social, and environmental development to achieve more sustainable societies. This what makes LAS a means to achieve and support sustainable development. Land administration was first defined by the United Nations Economic Commission for Europe (UNECE) in 1993 as “the process of recording and disseminating information about ownership, value and use of land and its associated resources... processes include the determination... ‘adjudication’ of rights and other attributes of the land, the surveying and description of these, their detailed documentation, and the provision of relevant information in support of land markets” (UNECE, 1996, p. 14). Therefore, the notion of LA is not limited only to land and extends to people and their relation to the land. The concept of land covers more than which people or communities have rights of ownership and use, that it can be bought and sold and taxed, and that it provides an economic production base. It paves the way towards meeting LAS challenges to safeguard the vision of economic development, social justice, environmental protection, and good governance (Williamson et al., 2010). However, this comprehensive understanding of LA is applied in a few but not all countries around the world and not in the Arab region.

LAS, through one of its design components, the Land Management Paradigm (LMP), supports developing countries in achieving sustainable development. LAS provide the LMP with the needed infrastructure for it to work beyond its known tasks to implement food and land security and improve governance (Williamson et al., 2010). Understanding land administration theory and practice is crucial for implementing LAS and processes. Explaining the relationship between LA and SDGs needs a good understanding of the difference between traditional LA approaches based on land use maps and the new LA approach, which relies on development and people’s well-being, which is specific and adapted to the local needs and priorities in each country.

Wealthy and successful economies prosper on regular, predictable, and institutionalized access to land. Land plays a crucial role for the economy of each nation, with land, property and constructions adding up to at least 20 per cent of Gross Domestic Product (GDP) (UNECE, 1996). Therefore, ownership, value, use and other land-related data are indispensable

tools for a market economy to work properly, as well as for sustainable management of land resources (Ibid.). Thus, the relationship between LA and land markets can be considered a central economic driver in most countries. Modern land markets involve a complex and dynamic range of activities, processes and opportunities, and are impacted by a new range of restrictions and responsibilities imposed on land-based activities (Williamson et al., 2010). Therefore, land markets should respond to economic vitality and SDGs, and without secure land rights, there can be no long-term investments and the SDG targets will be missed. Land rights provide institutions with the needed guideline to manage land and to deliver tenure security, equity in land distribution, sensible and attractive development, and fair land taxation.

1.5. The UN 2030 Agenda, Land Administration and Spatial Planning Interrelations

The 2030 Agenda presents a new challenge and offers a new approach to spatial planning. The OECD calls on planners to define spatial strategies to meet environmental goals while strengthening social cohesion and economic prosperity. The key tool to reach SDGs is co-ordinated development on these three goals via advanced planning instruments capable of overcoming the rigidity of some land use plans. Land was not a direct goal in the 2030 Agenda; however, it was embedded in the targets of several SDGs (1, 2, 5, 11, 15 and 16), highlighting the direct and indirect relationship between people and land. The focus was mainly on tenure rights, including the following targets: 1.4.2 on land tenure security perceptions, 5.a.1 on women’s ownership and share of land rights and the legal frameworks for women’s land rights, as addressed in target 5.a.2 and in 2.3.1 and 2.3.2 on smallholder farmers. The focus on land was embedded in relation to the environment, for example, in target 2.4.1 on agricultural area, and in targets 15.1.1, 15.1.2 and 15.3.1 on forest areas, biodiversity and degraded lands, respectively (UN, 2015). The strong relation of land with SDGs underscores the importance of good land governance, comprehensive spatial planning and a well-functioning LAS.

Regarding spatial planning, targets 11.1.1, 11.3.1 and 11.7.1 were dedicated to sustainable urban tenure and open spaces. Land administration is important for the spatial management of society, where government uses place as the key means of organizing information related to various activities – ranging from housing, health, transportation, and the environment to immigration, taxation, and defence. Location and spatial information need to be accessible to citizens and businesses, to

support these activities and to build better systems for managing and administering land. Spatial planners have a key role in achieving the SDGs related to land use. As illustrated in Figure II, “the integrated nature of the 2030 Agenda for Sustainable Development and its 5Ps

(People, Planet, Prosperity, Peace and Partnership), 50 demand effective land administration, realized through integrated geospatial information, for land policies, land tenure, land value, land use, and land development” (UN-GGIM, 2020, p. 11).

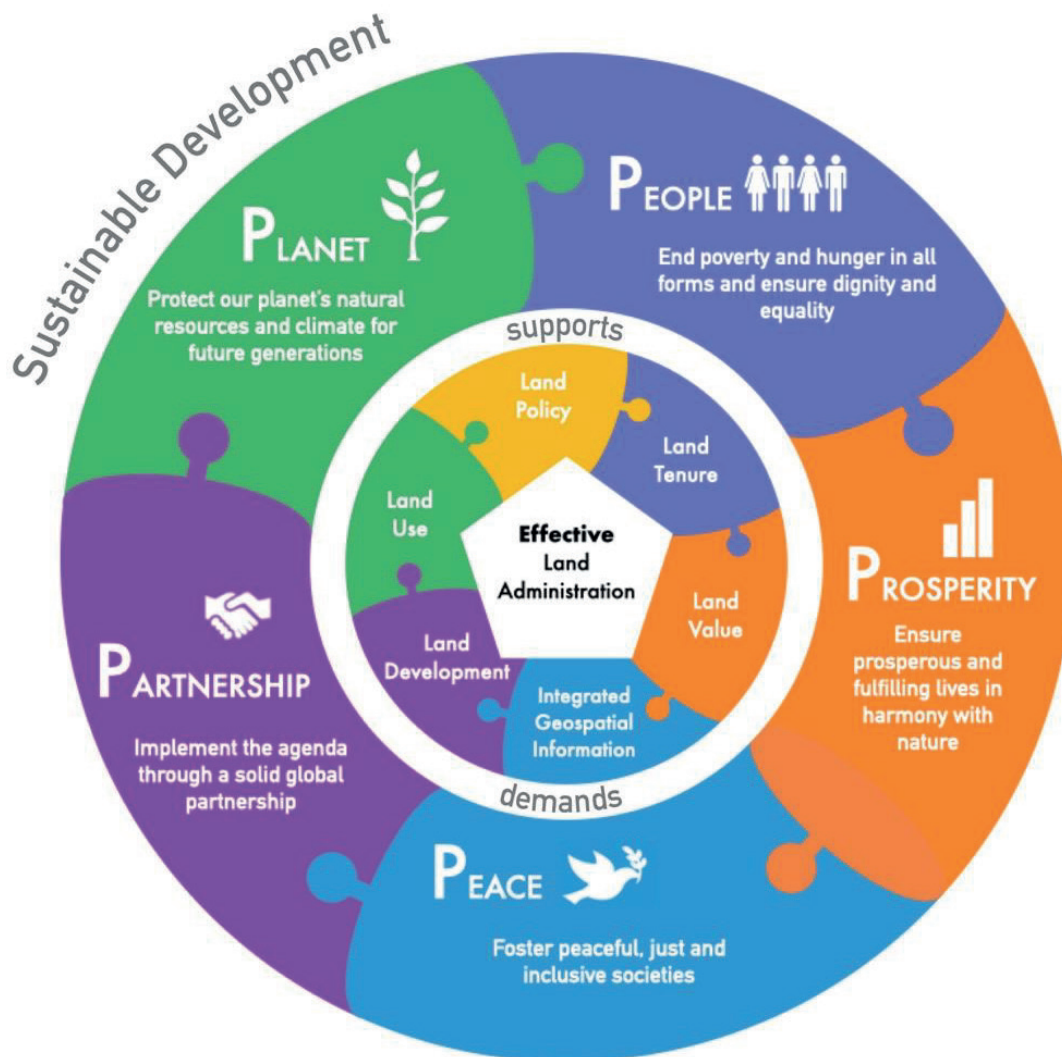


Figure II: Sustainable development and effective land administration. Source: UN-GGIM (2020).

Accordingly, the United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM) proposed on May 2020 a Framework for Effective Land Administration (FELA), to reiterate the need for effective land administration. Considering that a large part of humanity does not have recorded land and property rights, there is a need to accelerate efforts to document, record and recognize people-land relationships in all their forms and cut directly and indirectly across all SDGs. FELA shows that “effective

land administration supports poverty eradication, food security, and can support ensuring dignity and equality through documenting, recording and recognizing people to land relationships in all forms, notwithstanding the potential to undermine dignity when the information is misused” (UN-GGIM, 2020, p. 18). FELA is based on two dimensions: (1) integrated geospatial information (land policies, land tenure, land value, land use, and land development), and (2) institutional and stakeholder analysis along nine pathways (see Figure III).

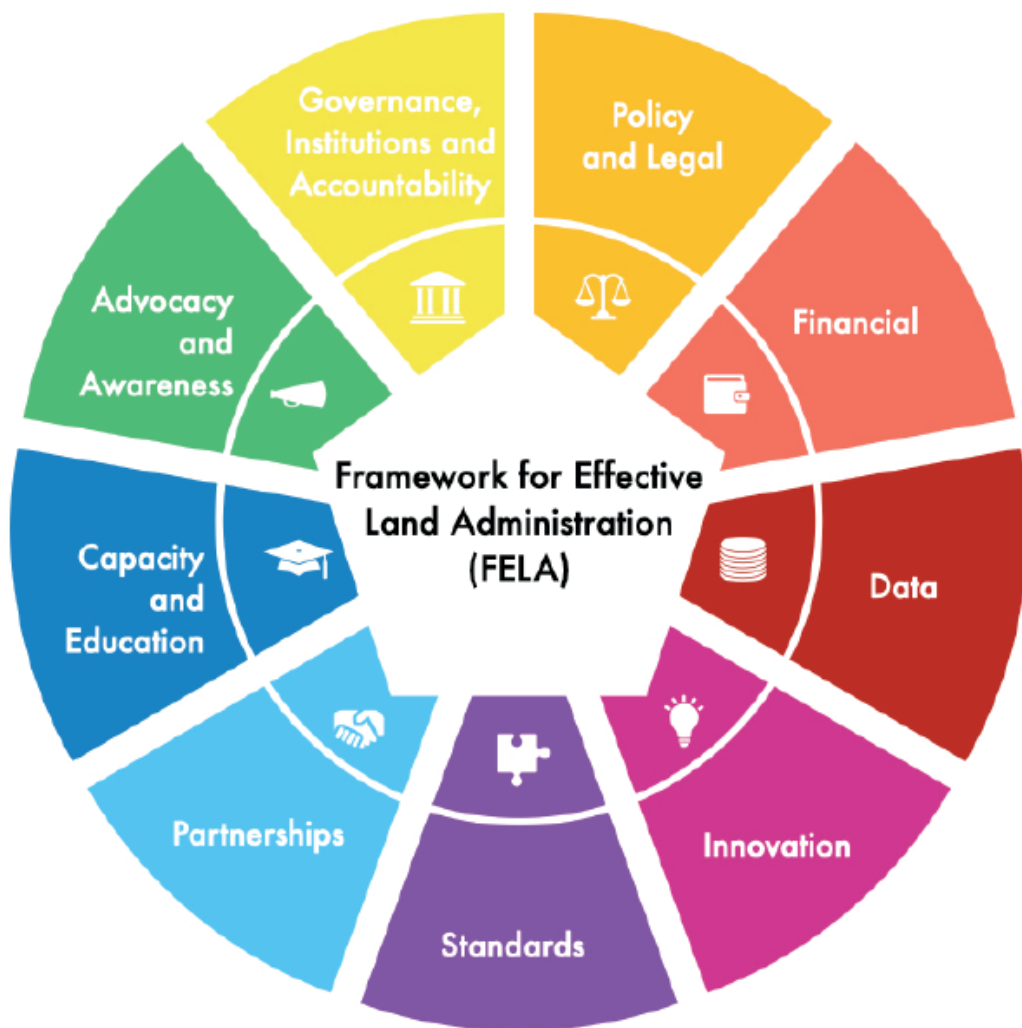


Figure III: The nine pathways of the Framework for Effective Land Administration. Source: UN-GGIM (2020).

1.6. Spatial Polycentric Approach: Basic Concepts, Definitions and Applications

Given the challenges related to limited space and the optimum use of lands, it is no wonder that opinions clash. It is not always easy to resolve conflicts; that is why it is important to consider different interests early on. Spatial planning is an instrument that can solve such challenges and, by bringing all opinions on one table, reconcile different ideas. Spatial planning is an important coordinating mechanism with crosscutting and forward-looking perspective. It plays a key role in enabling people to live side by side and ensuring positive development. The task of spatial planning is very complex, so it needs various instruments at its disposal. Additionally, its methods and approaches are used by the public and private sector to influence the distribution of people and activities in space at various scales. First, the decisions taken to coordinate interests and minimize conflicts are set out in a spatial plan. Second, in spatial planning cooperation, various stakeholders, spurred on by the spatial planning authority, join to develop land use strategies.

While there is no single, common definition for polycentricity, most researchers agree that it has various meanings, depending on the local context. Davoudi (2003) sees polycentricity as related to the spatial structure of urban network settlement; however, it differs based on the spatial context, whether it is local, regional or national. Polycentric development seeks to achieve balanced regional development by promoting more competitive regions. It reshapes the regional growth map in a way that achieves social and economic cohesion and realizes better opportunities for cities in marginal areas at all levels. Thereby, it can reduce regional disparities by creating an urban network of medium and small cities as well as open spaces between city centres and rural areas. This concept could be used to enhance the interconnection between these centres through sustainable transportation systems, as long as the countryside is specialized in sustainable types of jobs. Polycentric development can be considered a strategy for spatial optimization of business and land use as it reduces pressure on metropolitan regions by activating the surrounding towns and cities, thereby reducing the depletion of the region's resources and the resulting environmental impact. This is achieved by distributing urban tasks to cities and surroundings around the metropolitan area according to each region's capabilities, thus creating new job opportunities and systematic orientation of urban expansions.

1.7. Benchmarking, Comparative and Evaluative Approach

As LAS problems are shared, it is very important to understand what is suitable for the local circumstances

in light of international best practices. The information related to land is very important for policymaking. Availability and accessibility of land information improve the economic value and the way governments and the private sector do business in modern economies. Many countries, such as China, Indonesia and Malaysia, impose restrictions on access to land information, as maps or plans relate to military issues. Other countries, such as the United States and New Zealand give open access to digital maps to stimulate the economy. More and more countries are pursuing cost recovery (e.g., in Europe), looking to the primary audience for land information to pay an estimated price reflecting the cost of maintenance and sometimes data collection. Therefore, land and spatial information can provide a national advantage to improve the opportunities for citizens and businesses (Williamson et al., 2010).

The main aim of benchmarking studies is to review a wide variety of cases, to support research in exploring how to avoid "silo" thinking among different sectors. The importance of incorporating several disciplines comes from the need to achieve SDGs, which are embedded in many sectors. We summarized the main practices for evaluation in Table II, by intersecting the main indicators from the ten key principles of land administration, addressed in Williamson et al. (2010), with the main indicators of benchmarking from the three management control levels (Stuedler and Williamson, 2002; Stuedler, 2004) as well as considering several cases of post-conflict and polycentric development.

It is important to note that several studies highlighted the importance of consulting the affected groups during the land recovery process by covering successful case studies where this process was adapted as well as learning from failures that resulted when such processes were avoided (Cain, 2013; Unruh, 2004, 2008). Understanding when and why the approach works is essential. It enhances trust between different groups and the responsible institutions and provides an inclusive environment by encouraging women, vulnerable groups, and minorities to participate effectively in this process, thus better addressing SDGs.

With a benchmarking review, it is important to keep in mind that we cannot fully adapt approaches from different cases; there is no one-size-fits-all approach, as each country has its own circumstances. Nevertheless, international and common standards can provide a general outline to guide the research. Hence, combining the benchmarking from Table II with the strategies applied in the selected cases and their proximity to the general indicators derived from the Food and Agriculture Organization of the United Nations (FAO), including indicators from the World Bank, we managed to identify and assess key land governance indicators to determine what aspects of the land governance process need improvement.

Factor	Main focus	Strategy	Proximity to FAO (sub-) indicators	Countries	Reference
Law and legal framework	Land disputes (e.g., between returnee and squatters in post-conflict phase)	Traditional mediation mechanisms	9.a. Increase of the percentage of served conflicts: Use of alternative methods for conflict resolution (formal-informal)	Iraq	Barwari (2013)
	Illegal tenure documents	Ad hoc legal approaches to deal with a high number of similar cases	7.b. Time saving in proceedings or transactional services: Time saving in the regularization of tenure according to the legal status of the possession	Bosnia and Herzegovina	Todorovski et al. (2016) Williams (2013)
	Legal ambiguity among institutions and in land rights	Improving the legal framework; Strengthening land rights for informal settlers	12. Implementation of the regularization of tenure procedure 16. Judicial diagnosis of the surveyed and regularized territories	Afghanistan	USAID (2018)
	Ineffective LAS and authorities	Customary and religious system for land tenure security	9.a. Increase of the percentage of served conflicts: Use of alternative methods for conflict resolution (formal-informal)	Afghanistan	Stanfield et al. (2013)
	Solving land issues	Involvement of international actors (unsuccessful)	No relevant indicator	Bosnia and Herzegovina	Williams (2013)
	Informal settlement and squatting	Tenure security provision	12. Implementation of the regularization of tenure procedure	Argentina; Jamaica; Liberia	Galiani and Schargrodsky (2010) Salas (1986) Williams (2011)
Institutional arrangement	Institutional weaknesses	Strengthening institutions through international intervention, by developing policies and implementing programmes	8. Improved efficiency of LA staff 10. Decentralization, bringing services closer to citizens 14. Setting and updating the cadastre	Bosnia and Herzegovina; Kosovo	Todorovski et al. (2016)
	Improving connected land sectors (social, economic and environmental)	Increasing tenure security through recovery of removed and lost land records	11. Implementation of the cadastre-register integrated system 12. Implementation of the regularization of tenure procedure	Bosnia and Herzegovina; Kosovo	Todorovski et al. (2016)

Factor	Main focus	Strategy	Proximity to FAO (sub-) indicators	Countries	Reference
Capacity-building	Low state capacity to handle land disputes and LA issues	Empowering local actors, local management institutions, and bodies familiar with customary laws	10. Decentralization, bringing services closer to citizens	Iraq; Afghanistan; Timor-Leste	Barwari (2013) Stanfield et al. (2013) Miyazawa (2013)
	Reinforcing the institutional structure	Locating professionals through the country; Reinstitute training and research units; Reallocating capacities within the existing administration units	8. Improved efficiency of land administration staff	Angola; Mozambique; Timor-Leste	Unruh and Williams (2013)
Multiple mechanisms	Land recovery for the affected group	Consultation with the affected group and stakeholders	9. Increase of the percentage of served conflicts 13. Established mechanisms of approval and conflict resolution	Iraq; Colombia	Brookings (2008)
	Local growth-oriented urban planning	New land use system empowering municipalities to lease state land	17. Municipalities involved in the regularization of tenure	China	Wu (1998)
	Transforming the urban spatial structure	Differential land value principle	No relevant indicator	China	Wu (1998)
Technology	Enhancing mechanisms and capacities	Aerial photography; Maps, including photos by claimants; Photographing disputed boundaries	15. Digitalization of the register	Timor-Leste	Unruh and Williams (2013)
Governance	Facilitating local-level collective action on land access by the state	Polycentric governance engaging actors at local, national, and international levels	17. Municipalities involved in the regularization of tenure	Tanzania	Pedersen (2016)

Table II: Key characteristics of land administration system evaluation studies, global overview.



Located on the eastern shore of Mediterranean Sea, Syria supported a population of some 19.5 million before the start of the conflict in 2011 (Central Bureau of Statistics, 2019). The country is divided into 14 governorates (*mohafazat*) and 60 districts (*manatiq*), which are further split into sub-districts (*nawahi*), providing a basis for polycentric land administration. The objective of this chapter is to analyse the current situation and challenges concerning land use, tenure, planning and administration, and to propose suitable options for instituting an effective land administration in the country.

2.1. Spatial Approach and Land Use Degradation

Land is one of the most important resources, and Syria has been suffering under severe loss and degradation of lands, with unprecedented rates in the last two decades. Even before the war, the land use balance was fundamentally altered by urbanization and economic growth, in addition to severe socioeconomic and climate change shocks. The total land area of Syria (18.5 million hectares) is distributed as follows: 33 per cent arable land, 20 per cent non-arable land (including buildings and facilities), 3 per cent forests, and 44 per cent meadows.

2.1.1. Drought, Migration and Urbanization

For some time, FAO and UNEP have been highlighting that Syria faces several types of soil degradation, calling for the formulation of national soils policies. Land degradation in Syria takes many forms, for example, irrigated areas suffer from encroaching waterlogging and salinization, affecting 600,000 hectares of irrigated lands. Furthermore, the unprotected slopes on hilly land experience severe water erosion; wind erosion occurs in the marginal areas under barley cultivation and in the Badia where overgrazing is common (FAO, 1992, p. 4, 14). United Nations Economic and Social Commission for Western Asia (ESCWA) associates land degradation in Syria with agricultural activities, the harsh climate and unsustainable exploitation of natural resources. This kind of land degradation could turn into a major threat to food production systems and livelihoods in rural areas, especially if agricultural production continues to expand in marginal lands at current rates. The

increased demand for water from other sectors and the persistent inefficiency in water use at the agricultural level will result in dwindling water supplies of deteriorating quality, leading subsequently to migration from agricultural lands (ESCWA, 2007, p. 3, 39).

Since 2009, ACSAD (2011, p.29) has been sounding a regional early warning that 68 per cent of lands in Syria are susceptible to desertification. Waves of drought between 2000 and 2010 worsened the situation, leading to degradation of flora and fauna species. The drought forced thousands of farming families to leave their lands and homes, to move to cities for alternative work, especially during the intense drought years from 2007 to 2009. The January 2011 field survey documented the grave conditions:

most of the houses on villages are left empty and less than 10% are occupied by old people and children. The younger generations left for thousands of kilometers seeking work. Many young men left for Lebanon or Jordan as workers in sectors of construction or agriculture. Women left to work in the western part of the country, for packing vegetables in "Tartous" green houses. From the social point of view family members were separated, and divorce, second marriages and economical and sexual abuse have increased. (ACSAD, 2011, p. 29)

The social and economic context was already complicated before the conflict, marked by environmentally and economically induced movement and displacement towards cities. Climate change and drought have had a great impact on people's lives in many regions across Syria and are one of the factors behind the ongoing conflict. The agriculture sector – which employed 40 per cent of Syria's workforce and accounted for 25 per cent of gross domestic product before the crisis – has been severely impacted. Farmers have had to contend with erratic and poor rainfall since October 2007, the driver behind the worst drought in four decades. Around one million people are severely affected and face food insecurity, particularly in the Middle North, the South West and the north-eastern Al-Hasakah Governorate, where the most vulnerable, agriculture-dependant families reside (ACSAD, 2011, p. 26).

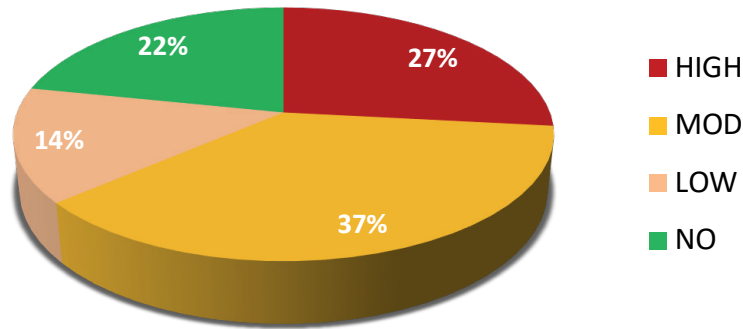


Figure IV: Level of drought vulnerability in Syria (185,180 km² in total). Source: ACSAD (2011, p. 14).

In the pre-war period, land use in Syria was affected by climate change, successive droughts, population pressures, leading to unbalanced use of natural resources and worsening degradation of lands. The result was waves of population displacement from affected areas to major cities such as Damascus and Aleppo. The rate of desertification increased from 59 per cent to 75 per cent between 2010 and 2014, largely due to the inability to develop and implement management of integrated disaster risks, to climate change impacts and because of soil pollution with oil and its derivatives during the war, especially because of random refining. The rate of drought and desertification peaked in 2014 at 75 per cent, stabilizing back to 59 per cent between 2016 and 2019. Soil degradation, which includes desertification, salinization and pollution, is a major problem in Syria, arising from unfair land use and excessive exploitation of the scarce water resources (PICC, 2020, p. 67).

Land degradation in Syria has been accelerating since 2011. In the first three years of the war, more than 70 per cent of the country's area fell out of state control, and armed factions classified as "terrorist" took control of the countryside. Damascus has almost completely lost its agricultural resources, and farmers lost the most important points of support to continue living on their lands. In 2011, the agricultural land area totalled between 4 and 4.5 million hectares, with 28 per cent under cultivation. By 2019, the share of cultivated area had fallen to 23 per cent due to the ongoing conflict in different regions and the migration of the rural population inside Syria and abroad. Vegetation cover decreased by 0.26 per cent between 2010 and 2015, largely due to the suspension of development projects. Access to those areas was limited due to sabotage by armed terrorist groups and military actions, and funding was lacking. During 2016, the density of vegetation cover fell 2.5 per cent below the range customary before the war (Ibid., p. 67).

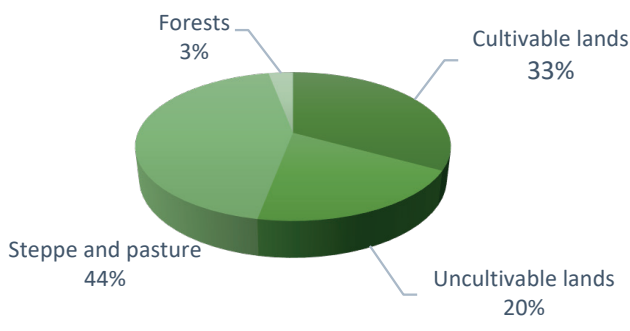


Figure V: Land use in Syria in 2011. Source: PICC (2020, p. 67).

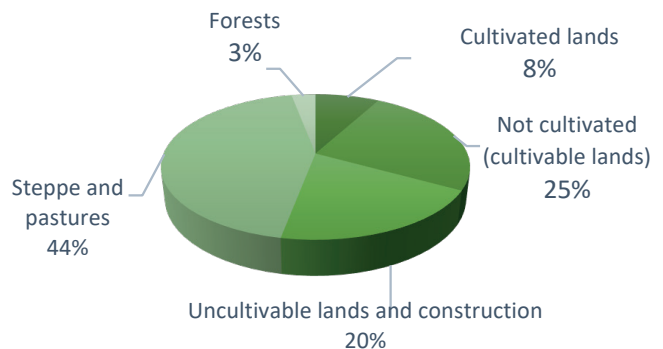


Figure VI: Land use in Syria in 2019. Source: PICC (2020, p. 67).

Cultivated land was converted to non-cultivated land use types in many areas in Syria. Generally, cultivated areas declined by 943 hectares per year between 2010 and 2018 (Mohamed et al., 2020, p. 67). Studies highlight a clear change in areas and percentages of land use balance between 2000 and 2015 (see Table III). The forests area decreased by 8.04 per cent between 2000 and 2015. The percentage of change concerning urban and artificial area land was enormous – 50.10 per cent. The change in agricultural lands and pastures was negative, which implies significant urban development on agricultural lands and forests between 2000 and 2015. Syria was known for significantly accelerated urbanization rates, growing from 43.5 per cent in 1970, to 49.8 per cent in 1990, and to 54 per cent in 2008 (see Figure VII) (Maya, 2010, p. 278). The indicators

show unbalanced development between urban and rural areas, accelerated urban growth and degradation of the agricultural sector, and migration from rural into the main urban areas, in search of work and better services.

Prior to the crisis, over half of Syria’s population lived in urban and peri-urban areas, and approximately one-third lived in informal settlements (UN-Habitat, 2013). These settlements provided services such as electricity and running water but had only limited official recognition and registration. The informal status of these settlements usually resulted from the lack of adherence to official regulations regarding land tenure and registration requirements, and/or land use, planning, and building requirements. Most residents of informal settlements lacked security of tenure.

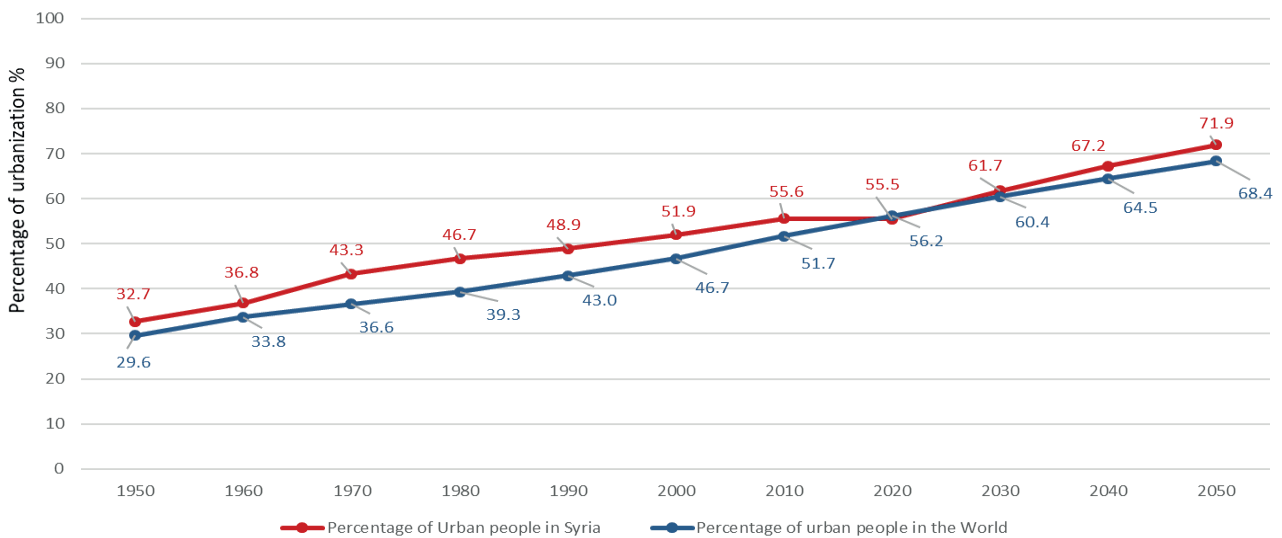


Figure VII: A century of urbanization in Syria and the world, trends and projections. Source: Authors based on data from DESA (2018).

Land Use	Area (km ²) in 2015	Area (km ²) in 2000	Difference 2015–2000	Per cent change
Forests	8,850	8,139	-711	-8.04
Shrubs, grass and sparse vegetation	4,189	3,592	-597	-14.25
Agricultural lands	67,209	67,154	-55	-0.08
Pastures	59,969	57,655	-2,314	-3.86
Water	2,344	2,362	18	0.77
Urban and artificial areas	4,033	6,053	2,020	50.10
Other	40,363	42,001	1,638	4.06
Total	186,957	186,957	0	0.00

Table III: Land use changes in Syria between 2000 and 2015. Source: SAR (2020, p. 9).

The degradation of Syrian lands takes many forms: pollution of agricultural lands and pastures, salinization, waterlogging, the deterioration of forests, and other problems (SAR, 2020, p. 8). Furthermore, Syria has witnessed an accelerated urban development. The percentage of people who live in urban areas has increased from 51.9 per cent in 2000 to 55.5 per cent in 2020, projected to grow even further to 61.7 per cent by 2030. Urbanization has reached 76 per cent in certain cities as Aleppo, Lattakia, Tartous and other cities in rural Damascus, hosting over 40 per cent of the country's 3.2 million IDPs. A large share of urban infrastructure has been destroyed and around 35 per cent of urban schools are not operating due to damage or occupation. More than 50 per cent of hospitals in cities are not operational. Around 760,000 housing units in Syrian

cities were damaged. Tragically, historic and traditional urban centres have been severely damaged and in some cases fully destroyed, for example, in Aleppo, Homs, Deir ez-Zor, Dara'a, Douma and Daraya (UN-Habitat, 2021).

Land use indicators became more positive between 2015 and 2018 because of slowed development (see Table IV). Forest areas increased by 1,337 and non-arable land decreased by 2,942 hectares. Rocky and sandy lands decreased by 4,497 hectares, while buildings and public utilities increased by 1,543 hectares. The growth of arable lands by 11,251 hectares is a positive indicator, confirming the reactivation of the agricultural sector and its recovery, impressive considering the economic blockade imposed on Syria in the last three years.

	Forests	Mead-ows and pastures	Non-arable land				Arable land		
			Rocky and sandy	Rivers and lakes	Build-ings and public utilities	Total	Unculti-vated	Cultivat-ed	Total
2009	580,858	8,244,069	2,833,611	154,383	692,718	3,680,712	347,834	5,664,498	6,012,332
2010	582,503	8,212,202	2,828,966	155,005	694,687	3,678,658	348,287	5,696,321	6,044,608
2011	584,775	8,199,011	2,808,966	155,131	702,189	3,666,286	352,161	5,715,738	6,067,899
2012	584,944	8,189,666	2,806,192	155,132	702,616	3,663,940	348,582	5,730,839	6,079,421
2013	585,759	8,188,052	2,802,993	155,132	702,914	3,661,039	349,901	5,733,220	6,083,121
2014	586,112	8,185,745	2,806,931	155,130	703,240	3,665,301	348,359	5,732,454	6,080,813
2015	586,110	8,185,674	2,806,649	155,144	703,583	3,665,376	350,128	5,730,683	6,080,811
2016	586,112	8,185,526	2,805,024	155,143	703,632	3,663,799	351,934	5,730,600	6,082,534
2017	586,112	8,185,581	2,804,476	155,143	703,698	3,663,317	348,560	5,734,401	6,082,961
2018	586,112	8,189,365	2,804,469	155,143	703,732	3,663,344	350,827	5,728,323	6,079,150
Change 2018–2011	1,337 +	9,646 -	4,497 -	12 +	1,543 +	2,942 -	1,334 +	12,585 +	11,251 +

Table IV: Total land use (ha) and changes (2009–2018), along the main categories at country level. Source: Authors, based on data from SAR (2018).

During the 10 years of conflict, many regions and cities fell outside of Syrian state control. Its inability to handle the increased demand for housing and the massive rural to urban migration, worsened the growing zones of informal settlements on agricultural lands, particularly in peri-urban sections of major metropolitan areas and in the main cities. Furthermore, unresolved contradictions in the transformation from traditional land tenures to modern land registries accumulated, further weakening the state's ability to properly manage urban growth. Because of severe land degradation, Syria joined the Land Degradation Neutrality Target Setting Programme (LDNTSP) at the end of 2016. Technical work teams have also been formed, to calculate the baseline and indicators for the programme and all other points related to setting voluntary targets, the implementation plan and transitional projects towards achieving land degradation neutrality (SAR, 2020, p. 7).

Also, planning processes have become very slow, with the number of residential areas in the governorates decreasing from 164 in 2010 to 11 in 2015. The significant decrease is indicative of the crisis' grave effect on urban planning. Between 2010 and 2015, the number of newly elaborated master plans decreased from 189 to 23, while the total coverage area decreased from 19,000 to 850 hectares for the same period. Industrial plans were halved, from 25 in 2010 to 12 in 2015. Also, the number of new urban agglomerations dropped from 12 plans in 2010 to 1 plan in 2015, and then increasing between 2018–2019 to reach 2 plans with 5.2 hectares (PICC, 2020, p. 67). The implementing of these plans remains impossible due to the blockade and sanctions imposed on Syria since 2011. They impact development and people's lives, increasing poverty and food insecurity as well as accelerating non-formal urbanization on agricultural lands. On the other hands, the only positive point of this change was the percentage of green areas, which increased by 3.5 per cent between 2010 and 2014. The increase, attributed to the decline in the growth of urban plans (despite the destruction of forests and gardens), led to a slight uptick in the share of green spaces, from 0.027 hectares per capita in 2010 to 0.028 hectares in 2014 (PICC, 2019, p. 136).

2.1.2. Land Use Policies and Their Impacts on Land and House Prices

Land use policies play a crucial role in determining land property prices. The traditional land use process in Syria is so long, it takes sometimes more

than twenty years before implementation starts because of approval delays and contradictions. This situation fosters inefficient land uses and leads to largely market-driven land use patterns. The influence of any public policies on land use impacts land value and land prices. The lack of coordination between different stakeholders leads to opposing incentives to developers and landowners, which accelerates informal use. Furthermore, fiscal systems encourage local governments to pursue specific planning policies, and different forms of land use have different fiscal impacts on local governments. At the same time, local governments prefer the most fiscally advantageous land use planning policies and try to attract commercial development rather than other types, which can generate inefficient land use plans. The impacts are numerous, such as the loss of open spaces, housing deficiency and rising housing costs. The fiscal systems should provide balanced incentives for local land policies.

More flexible planning systems are recommended, but this is not applicable in all situations; for example, historical and natural areas may need stricter regulations. On the other hand, more flexible planning instruments can help transform areas towards new uses that are more efficient, innovative and attractive (especially in reconstruction strategies). Furthermore, the housing cost in Syrian cities has risen sharply over the last decade. The deterioration and degradation of the housing stock because of the war is a major driver, as are land use regulations, which prevent the construction of sufficient numbers of new housing or infrastructure for the growing populations or for those who have lost their houses. In this context, access to own housing not possible for low- and middle-income families in Syria. House prices have increased 200 times. In 2010 before the crisis, the average price for a house of ca. 100 m² was around SYP 1 million (USD 20,000). One dollar equalled 50 Syrian pounds in 2010, but with the rapid collapse of the local currency, the dollar reached SYP 640 in 2016 and in early 2020 more than SYP 1,000. By the end of 2020, it had reached a fantastic exchange rate of SYP 3,970 for one dollar. Therefore, owning a house in Syria became impossible for a big category of people. The average price for a house was around SYP 1 million in 2011; in March 2021 the price stood at around SYP 80 million (for example, a youth housing project in Kodsaiia in rural Damascus). At the same time, the official monthly salary of the highest category official is not more than SYP 100,000 (USD 25).

2.1.3. New Spatial Framework: Main Goals, Outcomes and Outputs

The complex situation related to land use management and property registration prevents the formulation of a clear national framework regarding demolition of damaged and unsafe housing, because of tenure rights procedures.

Main spatial challenges:

- Multiplicity of authorities and lack of clear land strategy: administration, use, tenure and development;
- Rapid urbanization: 55 per cent and 76 per cent in host cities (more than 45 per cent informal);
- Land degradation, equitable spatial urban/rural land use, 9.3 million people face food insecurity.

Outcome 1: National programme for urban/rural agriculture implemented and public participation enhanced.

Main spatial outputs:

- Establishing a reference entity to lead LAS in Syria;
- Establishing and implementing a new LA paradigm in Syria based on the polycentric approach;
- Developing a new land development policy based on SDGs; urban regeneration, equitable spatial urban/rural land use based on urban agriculture.

The future of Syria depends on the quality of its resources, and its lands are one of the most important ones. Therefore, improving land administration will enhance well-being and ensure food security and quality life for the Syrian people, now and for future generations.

2.2. Legal Framework and Land Tenure Right Management in Syria

Land tenure is not only the right of those living on the property now but of all the past generations that have lived upon it and of all future ones. The land tenure systems in Syria are complex, stemming from hundreds of years of evolution in the legal system as well the socioeconomic conditions of the different communities in the country. Beyond economic value, land has important sentimental value for the Syrian people, and many are very closely attached to their land. The legal

framework for defining property rights in Syria became so complicated due to the different political visions for organizing society throughout its history: Islamic, Ottoman, French mandate and Baathist (EU, 2017, p. 9). Each period had its specific codes and regulation, reflecting the social contract of that period. The development of land and property rights codes built on previous codes with some modernization, altering old statutes and creating new sets of unresolved contradictions. Land administration became more important during the war, with the accumulating problems related to land tenure, deterioration and property rights. Therefore, any changes to land (use, value, property) have an important consequence on the distribution of wealth to the Syrian people and investments in reconstruction strategies.

Land in Syria is divided into two main categories, state lands (62 per cent), and private lands (38 per cent). The tenure system has many categories, including a wide range of customary, Islamic and informal rights (Forni, 2001, p. 9). This form of land tenure reflects ownership but not access and use rights. There is a land registry in all 14 governorates but no overall national register. These registers cover only formal land and property transactions, and both temporary and permanent registers function in parallel (UN-Habitat, 2013, p. 1). Basic statistics indicate that only 20 per cent of public land was registered before the crisis, for example, public farms and agricultural lands that were leased to individuals. Unregistered lands open to the public include forests and pastures, public lands used for roads and other public purposes. The state, as owner of a large portion of the land, has a key role in land administration but not in the private sector, except for national projects of capital importance. In theory, the real estate market is linked to private land and property; but in fact, there are black markets where rights over public land are being used improperly.

The land cadastre was established for the first time in Syria with land registers in all the governorates during the French mandate (1923–1946). These registers covered transaction within the statutory system; they did not include customary and informal transactions and there was no central, national-level registry. In addition, the process of digitalizing land records started in 2010 but only with new records, so it did not include transactions that occurred before 2010. Therefore, because of the conflict, the registry offices in many governorates were destroyed and official records were damaged, with obvious negative impact on tenure rights. Furthermore, it was estimated that

in 2013 approximately 32 per cent of the total urban population lived in informal housing, which is not recorded in the formal land cadastre (UN-Habitat, 2013). This situation will continue to hamper land use administration and reconstruction strategies.

Housing, land and property (HLP) challenges for those who left Syria as refugees or remained as IDPs are even more complicated, because they usually do not have an official document to prove property ownership. Furthermore, Syria is not a member of the 1951 Refugee Convention and the legal rights for Syrian refugees are not guaranteed. On the other hand, the Syrian courts have not developed a practical solution for those who left rented housing due to the conflict, "stating that vacancy of a property for a year may be sufficient to terminate a lease, but conversely forbidding eviction on an *in absentia* basis" (Al-Zien, 2019, p. 3). Concerning urban planning and land development, a quick review of the main legislative acts can help outline the situation in the legal and institutional context:

- The Urban Planning Law (Law No. 5/1982): The main point of criticism regarding this old law is that the central concept of a "master plan" as a technical tool is inconsistent with the new reality of urban development considering the market economy. Therefore, the development concept in master plans is still new in Syria and should be introduced and applied for land administration in urban areas.
- The Urban Expansion Zones Law (Law No. 60, 1979) and the Public Housing Law (Law No. 26/2000): There is confusion about the meaning of "expansion areas" or "housing expansion areas" between the two laws.
- The Violations Zones Law (Law No. 9/1974): "Irregularities" constitute a large category of the built environment in most cities, but the problem mainly lies in the procedures for obtaining the lands necessary for urban development. Currently, the impetus for urban planning is the practice of major cities, using the method of expropriation as the main planning tool.

After the conflict started, the government published around 40 laws and legislation related to lands, with the priority to set the reconstruction process in motion. Studies show that some of these laws have become a real obstacle to safeguarding HLP rights, especially for vulnerable people: "most controversial issues to arise from the conflict in coming years,

especially with regards to legislative disorientation [will be] created by the frequent amendments to urban planning laws" (Al-Zien, 2019, p. 14).

2.2.1. The New Legal Framework, Main Goals, Outcomes and Outputs

The accumulation of these contradictory laws will prevent the implementation of any new LAS. The regulatory role of formal institutions was very limited and ineffective, thereby facilitating corruption and inefficient land use. As a result, these types of misconduct in land use management worsened injustices between citizens, accumulating over the years. The problem of property rights was one of others major cause behind the conflict that broke out in 2011. The main problem of land property rights in Syria is going back to unresolved issues related to land property rights and the multiple tenure types. Land property rights in Syria are based essentially on the Islamic codes, which define the legal status and regulation for property issues according to political and social considerations. In relation of the public to the private, establishing property is directly related to the system of taxation and the obligations of the state towards its citizens. However, the state is also a major landowner and its property serves important social, economic, and political roles. Regulating the public domain has major implications on private property via planning regulations, production of public goods and state enterprises and their competitive impact on private property.

Circumstances related to both the droughts before the crisis and the conflict since 2011 have pushed populations living in rural areas to leave, forcing families to abandon their homes, farming and herding fields and move to urban areas or in some cases become refugees abroad. Some have returned to their property; others want to come back; some want to sell their property but have lost (or did not have any) documentation or evidence to prove their ownership. In a lot of cases, a secondary occupation of properties abandoned by displaced populations increases the risk of local conflicts. This complex situation can prevent people from returning to their lands and property.

Main legal challenges:

- Land tenure system: 38 per cent private lands, 62 per cent state lands;
- Loss of many ownership documents for housing and lands;

- Increased disputes related to housing, land and property rights, especially for vulnerable people;
- Discriminatory legislation and inheritance laws disadvantage fragile groups (e.g., women).

The complex situation related to land use management and property registration prevents the formulation of a clear national framework regarding demolition of damaged and unsafe housing, because of tenure rights procedures.

Outcome 2: Tenure systems and land laws are reformed.

Main legal outputs:

- Developing an integrated tenure system securing land and property rights for all;
- Establishing an ownership and recording system and providing people with tenure documents;
- Developing a new, fair legislation for property rights, inheritance, vulnerable people;
- Developing legislation based on SDGs, to safeguard natural resources and land use standards.

There are a several public policy tools that affect land use, the most important being land use regulations imposed by land use planning and code regulations. These instruments restrict how land can be used but do not affect how individuals and businesses would like to use land. In this context, land use regulations should encourage densification in low density areas and close to city centres and along public transport axes, according to infrastructure capacity and population growth.

2.3. The Institutional Framework and Land Use Stakeholders

Land use is a multidisciplinary and multi-level approach at the spatial (national, regional and local) and sectoral (economic, social and environmental) scale. Therefore, land administration needs more integrated approaches to manage spatial development and land property that consider the wide range of sectoral policies that affect land use beyond the planning system. Housing, transportation, energy, water, agriculture, tourism, and economic development pose demands on land and affect how it is used. This presents a complex governance challenge to understand land administration stakeholders and their roles, at sectoral and spatial level (see Table V):

Land administration national stakeholders	Land administration role			
	Land tenure and rights	Land value	Land use	Land development
Ministry of Local Administration and Environment (MLAE)	X	X	X	X
Ministry of Agriculture and Agrarian Reform (MAAR)			X	X
Ministry of Water Resources			X	
Ministry of Public Works and Housing (MPWH)			X	X
Ministry of Social Affairs and Labour	X			
Ministry of Industry			X	X
Ministry of Transport			X	X
Planning and International Cooperation Commission (PICC)			X	X
Regional Planning Commission (RPC)			X	X
Ministry of Finance		X		
Ministry of Tourism			X	X
Ministry of Justice	X			
Ministry of Communication and Information	X	X		X

Table V: National land administration stakeholders in Syria and their roles.

The planning system in Syria is based on three levels: national, local and sectoral. The national level is based on the national plan for social and economic development and the Planning and International Cooperation Commission (PICC), the technical arm for the prime minister and national government at national level. Land administration issues in urban areas are related to MLAE, while planning of agricultural land is related to MAAR. The land reform competence is related to the Ministry of Water Resources. Many sectoral ministries work directly and indirectly on land use, but there is no principal entity that leads and coordinates land administration at national or local levels. To understand the planning mechanism in Syria, we should understand the role of each entity and its work on land administration.

2.3.1. Ministry of Local Administration and Environment (MLAE)

MLAE is in charge of urban planning and master plans. The General Directorate Cadastral Affairs (GDCA) is its technical arm and one of the oldest service institutions operating in the country. The cadastral registry was established in the 1920s under the French mandate in Syria, in response to the perceived weakness of the method of registering land rights at the time, known as *daftar khanum*. It was not based on adequately identifying real estate, in addition to the fact that the designated area was not controlled and estimated by the concerned parties, and the records and bonds issued were not set on a clear legal basis. These deficiencies did not guarantee the safety of rights in real estate transactions. The real estate registry and its complementary documents are seen as having an important national value for preserving and developing property rights. Protecting social stability and promoting economic development are fundamental state duties of national sovereignty.

GDCA has two centres in Damascus and an office in each governorate. In the beginning, it reported to MAAR and then was affiliated with the Ministry of Finance and the Ministry of Justice. Its institutional home changed many times according to circumstances, eventually falling under MLAE. It maintains cadastral documents that show the physical and legal status of real estate, in relation to real rights, easements, relocation and emergency amendment. An official contract is required to change the real estate registry, which can deal with two different types of documents that comprise the real estate registry (Shaddoud, 2016). After 10 years of conflict, owners of real estate in Syria face numerous difficulties in realizing their rights:

- Policies and approaches differ substantially from one region to another. Some regions depend entirely on the distribution of real estate rights and funds by legal means (legal inheritance inventory).
- Many owners of real estate rights are absent. Some perished during the conflict, while others left the country or relocated to other cities looking for safety.
- Theft of real estate records is rampant in some regions and cities, forcing employees of real estate departments to rely on the civil registry instead of the real estate registry. This situation can produce problems with serious consequences. For example, a person can claim ownership of a property in the absence of real estate records and can sell the same property many times over to multiple buyers. Sales signals cannot be inputted in the real estate newspaper, and with a potentially large number of improperly documented sales, real estate problems, disputes and chaos can erupt.
- Real estate records for many cases are in areas outside of state control, and real estate rights holders cannot access their estate records.
- Maps of the survey departments are absent in some areas, such as villages in the countryside of Aleppo and regions in north-eastern Syria.

Following these challenges, securing HLP rights is a daunting task, characterized by loss, damage or destruction of property and the difficulty to manage the land because of conflicts over tenure rights or absence of owners (e.g., only 5,582,968 refugees are officially registered) (UNHCR, 2020).

2.3.2. Regional Planning Commission (RPC)

The need for this body emanated from the increased initiatives and studies of spatial and functional distribution for land use on the local and at sectoral levels. The effort to develop comprehensive plans addressing regional development was marked by duplication of efforts and lack of spatial coordination between sectoral ministries. RPC was established in 2010 by Law No. 26/2010, indicating a major shift in planning methodology and approach in the country. It sought to complete the planning structure and to bridge the gap between the national and local level, in turn, institutionalizing tools for effective planning patterns by introducing a new level of planning. Regional planning was seen as a tool to reach balanced development by taking into consideration planning mechanisms that link the different investment,

planning and policymaking initiatives with the comparative advantages and needs of each region.

RPC has developed and implemented an administrative structure related to MLAE, and recently to MPWH, to facilitate its mandate and role in the country. RPC is responsible for organizing the planning and spatial regional development process. Since its establishment, RPC has worked to develop several planning interventions at all spatial levels, through which it seeks to restore a balance between the various human activities and the resulting consumption of limited natural resources. This is done by verifying the ability of these resources to regenerate and the sustainability of development levels. The positioning of RPC under the direction of MPWH, with very modest technical and human capacity, will not allow it to produce an effective LAS because it needs another administrative position to enable it to take this responsibility at the national level. This conclusion was confirmed by PICC, which announced that the connecting regional planning approach was largely absent, making it difficult to bridge the gap and interlink national plans with local and development efforts at various levels and components. They have been adopted in the National Framework for Regional Planning, but the war has blocked the implementation of the basic components of this framework (PICC, 2019, p. 136).

Main institutional challenges:

- Multiplicity of authorities; no clear strategy for land (administration, use, tenure and development).
- Duplication of works and lack of coordination between the national entities at horizontal (sectoral) and vertical (national, regional and local) level.
- Absence of land administration system tools and policies in Syria.
- Lack and weakness of human and institutional capacities.

Outcome 3: Institutional and human capacity development is strengthened.

Main institutional outputs:

- Strengthening the institutional, data, ICT and human capacities.
- Establishing a transparent financing system for land management with multilateral partnerships (government, local, private, international).
- Strengthening the public participation in land use and development policies.

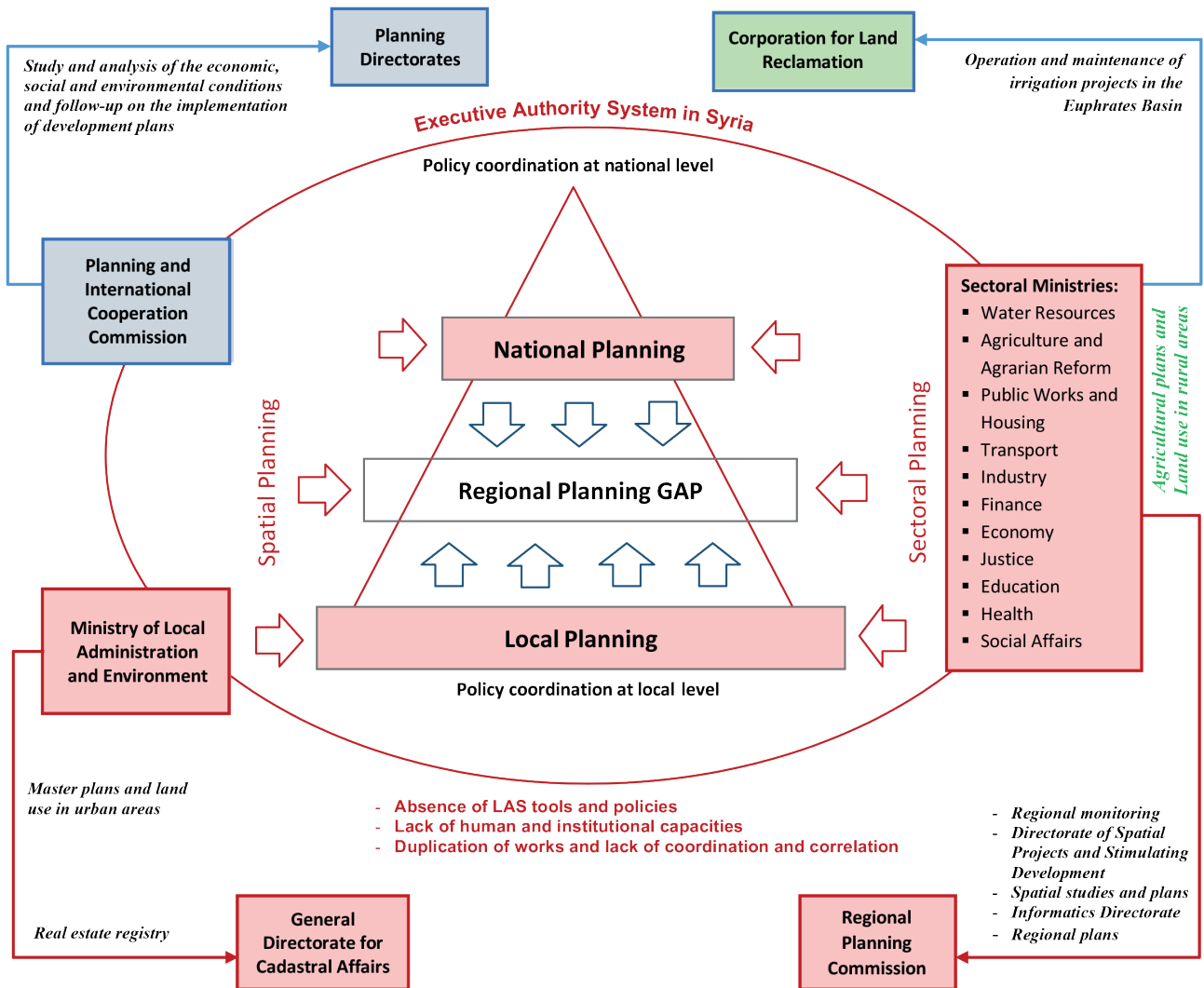


Figure VIII: The planning systems in Syria at national, regional, local and sectoral levels. Source: Maya (2021).

2.3.3. Initiatives and Projects for Spatial Planning in Syria

According to this context, several studies related to spatial planning were conducted on a regional or national level by many institutions; however, most of these studies were never implemented (see Table VI).

On March 2008, Japan International Cooperation Agency (JICA) together with MLAE presented the Study on Urban Planning for Sustainable Development of Damascus Metropolitan Area in Syria. This study presented for the first time a spatial framework for Syria based on the distribution of urban population,

the artery road network, and the macro water balance of seven basins (JICA, 2008). Alternative urban axes were compared by looking at concentration of urban populations per unit length of artery road. Based on this analysis, a spatial structure was identified and a strategy for the future spatial development of Syria was proposed (Figure XI). Its implementation was proposed in three phases: up to 2013; 2014 to 2019; and 2020 to 2025. The scenario was suitable at the time, especially considering the positive economic and social development indicators within a context of political stability and safety. The conflict totally changed the socioeconomic and spatial context, which became very complex, and the Syrian state is still not in control of all its territory.

Institution	Project
MPWH	- Sanitation and Sewage Outline (85 per cent), Atlas of Real Estate Development
MAAR	- Land Classification Manual-Determination of Land Productivity and Use Schemes Mechanism
PICC and SIA	- Investment Map
MSEA	- Environmental Land-Use Schemes for Damascus and Tartous Governorate
Ministry of Tourism	- Tourism Map – mapping areas and hubs, including attractions and potential areas for tourism development
MLAE	<ul style="list-style-type: none"> - Comprehensive Regional Study of the Eastern Region - Regional Strategic Study of the Palmyra Region - Sub-Regional Strategic Study of the Greater Damascus Area - Regional Studies of Wadi Barada and Ma'aloula - Regional Studies of the Sednaya Plain - Development Axes (Homs–Al-Brej, Homs–Tartous, Homs–Hama) - Comprehensive Regional Spatial Plan of Homs Governorate - Regional Study of Latakia Governorate - Regional Study of Governorate of Rural Damascus - Study of the General Map of Greater Damascus - Study of Al-Nadara Valley Area as part of “Homs Dream” - Regional Study of Tartous Governorate (contract to be finalized)

Table VI: Spatial planning projects in Syria.
Source: SAR (2011).

2.4. Effective and Efficient LAS to Assure Social and Economic Recovery and Peacebuilding in Syria

The analysis of the spatial, institutional and legal frameworks shows that many challenges need to be resolved. Therefore, a new model for effective land administration has been developed with priority actions and outputs (Figure IX).

Outcome 1: National programme for urban/rural agriculture implemented, and public participation enhanced.

Outcome 2: Tenure systems and laws reformed.

Outcome 3: Institutional capacity development strengthened.

Priority actions proposed according to these desired outcomes to ensure spatial, legal and institutional goals are being met, according to FELA. An effective and efficient land administration system, based on green cities principles, and food security are the main outputs for this programme, which are set to be achieved based on:

- Integrated land planning urban/rural, green cities and urban agriculture;
- Land investment;
- Implementation and monitoring;
- Land administration assessment.

The main outcomes of an effective and efficient land administration system are the following:

- Green, healthy cities and people;
- More jobs for women and youth;
- Affordable food prices for everyone;
- Decent income for individuals and families;
- Closely connected urban and rural areas;
- Reduced transport cost and energy;
- Innovation and food security.

Syria has lost more than 30 years of development, which will have long-term effects on future generations. Peacebuilding in Syria needs cooperation between all local, national, regional and international efforts to ensure prosperity and well-being for all.



Figure IX: A land administration model to ensure effective LAS in Syria: challenges and priority actions. Source: Maya (2021).



Land plays a fundamental role in shaping policies due to the “multidimensional criterion”, related to the different ways that stakeholders consider land (i.e., a property or space) and to the goals that it serves (political, social and economic) (Clerc, 2016, p. 106). How the land is envisioned affects urban spatial policymaking at different levels (national, regional and local); thus, land can be seen as a cross-sectoral issue (Bell, 2011). Current pressing challenges, such as urbanization, food security, climate change, conflicts and crisis, urge countries to deal with land issues within an appropriate spatial agenda and land policies.

3.1. The Importance of Governance in Land Administration

There is a fundamental integrated and intersecting correlation between LAS, sustainable development and governance. Several studies considered good governance as the fourth dimension of sustainable development, together with the social, economic and environmental elements. To achieve best practices of land administration governance and sustainable development goals, it is essential to have the necessary LAS infrastructure; however, this does not stop at that level. LAS is required for achieving more comprehensive and coherent goals such as keeping the peace in post-conflict times and addressing population growth challenges (e.g., informal settlements) and poverty pockets in urban areas (neighbourhood inclusiveness). Governance is a decision-making process that is embodied in all government sectors and, thus, has both direct and indirect influences (Zimmermann, 2008).

Good governance is based on a set of objectives that include: participation, fairness, decency, accountability, transparency and efficiency. In most developing countries, secure property rights are undermined by weak governance practices. Overlapping laws and regulations, weak institutions, limited accountability and incomplete property registration systems create an environment that lacks transparency. Technical complexities, institutional fragmentation, vested interests, and lack of a shared vision hamper the effort to improve good governance. It plays a significant role in effective application of decentralization, improving land use systems, and enhancing women’s land rights. For the investment in a land administration project to be considered successful, reaching sustainability by the end of donor engagement is the ultimate aim. Sustainability has many elements including: capacity; budget; good governance, transparency and accountability; securing land records from loss, destruction and fraud; reliable and consistent delivery of accessible services; and government commitment and public confidence.

3.2. Governance and Post-Conflict Land Administration

Land administration issues will continue to be priority areas in post-conflict recovery processes, as evidenced by the continuing concerns regarding food security, climate change, disaster mitigation and response, poverty alleviation, growing urbanization, human rights and others. Effective LAS is not just important to overcome such crises but also to improve quality of life by providing the adequate infrastructure, habitable urban places, and livelihoods for the rural and urban poor. Additionally, LAS seeks to enhance gender equality by improving women’s access to landownership, especially important in the developing world, where most women work land they do not own.

In post-crisis times (e.g., after a conflict or natural disaster) illegal land practices boom. The continuation of such practices hampers the recovery process and thus the achievement of SDGs. Whereas it is difficult to stop such practices, integrated LAS contributes to eliminating most of them or reducing their expansion and impact. This could be achieved through a governance system that is made by the government and supported by citizens on the local level. Delivering resilient approaches that serve planning at the local level (or even at multiple levels) will help upgrade different life aspects, including food security, land security, sustainable development, and overcome the problems emerging from the political challenges of the post-conflict phase. To reach these goals, LAS has to be recognized by all stakeholders and specialists as it influences national development policies by adopting the 2030 Agenda as the dominant framework.

3.3. Land Governance and Polycentric Development

Land governance is considered essential for good governance through an effective LAS designed to support the understanding of its role and functions as well as its institutional relation to the historical circumstances and policy decisions of a country (Enemark, 2009b). This can be reached by enhancing the land distribution and management paradigm with the support of land governance, thereby facilitating the process of integrating new needs into traditionally organized systems. It delivers detailed information and reliable administration of land from the foundational level of individual land parcels to the national level of policy implementation (Ibid.).

Polycentricity increases governance capacity in

polymaking, delivering services and developing the needed framework to steer all related practices. Concerning inter-institutional relations, polycentricity arranges institutions in an uncoordinated environment of independent actors. The unique design of polycentricity allows for a resilient attitude when dealing with emerging global challenges within increasingly complex societies (Araral and Hartley, 2013). Polycentricity encourages multilevel governance, denoting both vertical and horizontal coordination, building on social capital and focusing on the relevant level. This approach, in turn, enhances the policy coherence of the sustainable development tool by including the four sustainable development dimensions between different levels and sectors.

Despite the long history of polycentricity and its spread, it is characterized by vagueness. This ambiguity lies in its definition and encompasses governance as well as the geographical systems in its meaning (Eskelinen and Fritsch, 2009; Davoudi, 2003). At the same time, ambiguity makes the definition very flexible, so that it can be applied in various environments, giving polycentricity importance in both the academic and practice sectors. Thus, polycentricity can be interrelated to land governance.

Land governance is related to institutions, policies and processes that manage land and covers all activities related to LAS functions. When focusing on the land sector and its spatial dimension, "land governance is about determining and implementing sustainable land policies; this includes decisions on access to land, land rights, land use, and land development" (Enemark, 2009b). As administration is seen as the operational dimension of land governance, an effective LAS is necessary for good governance. Conversely, good governance is essential for achieving the SDGs related to land administration, with targets contributing to the overall well-being of the population (leave no one behind) and supporting the Millennium Development Agenda (Bell, 2011; Enemark, 2010).

3.4. Polycentric Development Model

Effective LAS aims towards smart and resilient rural and urban societies, with equitable spatial and land use planning and land development as well as ensuring participatory and inclusive land use. Effective planning is one of the aspects needed to achieve this goal (UN-GGIM, 2020). Activities related to land use planning and control require a spatial framework for identifying the physical and spatial objects on the ground (UN-Habitat, 2016). Systematic spatial

planning (the process of shaping the built and natural environments) offers a chance to make the technical infrastructure more sustainable and less expensive. It is about the management and development of space to create better places, responding to the needs of society, the economy and the environment. Spatial planning can contribute towards equitable rural and structural transformation by providing policymakers with information that helps them identify and prioritise the necessary sectoral interventions. In other words, spatial planning is an instrument that plays a significant role in setting complementary, successive development priorities in full recognition of cross-sectoral synergies within the rural-urban, known as "rurban", continuum.

Polycentricity represents the principle of strategic planning on the regional level, where it aims to concentrate land use and optimise infrastructure (Bergsli and Harvold, 2018). Moreover, this principle extends to include the lower scales of strategic planning, especially metropolitan regions, by enhancing competitiveness, counteracting sprawl, supporting effective land use, and strengthening collaboration between sub-centres (Schmitt, 2013). This, in turn, plays a remarkable role in increasing regional coherence and decreasing inequality between development poles (ESPON, 2006). Polycentricity is comprised of two dimensions, a morphological and a functional one. The morphological focuses on population, employment and land use (Araral and Hartley, 2013), while the functional on the economic nodes and transportation webs (Vasanen, 2012), i.e., the communication patterns between cities (Burgalassi, 2010). In a polycentric system, the development poles contribute to reducing the economic and demographic disbalance through the optimal spatial structure (Humeau et al., 2010). This illustrates the significance of polycentric development in hinterland areas, where it focuses on addressing urban-rural relation from a planning perspective (Eskelinen and Fritsch, 2009). Therefore, land use efficiency can be enhanced when polycentric development is applied on the geographical scale between cities (Brezzi and Veneri, 2014). Similarly, polycentricity can be applied on the institutional scale or between the effective authorities within the urban system to describe relations between cities (Cowell, 2010). This chapter aims to answer the following questions:

- How can a polycentric development spatial approach improve LAS in Syria?
- How can polycentricity control urban development, reduce informal settlement and contribute to achieving balanced sustainable development at the national and local level?

Figure X illustrates the relation between spatial planning and LAS and, in turn, the relation between LAS and polycentric development as a spatial planning approach. Polycentric development is proposed in this study as a good planning approach to support LAS in a post-conflict phase, because it shares the same goals as the SDG and spatial planning in

achieving balanced urban development. Polycentric development can contribute to better land use practices, with the assistance of good land governance support of decision-making process. As a result, land use optimization and, in turn, a more effective land administration system that contributes to meeting SDGs can be achieved.

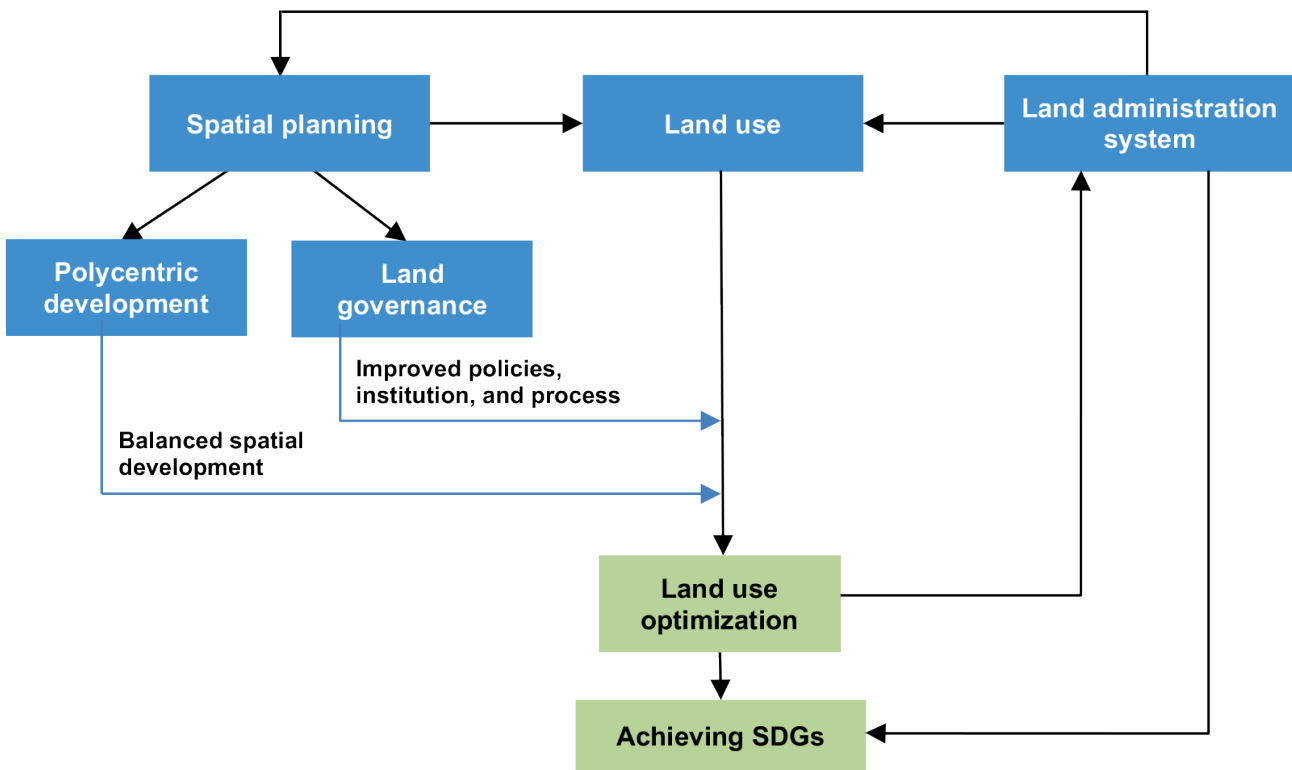


Figure X: Conceptual framework for spatial planning and polycentric development.

3.4.1. National and Regional Levels

As mentioned in Chapter 2, the JICA (2008) study proposes the development of multiple urban centres closely linked with each other into a coherent urban agglomeration, which is linked with other agglomerations (see Figure XI). This vision is consistent with the concept of polycentric development, in terms of establishing interrelated urban centres, and coincides with the National Framework for Regional Planning of the RPC (see Figure XII).

The National Framework for Regional Planning moves from the concept of growth understood in its general form and spreading development geographically to the concept of a development pole and the feasible investment in a place (RPC, 2012). This indicates the need for balanced and sustainable development in Syria on the national level and the application of polycentric development on the national and regional level. JICA's vision is also consistent with the regional division of Syria, as illustrated in Figure XIII and XIV.

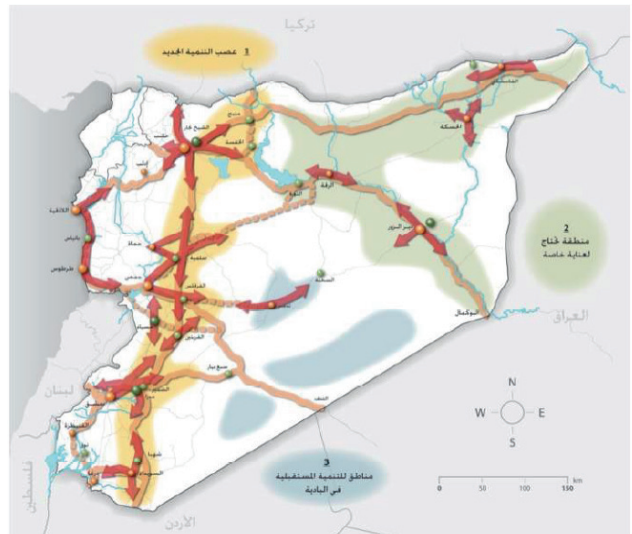
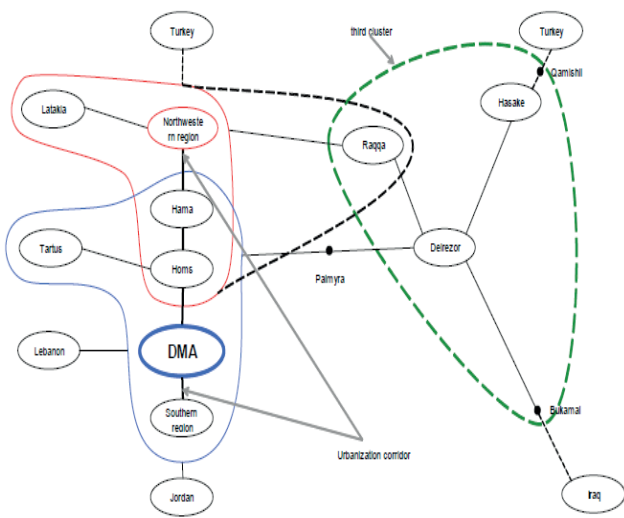


Figure XI: Spatial development strategy, proposed spatial structure. Source: JICA (2008).

Figure XII: Spatial structure according to National Framework. Source: RPC (2012).

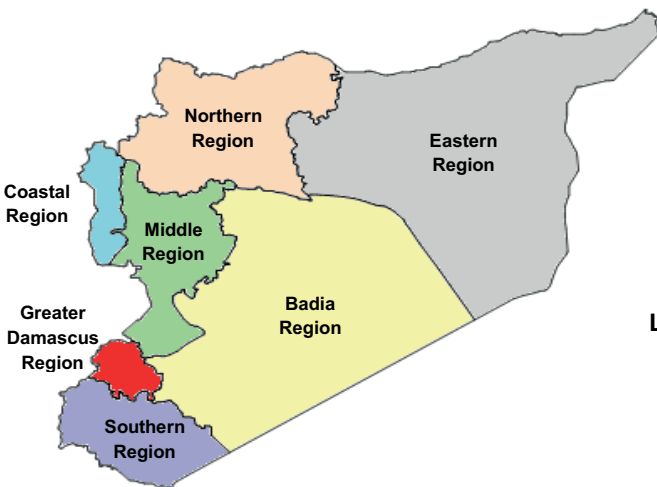


Figure XIII: Syrian regions. Source: RPC (2012).

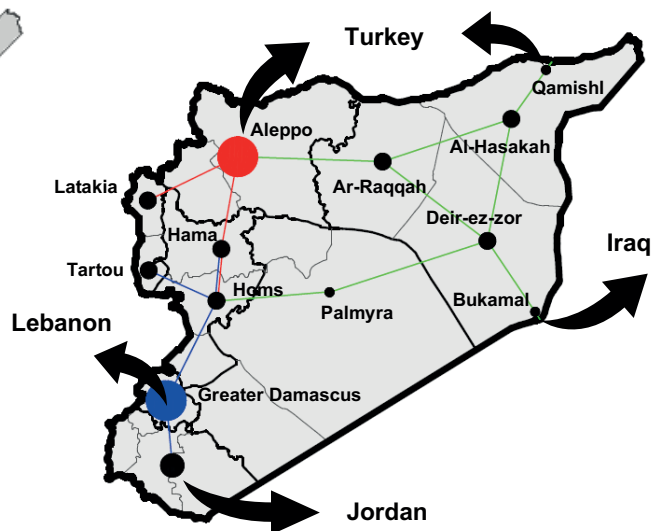


Figure XIV: Polycentric development on national and regional levels. Source: Authors' elaboration based on the JICA future vision (JICA, 2008) and RPC national development plan (RPC, 2012).

3.4.2. Local Level

The Lattakia governorate was chosen as a case study for the local level because it has a wide range of land uses, and Lattakia remained a relatively safe area during the war. This case will illustrate how land use planning and people’s behaviour changed during the conflict, especially considering that Lattakia was one of the main destinations

for IDPs. The polycentric approach was proposed on the local level (Figure XV), where interrelationships happen on the sub-district level and cover the entire governorate. However, according to the available data on land use planning of Lattakia governorate, the study was narrowed to testing the effect of polycentric development on land use on the municipal scale, with a focus limited on the city of Lattakia.

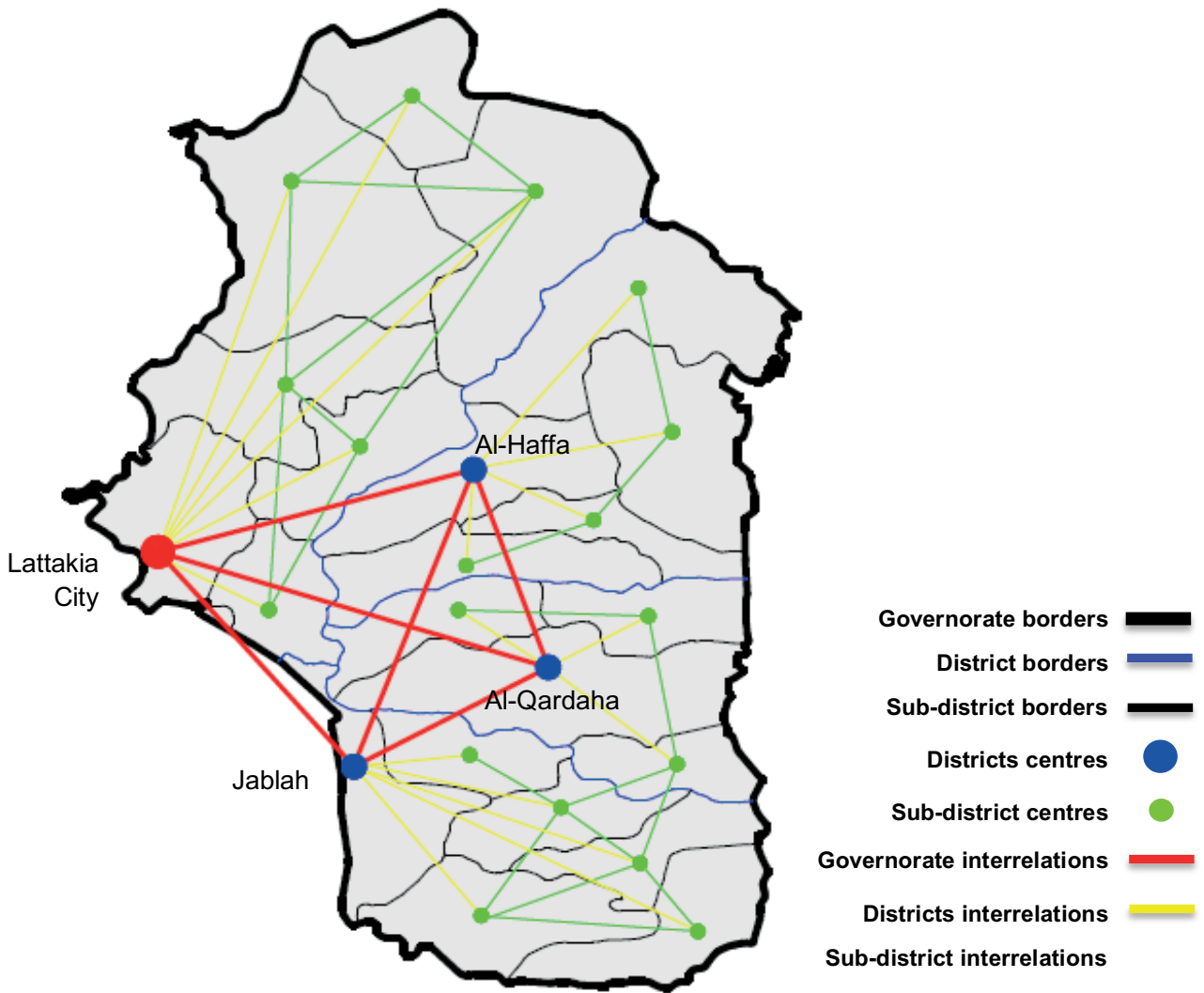


Figure XV: Applying the polycentric development approach to the Lattakia governorate.

Figure XVI demonstrates the Master Plan of Latakia City for the year 2001 and the future development direction prepared by Latakia Municipality for the year 2025. In principle, polycentric development corresponds with the master plan in terms of the main goals of achieving balanced sustainable development and distribution of services and activities. Yet, the latter goal is the main challenge of the plan, in addition to other challenges such as rural–urban migration that leads to the spread of informal settlement and compromises agricultural lands.

According to the plan, some of the development directions would lead to land use change. For

instance, the proposed area in neighbourhoods 11, 14, 13 and 16 (see Figure XIX) is in a part of town with low population density (see Figure XVIII), which is currently used as a farming area (see Figure XVII). Expansion in this direction would compromise the farming area, threatening its potential future use for urban agriculture. These kinds of plans and actions do not seem to advance land use optimization. Our hypothesis focuses on how polycentric development could contribute to systematic urban growth and better optimization of land use. With balanced distribution of urban services and activities, it will prevent urban expansion and sprawl towards rural areas.

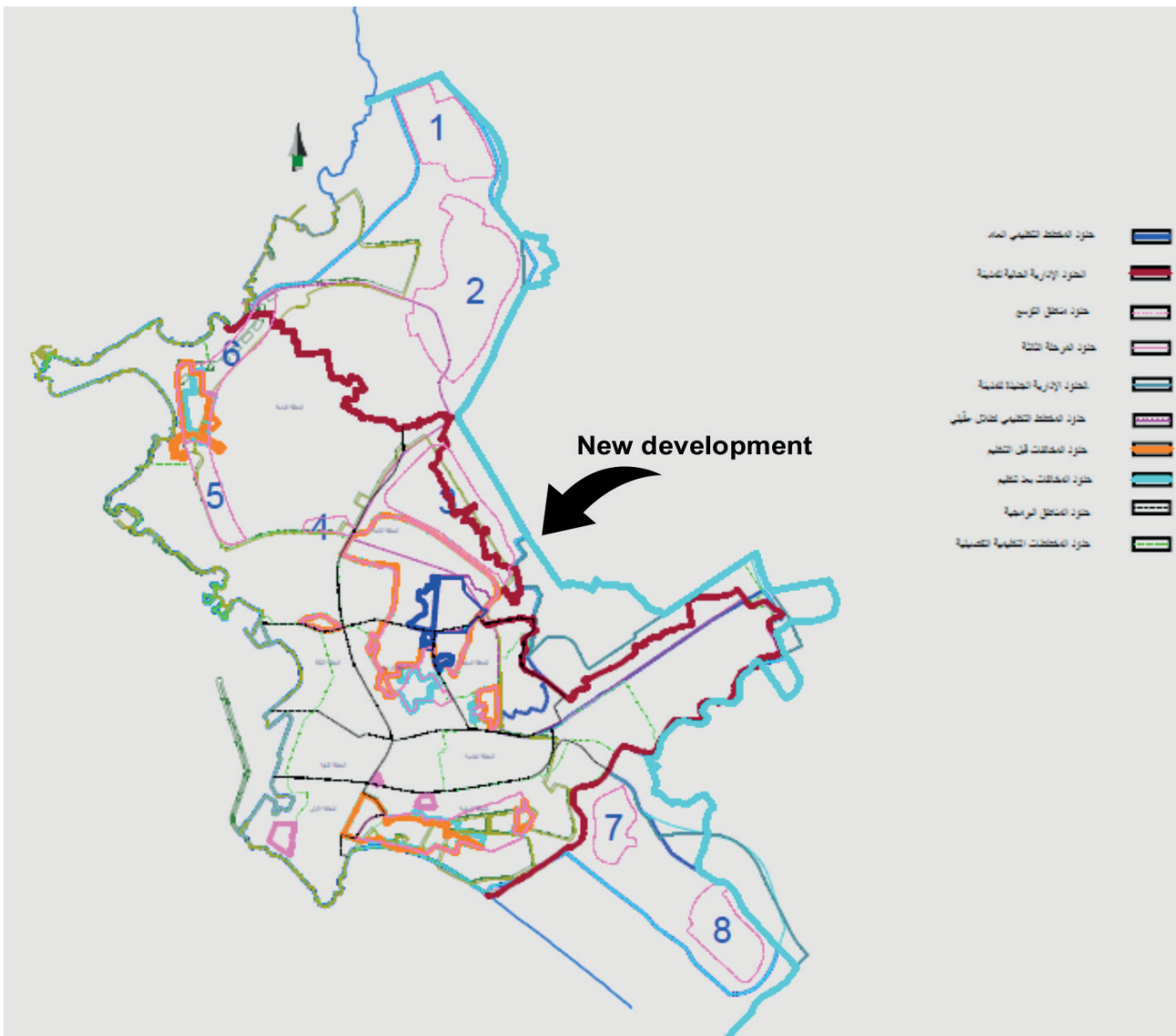


Figure XVI: Lattakia's current and proposed master plan. Source: UN-Habitat (2014).

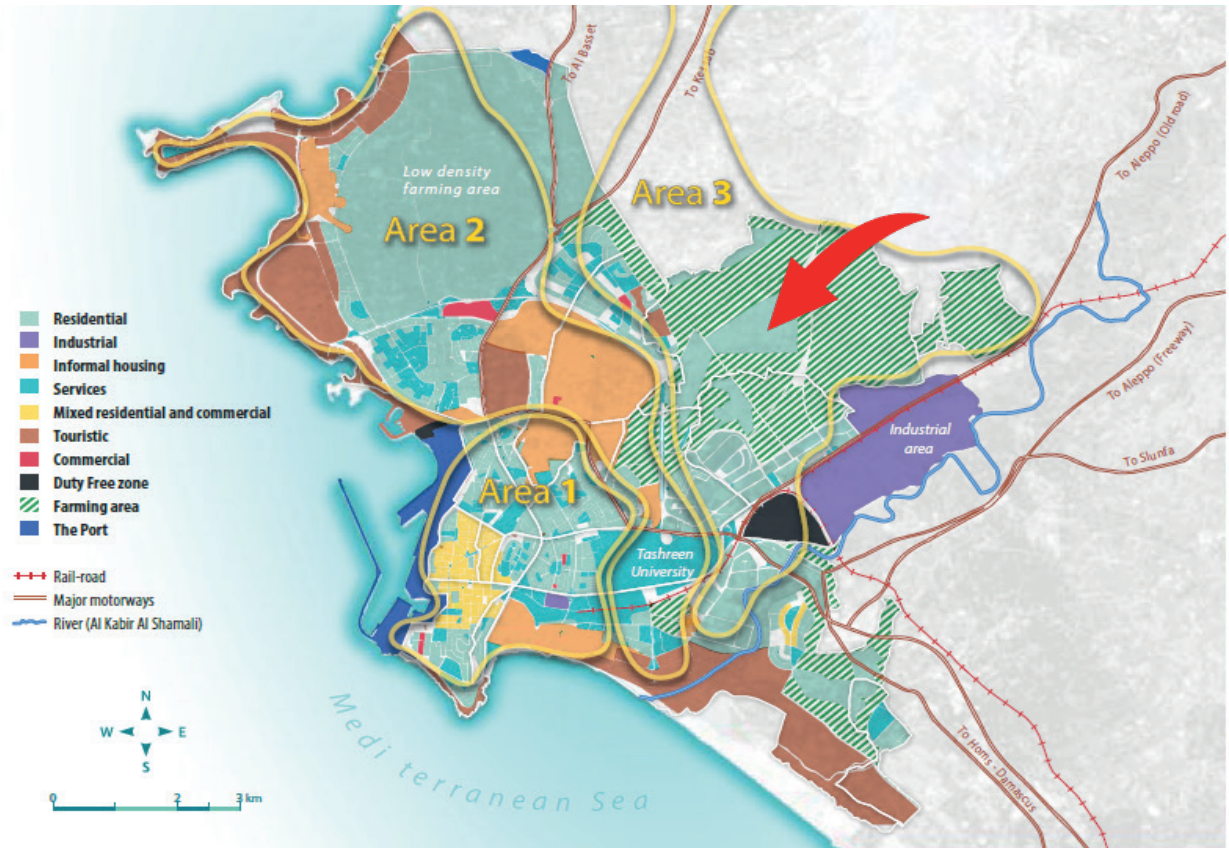


Figure XVII: Urban composition in Lattakia.
Source: UN-Habitat (2014).

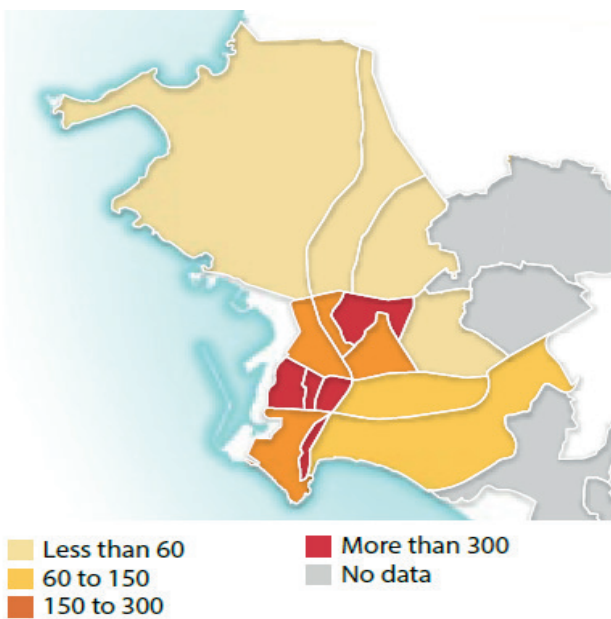


Figure XVIII: Population density by neighbourhood (people/ha).
Source: UN-Habitat (2014).

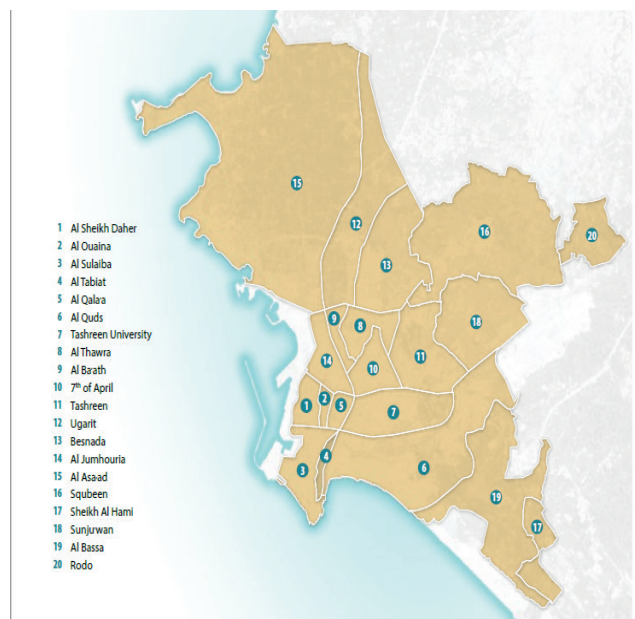


Figure XIX: Lattakia neighbourhoods.
Source: UN-Habitat (2014).

3.4.3. Land Governance Indicators Assessment

The poorly managed processes of urban expansion, concentration of poverty in slums, lack of clarity on land rights and the resulting conflicts over land reveal major deficits in how land is managed. Addressing these shortcomings requires an objective assessment of the land governance setting and the identification of priority reform areas. The Land Governance Assessment Framework (LGAF) is a diagnostic instrument for assessing the state of land governance at the national or sub-national level. Local experts rate the quality of a country's land governance along a comprehensive set of dimensions. These ratings and an accompanying report serve as the basis for policy dialogue at the national or sub-national level (World Bank, 2020). The LGAF tool is a highly participatory approach that analyses various dimensions of land governance in a systematic way. It was adapted for this study to identify good practices and build consensus on priority areas for improving land administration. The results of the analysis enable stakeholders to address key governance gaps and elaborate a clear roadmap for actions.

The difficulties are linked to the diversity of the land regulations and the bureaucratic management of real estate by many institutions. The state, as a primary landowner, needs to develop an efficient system to increase land security and facilitate land administration. This will allow monitoring of the land market, improve planning in urban and rural areas, enhance the legal framework of land, and integrate new technology to maintain land management (redistribution, consolidation, valuation and assessment).

This chapter adopts the basic methodology from an OECD (2020) report on assessing governance frameworks by measuring indicators; however, these indicators were selected based on multiple resources and examples of governance principles and indicators by organization such as the World Bank, UN-Habitat, and the United Nations Economic and Social Commission for Asia and the Pacific. We focused on assessing the indicators concerning land administration and spatial planning (polycentricity), based on the available data from the literature on the Syrian case. The assessment relied on the following criteria: "i) newcomers, when the governance condition is planned or in development; ii) in progress, when the governance condition is in place and not implemented, or in place and partly implemented; iii) advanced, when the governance condition is in place, functioning and objectives are achieved" (OECD, 2020). Noting that the assessment focused on the land governance process, the following indicators were employed:

Land tenure security: Physical documents of property represent the only proof of ownership. All Syrian properties are registered in the land cadastre (the land registration system authority). The conflict disrupted property systems as many records in land cadastre institutions were damaged or destroyed (Al-Zien, 2019). In 2010, 38 per cent of the population lived in informal settlements, where real estate ownerships are not registered, making landownership almost impossible. Property ownership is limited to the physical building (the bricks and concrete) and not the actual value of the real estate.

Digital record of properties: As mentioned in Chapter 2, only 20 per cent of the country's public land is registered, and the register is limited to formal transactions on governorate level only (no overall national register). The digitalization of the property cadastre is being implemented since 2010; however, this process applies only to new records of properties and not to old ones. As a result, most existing records are not digital, and data on these records is not easily available.

Paperwork: Many transactions are still not officially registered by real estate authorities due to the complicated legal procedures and bureaucracy. For instance, a property transaction requires having the consent of all inheritors (owners) to complete the sale, which makes it practically impossible to complete such process when the number of owners is very high.

Illegal activities: During the conflict, instances of property ownership forgery increased substantially, where the same property was sold to several persons. This situation led to involving high-ranking law enforcement officials, due to the approval of these transactions based on forged documents.

Availability of spatial data: The Regional Planning Commission started to develop data related to spatial information; however, as this data are not publicly available, its quality and level of detail remain unknown.

Planning policies: Planning laws go back to the 1980s, and many master plans are very old and only partially updated. However, the government is working on rehabilitating mechanisms for the recovery.

Institutions: The local administration law (No. 107/2011) represents the legal decentralization mechanisms. Nevertheless, the law provides local authorities with limited power over only small development projects.

Stakeholder engagement: Regarding planning, stakeholder engagement is limited to objections to plans in case of conflict of interest. This means that urban/spatial plans are not usually based on community needs.

Indicator	Level of advancement in the process (1 to 6)					
	New		Ongoing		Advanced	
	(1) early planning	(2) being developed	(3) weakly implemented	(4) partly implemented	(5) functionally implemented	(6) objectives achieved
Land tenure security			X			
Digital recording for properties				X		
Paperwork				X		
Illegal activities					X	
Spatial data availability				X		
Planning policies					X	
Stakeholder engagement			X			
Institutions					X	

Table VII: Land Governance Assessment Framework: evaluation of indicators for Syria.

better visualisations of the results, Figure XX provides an overview of the level of the various governance dimensions. This helps identify which dimensions are performing better and where further action is needed. As seen in Figure XX, from the evaluation of the indicators it emerges that governance processes are not in a position to support good governance and sustainable LAS. Our assumption is that a polycentric

development approach can enhance these processes to achieve good governance. Coinciding with the Fit-For-Purpose approach, solutions can be crafted for the specific country context. This hybrid approach should be flexible to accommodate different changes, and upgradable when economic opportunities and social requirement arise, and also implementable under the current constraints.

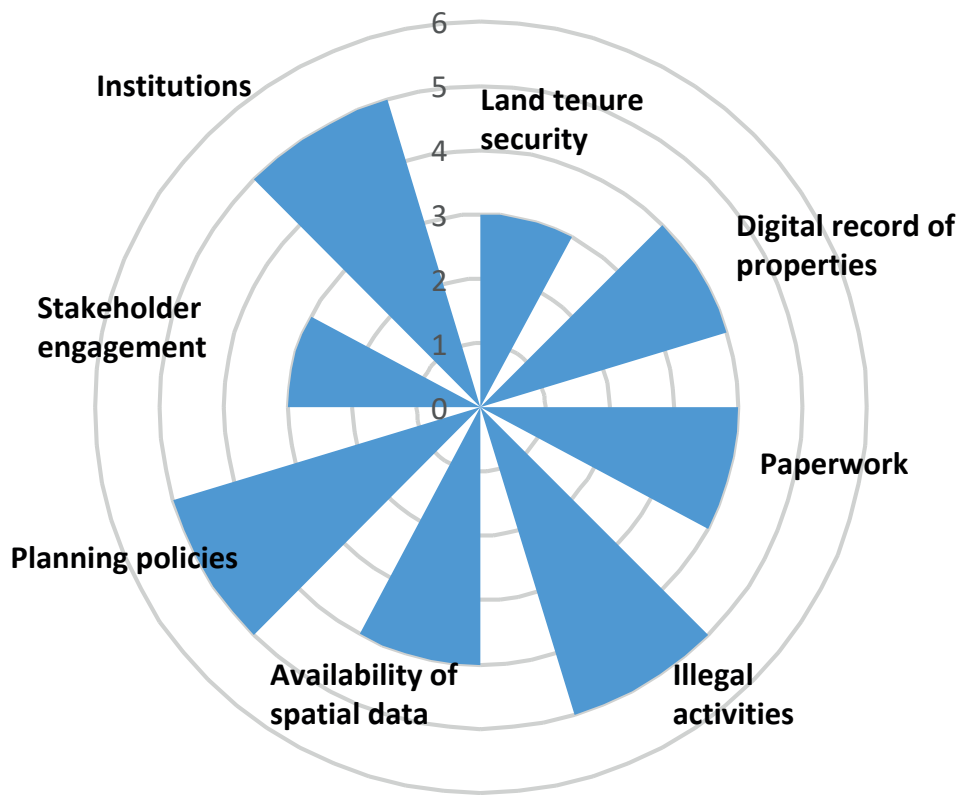


Figure XX: Governance indicator scoreboard for Syria.

3.5. Conclusion

Proceeding from the indicators and the principles of the Fit-For-Purpose approach, the research suggests the following recommendations. Applying polycentric development in post-conflict development policies can reduce land administration problems by influencing the demographic concentration of the population. This, in turn, will shape the land use

system through the governance and the regulations it imposes. Applying polycentric development can contribute to determining the lands that can be managed by municipalities to avoid misuse, such as informal settlements on agricultural land. Figure XXI illustrates the change in land use during the past years, driven by the significant demographic movements due to the war as well as environmental impacts.

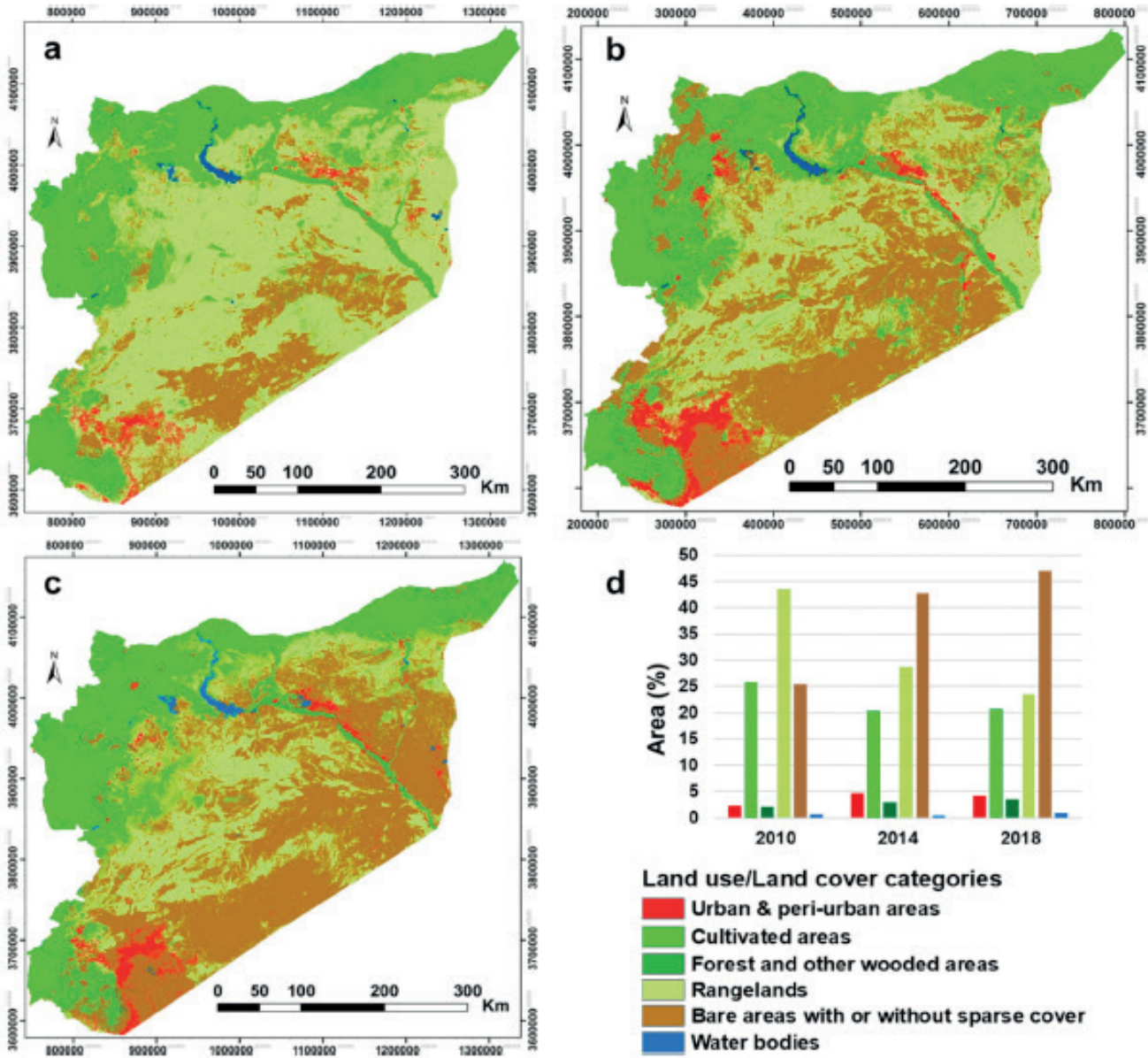


Figure XXI: Land Use Land Cover (LULC) maps of Syria. For 2010 (a), 2014 (b), and 2018 (c). Area comparison (in per cent) of LULC categories, after computing adjusted area estimates (d). Source: Mohamed et al. (2020).

“Land value is another indicator of changing urban space. Most studies on the polycentric transformation implicitly pursue a better fit to the land-value curve. The logic is that as modern cities become increasingly polycentric, the sub-centres affect land value within a specific radius as a result of agglomeration benefits and enhanced accessibility” (Wu, 1998, p. 1078). Concentrating development in multiple poles instead

of following monocentric concentration influences land and property value. Directing this behaviour would help attract inhabitants and businesses to converge in several cities and would create integrated development, thereby reducing misuse of lands. Improved land governance is sorely required to support such planning approaches with policies and to facilitate the related processes.

In post-conflict countries, sustainable recovery is a key priority. An effective land administration system ensures an equitable response as well as food and land security. It strengthens safety and social cohesion and builds resilient communities – all essential elements for successful return of IDPs and refugees. Hence, good governance in land administration has far-reaching impacts on society at large. In developing countries, land governance is considered as a tool to promote sustainable development. Good governance is often deemed as the fourth dimension of sustainable development. In Syria, the massive demographic changes and the economic and social crises during the war (exasperated by the natural disaster of drought) negatively affected land use, leading to increased informal settlement, destroyed houses, and unsure tenancy situation. Several studies highlight the importance of land governance and management, ownership, and land rights as essential issues to tackle, in light of Syria's current humanitarian operations.

This research aimed to suggest strategies for effective LAS to address the challenges that emerged during the war. Moreover, the research explores how spatial planning can support Syria to fulfil this objective. Polycentric development was suggested as an approach that can infuse good governance LAS practices in the post-conflict era. For that purpose, benchmarking of similar case studies was conducted to identify and assess key land governance indicators, in order to identify potential areas of improvement in the land governance process. The analysis of the spatial planning system in Syria, the institutional and legal framework, and the stakeholders mapping revealed the main land administration challenges. Furthermore, we explored the application of polycentric development and its effect on land use in Syria on the local, regional and national level, supported by eight governance indicators (depending on data availability).

The limitation of this study is related to the lack of detailed data, which prevented expanding the research to include more indicators. However, this analysis can be seen as a beginning that opens up the discussion and raises awareness regarding the importance of improving the governance process

to achieve a better land administration system and ensure sustainable recovery in the post-conflict phase. The lack of digital data hampered our attempts to predict how polycentric development would affect land use changes.

Moving towards a polycentric development approach does not come without obstacles. The uncertainties of the effectiveness of this approach in achieving sustainable development might prevent its implementation. The barrier is often economic, but, in addition to the lack of resources, an inefficient regulatory framework and lack of comprehensive vision could also pose obstacles to achieving polycentric development. Even when the technical solution is known, it still needs to be put in its right place. Therefore, updating the legal and institutional framework is a must to achieve comprehensive and integrated recovery and SDGs. Moreover, sharing information, data exchange and availability, and capacity-building are other important elements of the process that should be supported by adequate financial resources.

The study of changes in land use and urban spatial structures (through satellite remote sensing) may be particularly important, especially in Syria. In addition to being a developing country, it faced a devastating war, which makes it even harder to acquire disaggregated socioeconomic data. Hence, detecting land use changes might be the most reliable way to understand the transformation of urban spatial structures, providing critical decision-making support to urban and regional planning. Priority and timing are two crucial factors for post-conflict recovery of LAS, and we propose to implement solutions in three main phases, in the short, medium and long term. This approach would help generate a common understanding on a number of key questions: what would be the role of municipalities; who would develop the plans on local level; what would be the role of the state; will lands be given to poor; and how informal settlement will be controlled? Table VIII illustrates a timeline matrix of the priority tasks for each phase. Having an oversight body that regulates and manages the above-mentioned processes is the principal requirement that must be met to advance towards improved LAS and post-conflict recovery.

04 CONCLUSION AND RECOMMENDATIONS

Priority actions and outputs	Short term (1–2 years)	Medium term (3–5 years)	Long term (5–10 years)
Establishing a reference entity to lead LAS reform in Syria	X		
Establishing and implementing a new paradigm for land administration in Syria based on a polycentric concept		X	X
Elaborating new land development policies based on SDGs, urban regeneration, and equitable spatial use of urban and rural land		X	X
Developing an integrated tenure system, securing land and property rights for all	X	X	
Establishing an ownership and recording system and providing tenure documents	X	X	
Developing fair legislations for property rights, inheritance and vulnerable people	X		
Drafting SDG-based legislation to safeguard natural resources and land use standards	X		
Strengthening the institutional, data, ICT and human resource capacities as well as digitization of the entire registration system	X	X	
Establishing a transparent financing system for land management with multilateral partnerships (government, local, private, and international)	X	X	
Strengthening public participation in land use and development policies	X	X	X

Table VIII: Action plan matrix for post-conflict recovery of LAS in Syria.



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