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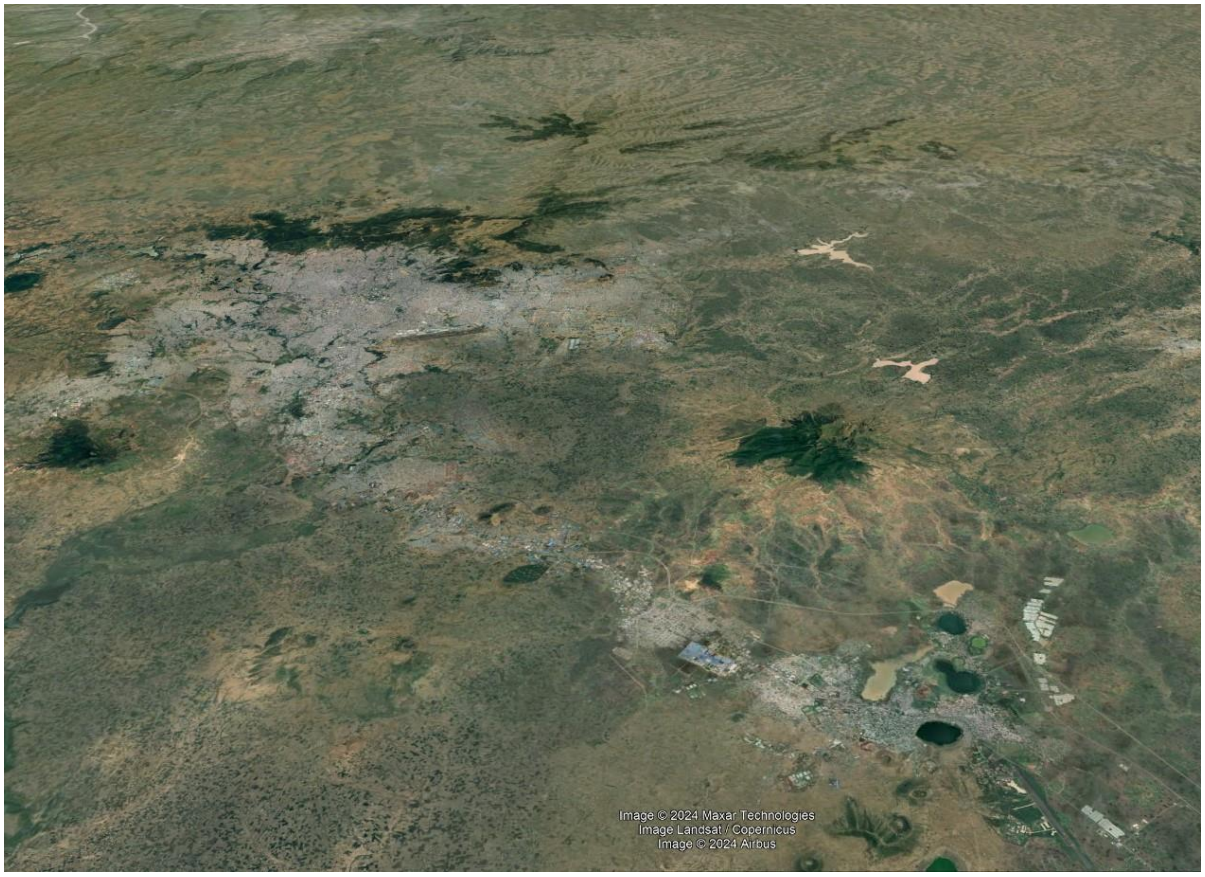
The Relevance of Spatial Planning in Ethiopia



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December 2023

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1. Executive Summary

This conference paper explores the concept, elements, and issues related to spatial planning, focusing on its relevance in the context of Ethiopia. The paper highlights the importance of spatial planning in achieving sustainable development, balanced regional development, managing land use, and addressing environmental challenges. It compares spatial planning with other land use planning approaches and discusses the various techniques, tools and methods used in spatial planning, such as Geographic Information Systems (GIS) and Participatory Planning. It explores in depth the rich German spatial planning system from which Ethiopia can draw some lessons. Drawing from this experience in spatial planning, the paper examines the challenges and opportunities faced by Ethiopia in implementing spatial planning and provide insights and lessons learned that can inform future spatial planning efforts.

It should be noted that this paper is not an academic paper but rather an educational paper that has referred directly and indirectly to numerous sources, which are shown in the reference section as well as in some of the important chapters.

1.1 Spatial Planning: Concepts and Features

Spatial planning is a process that aims to coordinate and optimize the use of space in a specific area, taking into account social, economic, environmental, and cultural factors. It enables the integration of various sectors such as housing, transport, energy and industry, and improve national and local systems of urban and rural development, while all the time taking into account environmental considerations. It is conducted at various spatial levels, ranging from the national to the state, region, municipality, and smaller localities. It follows standard planning procedures and involves analyzing the current state of a region, setting objectives for its future development, and implementing strategies to achieve those objectives. Spatial planning considers various aspects such as land use, transportation, infrastructure, housing, and natural resources. It seeks to ensure sustainable development, equitable distribution of resources and development across regions, and the improvement of quality of

life for the community.[1, 6, 7, 9, 10, 11, 12, 14,15, 16, 17,18, 19, 20, 22, 23,24, 25, 29, 32, 33,34, 35, 37, 39,40, 41, 43, 44, 45, 46,47, 48]

1.2 Spatial Planning vs. Land Use Planning Types

Spatial and land use planning are closely related concepts in which land use considered as subset or a crucial component of spatial planning. Both attempt to organize and manage space to meet social, economic and environmental objectives. Both significantly impact the physical layout of cities, regions and areas by determining how land is utilized and developed. Both depend on policy instruments, regulations and guidelines to achieve their objectives. Moreover, both consider aspects like sustainability, equity, economic growth and community needs in their planning process.

On the other hand, both have some differences. Land use planning focuses specifically on controlling and regulating the use of land within a particular area. Land use planning requires legal basis and sets out policies and regulations to guide the allocation of land for different purposes, such as residential, commercial, industrial, and agricultural uses. Spatial planning involves a broader perspective integrating land use with other factors to plan for the overall spatial organization, infrastructure and development of an area or a region. Other types of planning may complement spatial planning, such as environmental planning, transportation planning, and urban planning.

While spatial planning takes a long-term view considering key issues like sustainable development, future growth and connectivity between cities, regions and the nation, land use planning usually concentrate on immediate and short-term land allocation and zoning.

Finally, both exhibit differences in scale. Land use operate at smaller localized scale as in zoning within a city, but spatial planning often involves larger scales, as in the case of metropolitan planning, regional planning or state planning.

1.3 Lessons Learned from International Experience in Spatial Planning

Experience in spatial planning can provide valuable lessons for Ethiopia. Notable among them are:

- Integrated planning approaches can be effective in promoting sustainable development by considering the interdependencies between different sectors and spatial factors.
- Early public participation and stakeholder engagement are crucial for successful spatial planning, as they help ensure a sense of ownership, transparency, and inclusivity.
- Long-term vision and flexible planning frameworks that accommodate changing needs, conditions and uncertainties are important for the adaptability and resilience of spatial plans. The flexibility involves adoption of strategies that can adjust to evolving trends, use of scenario planning approach that considers various future scenarios, introducing flexible zoning regulations and mixed used development in response to changing needs, adherence to collaborative and participatory decision-making process, integration of resilience principles into spatial planning so as to cope up with unexpected natural and man-made hazards and implementing a monitoring and evaluation system for checking the effectiveness of spatial plans and making the necessary adjustments of spatial plans to be responsive to changed contexts and emerging needs.
- Effective governance structures, planning legislation, and coordination mechanisms are necessary to facilitate the implementation of spatial plans at various spatial levels and ensure their enforcement through planning regulations corresponding to various levels of government ranging from local, zonal, state and national levels.
- Monitoring and evaluation systems play a vital role in assessing the effectiveness of spatial planning strategies and identifying areas for improvement.

1.4 Experiences, Challenges, and Relevance of Spatial Planning in Ethiopia

Ethiopia is experiencing rapid urbanization and population growth, which poses challenges in terms of managing spatial development. The level of urbanization in Ethiopia is increasing rapidly.

In 2000, 9.8 million people or only 14.7 % of Ethiopians lived in urban areas. However, by 2010, this has increased to 17.3% or 15.2 million people and 21.7% or 24.5 million people in 2020. This level of urbanization is one of the lowest and even below the average for the Sub-Saharan Africa. But the country is now urbanizing rapidly with the annual growth rate of urban population exceeding 4%. It is projected that the total population of Ethiopian will reach 139.6 million, 166.1 million and 190.8 million by 2030, 2040 and 2050 respectively. Similarly, the urban population will be 37.5 million (26.9%), 54.3 (32.7%) million and 74.5 (39.1%) million in year 2030, 2040 and 2050 respectively. The level of urbanization in Ethiopia is projected to increase by about 18 percentage points between 2020 and 2050. Accordingly, the urban population will triple by 2050 and increase by about 50 million between 2020 and 2050. [50, 51]

This is increment is significant. In response to rapid urbanization, the country has witnessed the widespread growth of informal settlements, inadequate infrastructure, housing shortages, poverty, mobility and accessibility problems, unemployment, and regional inequality.

Accelerated urbanization will impose challenges three key sectors, namely; the provision of housing, adequate infrastructure and services as well as jobs for a growing urban population. For example; in Ethiopian an estimated 70–80 percent of the urban population lives in what might be considered slum. This is one of the highest rates in Sub-Saharan Africa. Urban areas faces *low coverage of sanitation services even by Sub-Saharan Africa standards. Solid waste management is a* challenge where open waste disposal is common in urban areas potentially a source of public health problems. Road density low which is again is below the African average. Consumption of water is low in comparison with the international standard consumption rate of 100 liters per day per person and access to "safe" potable water is also limited. For example, in 2012, for instance, water consumption in Addis Ababa was around 50 liters per person per day and about 44 percent of the population had access to "safe" water supply. Similarly, unemployment is high and most jobs are in the informal or household sector and new job creation is not in parallel

with urban growth. It is to be highlighted that the challenge of providing jobs, housing, infrastructure and services is not only just to meet current levels of demand, but also that of the rapidly expanding urban populations that are set to triple over the coming three decades.[50]

Spatial planning can help address these challenges by guiding the sustainable growth of cities, promoting economic growth and affordable housing, promoting efficient land use[1], promoting mixed land use that integrates different types of activities or land uses within a particular area and thus enabling people to live, work, educate, shop and take leisure activities with in closer proximity , directing urban development that maximizes the use of public and active transportation[2], ensuring equitable access to services and opportunities and protecting the environment.

However, there are several challenges to effective spatial planning in Ethiopia, including limited financial resources, weak institutional capacity, weak planning legislation guiding spatial planning at various levels, and inconsistent policy implementation. Despite these challenges, spatial planning could be instrumental for the country to foster inclusive development, improve urban resilience, support sustainable economic growth, and enhance integrated and multisectoral development at different spatial levels.

2. Spatial Planning

2.1 Introduction

Spatial planning encompasses a range of activities and strategies aimed at guiding the spatial organization of urban and rural areas, ensuring efficient land use, promoting sustainable development, and enhancing the overall quality of life for residents. Spatial planning aspires to be an interdisciplinary and cross-cutting coordinator of sectoral policies and decisions with spatial impacts, including those concerned with the environment, infrastructure and

[1] Land serves multiple purposes/functions with minimum wastage and negative impact on the environment

[2] Includes walking and bicycling

regional economic promotion. It is generally institutionally anchored on at least two spatial levels (municipal and national)[3]. In addition, there are greatly varying forms of organization on the regional planning level in different countries. [37]. It goes beyond land use planning[4] by considering the broader spatial context and integrating sectoral, social, economic, and environmental factors into the spatial decision-making process. It plays an important role in improving national and local system of urban and rural development. [47]

Spatial planning, as public activity, has both regulatory and development functions in which the approval of the government of a proposed development activity at local, regional and/or national levels is the regulatory function. On the other hand, the role of the government's decision to avail development tools for providing services and infrastructure, for establishing directions for urban development, for preserving national resources, and for establishing incentives for investment to mention the few bestows the development functions of the government. [47]

Spatial planning enables the achievement of a number of social, economic, physical and environmental objectives. Some examples include; the promotion of territorial integration through enhancing balanced socioeconomic development between regions, enhancing urban development and its integration with rural areas, improve and ensure equitable accessibility, protect natural and cultural heritages, mitigate environmental damages and promote sustainable development. [47].

Spatial planning is performed at national, regional/state and local levels. At national level, the government formulates development frameworks and

[3] In Ethiopian context, this can be found at the national and regional constitution, charters of city administrations and decrees of urban governments issued by the regional governments.

[4] Both land use planning and spatial planning involve the organization, regulation and management of land and resources but they differ in terms of their focus, scope, regulatory frameworks, timeframe and vision, scale , implementation process and stakeholder engagement. Land use planning is considered as the subset of spatial planning.

policies that guide the decision-making process and sets the preconditions for effective implementation of the planning process at the lower tiers of government.

Some of the major tasks at national level are the establishment of the legal framework, setting the framework for coordination between sectors and between regions with in the country, developing the framework for monitoring the implementation of national guidelines and principles at state, regional and local levels, provision of support for regional and local authorities through capacity building, professional advice and political leadership that will facilitate the implementation of national guidelines as well as in the identification of main challenges in planning and implementation.

At a regional level, regional governments are responsible for the preparation and coordination of long-term regional strategy that will guide the development of the whole region. This must be done in close consultation and cooperation with the key regional and local stakeholders. Moreover, the regional government should support the local governments by creating awareness of the national and regional priorities, planning and provision of major infrastructure improvements, identifying and designating protected areas, conduct of environmental impact assessment and appraisal regionally significant plans and projects and provision of guidance and assistance to local authorities by establishing local planning instruments.

Finally at local level[5], spatial planning involves the preparation of local plans that are aligned with the national and regional polices and goals. As end users, local governments should prepare regulatory planning instruments (spatial and land-use plan), identify priorities for implementation, enhance the preparation of local spatial plans, set the framework for planning process and coordinate the planning activities with neighboring local governments, actively involve the community through participatory planning tools and

[5] In the Ethiopian context, the local levels in the rural and urban setting include both Woredas' and Kebels' in which Woredas are higher in hierarchy and could include a number of Kebels.

monitor and evaluate the implementation of policies and proposal taking into account the relevant planning legislation.

However, the success of the implementation of effective spatial planning at different levels of government depends upon the availability of planning laws, policies, guidance, procedures and incentives that have both long-term vision and sort-term considerations and degree of ease of cooperation between different government agencies. [47]

Ethiopia is experiencing notable demographic shifts, with a growing population and increasing urbanization rates. Over the past few decades, the country has experienced significant population growth and urbanization, primarily driven by rural-to-urban migration and natural population increase. As a result, Ethiopian cities and towns have witnessed rapid expansion, often characterized by informal settlements, inadequate infrastructure, urban sprawl, unemployment, poverty, housing shortages and a strain on essential services. This presents complex challenges in terms of land management, infrastructure development, and equitable access to resources and services. Similarly, Ethiopia's rural areas face their own set of challenges, including land degradation, limited access to basic services such as education and healthcare, and the need for sustainable agricultural practices.

These complex spatial dynamics require comprehensive spatial planning strategies that integrate the needs of urban and rural areas while considering the unique geographical, social, and economic characteristics of the country. It is envisaged that spatial planning will provide a framework for addressing these challenges both in rural and urban areas of the country by guiding development in a coordinated and sustainable manner, minimizing negative environmental impacts, and promoting social and economic well-being.

The objective of this conference paper is to explore the relevance of spatial planning in the Ethiopian context, examining its concepts, features, and practical implications. The scope of this paper encompasses various aspects related to spatial planning, including its definition, principles, and the process

involved. Additionally, it will compare spatial planning with conventional land use planning approaches[6] to highlight its advantages and distinct features. Furthermore, the paper will discuss the methods and techniques employed in spatial planning, such as participatory planning, GIS and remote sensing, investigating their relevance in addressing Ethiopian development goals. [1, 2, 4, 11, 21, 27, 28, 30, 27, 28, 30]

It will also draw insights from the German experience in spatial planning to provide valuable lessons that can inform future planning efforts in Ethiopia. Through an analysis of the Ethiopian planning experiences, urban and regional spatial development plans and policies this paper will identify the key challenges and opportunities in implementing spatial planning, taking into account the unique context and specific needs of the country.

2.2 Spatial Planning: Definition and Scope

Spatial planning concerned with "the problem of coordination or integration of the spatial dimension of sectoral policies through a territorially-based strategy" [4]. Spatial planning can be defined as a systematic and forward-thinking process aimed at organizing and regulating the use and development of land, resources, and infrastructure within a defined geographical area. It is concerned with overcoming the challenges of coordination and integration of the spatial dimension of sectoral policies through a territorially based strategy [7]

There is no common definition of the concept 'spatial planning 'that is universally accepted by all. Spatial planning is defined in number of ways. Here are some examples;

- '…the Compendium of European Spatial Planning defines spatial planning as methods used largely by the public sector to influence the

[6] Conventional land use planning generally focuses on regulating and managing the use of land within a defined geographical area and applies such approaches as zoning, land use regulations and policies. On the other hand, spatial planning is a broader concept including not only land use but also the the spatial organization of activities and resources within a region or territory.

future distribution of activities in space [10]. The Compendium states that spatial planning is undertaken with the aims of creating a more rational territorial organization of land uses and the linkages between them, to balance demands for development with the need to protect the environment and to achieve social and economic development objectives. It embraces measures to coordinate the spatial impacts of other sectoral policies to achieve a more even distribution of economic development between regions than would otherwise be created by market forces, and to regulate the conversion of land and property uses. [10]

- In the United Kingdom, the Government defines spatial planning as going beyond traditional land-use planning to integrate policies for the development and use of land with the other policies and programs that influence both the nature and function of places. This includes policies that can impact on land use but which are not capable of being delivered solely or mainly through the granting or refusal of planning permission and which may be implemented by other means[7]. [46]
- In Slovenia, spatial planning is defined in the 2002 Spatial Planning Act as an interdisciplinary activity involving planning land use, determining the conditions for the development and location of activities, identifying measures for improving the existing physical structures and determining the conditions for the location and execution of planned physical structures.[39]
- In Germany, spatial planning at the federal and state levels comprises all comprehensive, supra-local and superordinate activities for structuring and developing space. It is "comprehensive" in the sense that it has the job of coordinating spatially significant sectoral planning. It is "supra-local" in that its scope is beyond that of the territorial and

[7] The policies adopted in the document emphasize is the achievement of sustainable development goals. Local authorities, planners, developers and stakeholders should consider broader sustainability principles and strategies in their decisions–making process to spatial development in general and land use development specifically.

material, autonomous scope of the individual local authority. The comprehensive and supra-local nature of spatial planning gives it "superordinate" status in the German planning system. All public planning authorities have to comply with or take account of the requirements of spatial planning in any spatially significant planning and measures they undertake. Planning and measures are said to be "spatially significant" if they make use of land or influence the spatial development of an area. According to the Federal Spatial Planning Act and state spatial planning acts, the task of spatial planning is to guide and develop spatial structure in the pursuit of sustainable spatial development. In Germany, the essential purposes of spatial planning (Supra-sectoral planning) are elaborated and implemented by a range of tools on three levels: federal spatial planning Bundesraumornung), state spatial planning (Landesplanung) including regional planning (Regionalplanung)[8]; and urban land-use planning (Bauleitplanung). Taken together, these three planning tiers constitute a coherent spatial planning system in Germany. [35]

Generally spatial planning is a comprehensive and integrative approach to land management and development that goes beyond traditional land use planning. It involves the strategic organization and design of physical space to achieve sustainable human settlements, economic growth, and environmental protection. Unlike conventional land use planning[9], which

[8] Regional planning is not only limited to the state boundary but in cases where necessary, it could also extend beyond the state boundaries involving a number of states in the regional planning process for the shared region. In the Ethiopians context, spatial planning at a regional level should involve all the Woredas concerned in decision-making process.

[9] It should be noted that in some countries, like Germany, land use planning at municipal level (like in the Flaechennutzungsplan), does also consider the broader spatial context and includes social, economic and environmental dimensions. However, the municipality needs to add an explanatory statement to the plan. In this explanatory statement, the municipality needs to state the objectives, purposes and effects of the plan (esp. the environmental effects, but also the others). In Ethiopia land use planning at Woreda level, taking the example of Germany, should also adopt a holistic perspective by integrating

primarily focuses on zoning and regulatory controls, spatial planning takes a holistic perspective, considering the broader spatial context and incorporating social, economic, and environmental dimensions into decision-making processes.

The scope of spatial planning differs greatly from one country to another, but most share a number of similarities. In almost all countries, spatial planning is concerned with identifying long- or medium-term objectives and strategies for territories, dealing with land use and physical development as a distinct sector of government activity, and coordinating sectoral policies such as transport, agriculture and environment. [23]

2.3 Key components and elements

Spatial planning comprises several interrelated components that contribute to its effectiveness. These include:

- Land use zoning through which spatial planning involves the allocation of different land uses, such as residential, commercial, industrial, agricultural, and recreational areas, to ensure efficient use of available land resources.
- Infrastructure development including the planning and provision of essential infrastructure systems, such as transportation networks, utilities, water supply, sanitation, and public amenities, to support economic activities and enhance quality of life.
- Environmental protection measures in which spatial planning incorporates strategies to protect and preserve natural resources, biodiversity, and ecologically sensitive areas, ensuring sustainable environmental management and minimizing negative impacts.
- Urban design principles encompassing the application of design principles and guidelines to shape the physical form, layout, and

Woreda sectoral planning and incorporate social, economic and environmental aspects (or even dimensions) into the land use decision-making process.

aesthetics of urban spaces, promoting functionality, attractiveness, and human-scale development.

- Social inclusion strategies through which spatial planning aims to address social inequalities and ensure equitable access to housing, education, healthcare, and public services, fostering inclusive communities that cater to the needs of diverse populations.
- Economic development policies involving the integration of economic considerations into spatial planning, fostering job creation, investment opportunities, and sustainable and balanced economic growth in different regions.

2.4 Principles of Spatial Planning

Spatial planning is guided by several principles. The principles can be perceived from the functional as well as legal and policy perspectives. Functionally, spatial planning follows the following principles:

- **Integration** is a key principle and spatial planning emphasizes the integration of social, economic, and environmental considerations having spatial implications. It recognizes the interconnectedness of these dimensions and seeks to optimize their interactions to achieve balanced and sustainable outcomes. By integrating land use planning with transportation, infrastructure, and environmental management, spatial planning aims to foster synergies, minimize conflicts, and promote more efficient resource utilization. It also provides the framework for the effective governance of social, economic and environmental factors through a structured approach that integrates these factors into the spatial decision-making processes. This ultimately results in the balanced use of land and resources and achievement of sustainable development goals.
- **Long-term Perspective** as spatial planning adopts a long-term perspective, considering future needs, trends, and uncertainties. It anticipates the impacts and consequences of present-day decisions, considering the potential long-term implications for communities and

the environment. By adopting a forward-looking approach, spatial planning helps to avoid short-sighted development patterns and encourages sustainable growth and resilience over time.

- **Stakeholder Engagement** as spatial planning recognizes the importance of engaging stakeholders throughout the planning process. It involves meaningful participation of communities, interest groups, government agencies, and other relevant entities. Stakeholder engagement facilitates the exchange of knowledge, fosters transparency, builds trust, and enhances the legitimacy and acceptance of spatial planning decisions. By involving diverse perspectives and local knowledge, spatial planning can generate more inclusive and locally appropriate solutions.
- **Multilevel Governance** as spatial planning requires coordination and collaboration among different levels of government, from national to regional and local. It acknowledges that effective planning outcomes depend on coherent and coordinated actions across jurisdictions and sectors. Multilevel governance mechanisms facilitate cooperation, coordination, and policy coherence, enabling the alignment of spatial planning objectives with broader development strategies and policies.
- **Adaptive Management** in which spatial planning recognizes the need for adaptive management approaches. It acknowledges the inherent complexity and uncertainty associated with planning processes and outcomes. Adaptive management allows for flexibility and responsiveness to changing circumstances, emerging knowledge, and evolving needs. It enables adjustments, revisions, and continuous learning, ensuring that spatial planning remains dynamic and adaptable over time.

On the other hand, six key principles that define the scope and the framework of the law and policy of spatial planning are also recognized [47]

- **Democratic principle**
    - The democratic principle implies that Good Government corresponds to good planning. Spatial planning is a centrally

important government function, directly affecting the lives of all people. It is therefore particularly important that planning decisions are made with legitimate authority by bodies that are accountable through democratic processes.

- **Subsidiarity principle**
  - The subsidiarity principle supports decision-making process that is to be driven by local requirements. In other words, the principle implies that decision should be made at the most appropriate and effective level of governance, allowing for decisions to be made as locally as possible while higher levels of government intervene only when necessary. The principle emphasizes decentralized decision-making, empowering local authorities and communities to make decisions that affect their regions and livelihood. However, the principle of subsidiarity also acknowledges that it may be necessary for the decision to be made at higher levels because the scale of the issue or objective being pursued cannot properly be addressed at the local level, as in the case of major transportation infrastructure construction. Similarly, there could be net benefits accruing to lower levels because of decision made at higher levels, therefore, it becomes necessary to waive some of the decision-making power to higher levels in order to avoid incoherent spatial development strategy[10].
- **Participation principle**

[10] Some of the benefits of decision-making at higher levels to lower levels include access to resources, funding and expertise by higher levels. Higher levels ensure that local level plans are aligned with higher level plans. Higher levels are in better position to coordinate issues transcending local boundaries. Higher levels governments formulate legal and regulatory frameworks that ensure consistency and compliance across different localities and thereby ensure certainty and stability in planning decisions. Moreover, waiving some decision-making power of spatial planning to higher levels aids in plan integration across regions, ensure economies of scale of large projects with regional implications, fill the local capacity, resource and expertise gap and ensure that national interests are maintained.

- The participation principle is founded on the fact that spatial planning decision will impact the community. Therefore, the spatial planning decision making process must ensure community participation through effective participatory procedures.

- **Integration principle**
  - The integration principle of spatial planning recognizes the need for sectoral and geographical integration. Spatial planning process will enhance policy coherence and common territorial development strategies that will promote integration between different levels of government, integration between sectors and integration across political boundaries. Adoption of this principle will provide mutual benefits to all.
- **Proportionality principle**
  - The proportionality principle promotes balance between commitment and flexibility in spatial development. Spatial development policy should be founded on solid commitments to achieve development goals and yet must be flexible enough as well to adapt itself to economic, social, technological trends and promote innovations.
- **Precautionary principle**
  - The precautionary principle of spatial planning implies that in case any spatial development that will likely have potential negative impacts but the degree of damage cannot be precisely determined for the lack of information or uncertainty, then precautionary measures should be instituted for such development activities elsewhere so as to reduce such damages. A good example is the international recognition to reduce global warming in vulnerable areas, although its impact on climate change is not precisely known.

Apart from these basic principles, the importance of the rule of law and access to justice for different stakeholders and regional entities must be also highlighted.

2.5 Strategic Objectives of Spatial Planning

The purpose of a spatial strategy[11] is to provide an overview of the proposed pattern of spatial development of the territory and to add value by coordinating the territorial impacts of sectoral policies. The critical issue for spatial strategies is how to maximize sustainable development through encouraging and guiding the spatial distribution of development, redevelopment and investment; the coordination of infrastructure, e.g. the transport, water, housing, health and social services that support such development; and also the maintenance of environmental assets. Therefore, the spatial strategy should be comprehensive so as to incorporate all aspect of development and space so that it can be instrumental in coordinating territorial impact of spatial development. It is as well strategic as it attempts to specify the general location of development at the level of settlement or sub region without designating detailed boundaries. [41, 47]

In many examples, spatial strategies are formulated by regional governments but in case of cross regional issues, as in metropolitan or big urban areas, local governments cooperate in the formulation of common spatial strategy. The formulation of the spatial strategies should not be impeded by administrative boundaries in those cases where functional relationship transcends their boundaries. Moreover, the spatial strategy can be used to facilitate sectors to consider the spatial dimension of their activities and and understand how their activities relate to the decisions made by other sectors. It is recommended to give priorities for spatial strategies over sectoral policies in the process of

[11] Spatial strategy is understood as the means through which the stated objectives objectives of spatial planning can be achieved. It acts as the practical implementation tool for the broader goals outlined in spatial planning. It provides the framework and direction necessary to translate the long-term spatial vision into action, ensuring that spatial development occur in planned, sustainable and inclusive manner.

approval of spatial strategies by national and/or regional government. Spatial strategies, which are collectively decided including the lower ties of government, enhance vertical policy integration by providing the framework for the formulation of regional and local spatial strategies that are aligned with the national spatial priorities[12]. [41]

On the other hand, it is evident in many cases that strategic plans that are formulated usually ignore or give little attention to the geographical and territorial impacts of polices and activities by focusing only on the sector. However, spatial planning advocates and considers the interaction among the policy sectors according to different territorial units; national, regional and local, across a wide range of policy sectors dealing with diverse problems of economic, social and environmental development.

Spatial planning is primarily concerned with the coordination of sectoral policies across territorial units which will promote the achievements of the spatial objectives. Despite variations between countries, spatial planning systems in general have the following three fundamental functions [32]

[12] Spatial strategy decisions, in principle, are collective made by stakeholders representing the government, local authorities, community representatives and businesses involving input from planners, experts and citizens through public consultation forums. Top-down decisions in spatial strategies often originate from government bodies, national policies or overarching regional development plans that guide and influence the broader strategic directions for spatial development. On the other hand, bottom-up decisions involve grassroots initiatives, local community-driven development plans, and feedbacks form citizens and local organizations which emphasize the importance of local needs, preferences and grassroots innovations in shaping spatial strategies. Equally, horizontal coordination, collaborative agreements and shared strategies with adjacent regions is crucial for addressing common issues such as infrastructure development, transportation networks, environmental conservation or economic development. Similarly, spatial strategies seeks to integrate various sectors such as transportation , housing, environment, social services so that these sectors work cohesively rather than in isolation leading to a more holistic and sustainable spatial development approach.

- Spatial planning provides a long or medium-term strategy for territories in pursuit of common objectives, incorporating different perspective of sectoral policies;
- Spatial planning deals with land use and physical development as a distinct sector of government activity alongside transport, agriculture, environment, etc., and
- Spatial planning can also mean the planning of sectoral policies according to different scales.

There has been a major shift in the objectives of spatial planning – a shift from the traditional agenda of promoting welfare state (in European context) and formulation of spatial development strategies through master plans and other development plans to more broad spatial development agenda. The shift has been instigated by the need to secure sustainable development, promote local endogenous development and adjust local economies to competition and the requirements globalization. Currently, spatial planning is directed at achieving the following strategic objectives;

- Spatial planning attempts to reduce existing spatial or regional disparities within countries;
- Spatial planning is concerned with the achievement of sustainable development;
- Spatial planning is a tool to coordinate various sectoral policies in pursuit of common spatial development strategies; and
- Spatial planning is a tool of spatial integration, coordination and interaction which enables sub-national government to shape their own spatial development policies in line with national or even international policy goals and as well facilitates regional and local governments to adapt national policies to regional and local contexts.

2.6 Types of Spatial Planning and Approaches

Spatial planning can be categorized into different types and approaches, each tailored to address specific spatial challenges and objectives:

- Strategic Spatial Planning: Strategic spatial planning focuses on long-term visioning and policy development at regional or national levels. It involves setting broad goals, formulating strategies, and establishing policy frameworks to guide spatial development and land use decisions.
- Regional or Sub-Regional Spatial Planning: Regional or sub-regional spatial planning narrows down the focus to a specific region or sub-region within a larger jurisdiction. It aims to address regional disparities, promote balanced development, and ensure coordinated spatial development within the designated area.
- Urban or Metropolitan Spatial Planning: Urban or metropolitan spatial planning is concerned with the planning and management of urban areas or metropolitan regions. It aims to create sustainable, livable, and well-functioning urban environments by addressing issues such as urban sprawl, transportation infrastructure, housing, and public space design.

2.7 Key Stakeholders of Spatial Planning:

Spatial planning requires the collaboration and active engagement of various stakeholders to ensure its effectiveness and social inclusivity. Identifying and engaging the whole range of stakeholders is crucial. Stakeholders can include those directly involved in the decision making process, such as local authorities (politicians and civil servants) and other tiers of government, the development industry and investors, as well as others who can productively contribute to the decision-making process such as community representatives and NGOs.

Key stakeholders involved in spatial planning are:

- **Government agencies**
    - National, regional, and local government entities responsible for policy formulation, planning, and regulatory functions play a crucial role in spatial planning. These also include urban and regional planning departments. The planning departments within governmental institutions are responsible for coordinating and

implementing spatial planning initiatives, including plan formulation, implementation, and monitoring.

- **Environmental organizations**
    - Non-governmental organizations (NGOs) and environmental advocacy groups contribute to spatial planning by providing expertise on environmental conservation, sustainable development, and climate change, resiliency and biodiversity protection.
- **Community organizations**
    - Local community groups, neighborhood associations, and civil society organizations play a vital role in providing input, representing community interests, and fostering participatory decision-making processes in spatial planning.
- **Private sector**
    - Developers, landowners, businesses, and industry associations have a stake in spatial planning as it influences investment opportunities, land use regulations, and infrastructure development.
- **Academia and research institutions**
    - Academic institutions and research organizations provide valuable research, expertise, and technical support in spatial planning, contributing to evidence-based decision-making and innovative planning practices.

By involving these key stakeholders in the spatial planning process, a more inclusive, comprehensive, and sustainable approach can be achieved. Engaging stakeholders provides a way of exchanging knowledge and information to improve the spatial planning process. It can also help create consensus between stakeholders and increase the general support for policies and facilitates smoother implementation and more acceptance of its results.

2.8 Spatial Planning Process

The spatial planning process, in line with other planning process, follows a systematic and iterative approach, comprising several interconnected steps:

- **Data collection and analysis**
  - The planning process begins with the collection and analysis of data to understand the physical, social, and economic characteristics of the planning area. This includes gathering information on land cover, topography, demographic trends, economic activities, infrastructure networks, and environmental features. Data analysis techniques, such as Geographic Information Systems (GIS), remote sensing, and statistical modeling, help to generate insights and inform planning decisions. Such information enables planners to understand the existing conditions, trends, and challenges within the study area.
- **Stakeholder consultation**
  - Planners engage with various stakeholders, including government agencies, local communities, businesses, NGOs, and experts, to gather input, incorporate diverse perspectives, and ensure the inclusivity of the planning process. Stakeholder engagement is a fundamental aspect of spatial planning. It involves consultations, workshops, public hearings, and other participatory mechanisms that provide opportunities for stakeholders to contribute their perspectives, aspirations, and concerns. Engaging stakeholders fosters a sense of ownership, builds consensus, and ensures that planning outcomes are informed by local knowledge and priorities.
- **Goal setting (policy formulation)**
  - Based on the analysis of data and stakeholders input, spatial planning involves the formulation of goals, objectives, policies, strategies, and spatial plans that guide development within the

planning area. This includes defining land use categories, establishing development priorities, identifying growth areas, and setting goals and objectives for sustainable development. Policy formulation requires the integration of social, economic, and environmental considerations and often involves iterative processes of consultation, evaluation, and refinement.

- **Plan formulation**
    - Planners develop spatial plans and alternatives that outline the desired land use patterns, infrastructure networks, environmental protection measures, and design guidelines. These plans serve as blueprints for future development.
- **Plan evaluation**
    - Weighting and screening of various scenarios and development of alternatives though which the most viable and desirable course of action is evaluated and selected. This process involves the identification of criteria (includingtechnical, environmental, social, and economic criteria) and indicators, assignment of weights to the criteria, scoring and evaluation of each scenario or alternative, normalization and aggregation of scores based on weights assigned to each criterion for every scenario, ranking and screening of scenarios and alternatives according to their overall performances, conduct sensitivity analysis in order to test robustness of the results changes in weights or assumptions, and finally the selection of the preferred scenario or set of alternative spatial plans.
- **Plan implementation**
    - This step involves the implementation of the spatial plans through regulatory and non-regulatory means. Regulatory mechanisms include the establishment of zoning regulations, land use controls, and development guidelines to guide land use decisions and

development activities. Non-regulatory measures may include incentive programs, public investments, and infrastructure development that align with the spatial plans. Implementation requires coordination among various government agencies, private sector entities, and community organizations.

- **Monitoring and Evaluation**
  - Spatial planning involves monitoring and evaluating the effectiveness of implemented policies and spatial plans. This includes assessing the extent to which desired outcomes are achieved, evaluating the impacts of development activities, and identifying necessary adjustments and improvements. Monitoring and evaluation provide feedback to inform future planning processes and ensure that spatial planning remains adaptive and responsive

2.9 System of Spatial Planning

Spatial planning systems around the world have been reviewed in recent years, with a focus on increasing the importance of strategy, ensuring more effective collaboration, and allowing for more flexibility in development regulation. To achieve these goals, governments should enact laws that establish a simple set of priority spatial planning instruments and transparent procedures for their creation. Moreover, the importance of planning instruments including spatial strategies that are directed at coordinating activities of sectors and administrations over relatively large but coherent territories, directives, spatial framework setting out a minimum of policy statements and specific designations to guide development, redevelopment, and infrastructure coordination and policy statements ensuring consistent and efficient decision-making is to be emphasized. These mechanisms should be backed up with a system for the environmental appraisal of plans and projects, as well as firm and consistent enforcement of decisions.

Spatial planning system employs a number of instruments and tools, including laws, policy statements, guidance, procedures, incentives and sanctions. The

important ones are discussed below. The important ones are discussed below. [47]

2.9.1 Tools and Instruments of Spatial Planning

All countries need a set of planning tools that enable effective and fair management of spatial development. However, previous approaches to planning have been too detailed and prescriptive, using a top-down approach that assumes too much control over private and public actions related to property use and development, land use controls and restrictions, location decision on public facilities, environment conservation and infrastructure development and public transportation services. This has led to rigid plans that are difficult to prepare and keep up to date, and that inhibit planning authorities from responding to opportunities. The key is to find a balance between commitment and flexibility, knowing which needs must be addressed immediately and which needs can be met over a longer timeline. Planning tools should work together in a complementary and consistent way to ensure a proactive and coordinated approach to managing development, as well as fairness, accountability, and transparency in the decision-making process. It is also important that planning tools are considered corporate documents owned by all sectors of government, rather than as an external imposition. This means that they should be prepared in an open and collaborative way. [47]

Spatial planning employs various instruments and tools to facilitate effective plan implementation and management. Broadly, these are laws, rules and regulations, plans and development incentive and restrictions. These instruments include:

- **Land use plans**
    - Comprehensive land use plans provide a framework for guiding development and land use decisions within a specific area. They outline the desired land use patterns, development guidelines, and zoning regulations. The land use plans ranges in terms of

geographical dimension and scale from local to regional and national. At local level, the land use plan could be for a specific municipality, town or city or Woreda is more specific detailing land use regulations, zoning ordinances and development guidelines. At regional level land use planning aims at coordinating development, infrastructure or environment across a broader area. In some case the land use plan applies for the whole nation setting outgeneral guidelines and polices for land use, development and conservation. In terms of legal perspective, some land use plans, like local land use pans, are legally binding and have a legal status in which violation could have legal consequences. In other cases as in regional and national land use plans, land use plans while not legally binding, they serve as guiding documents influencing land use decision-making processes. The comprehensive and use plans should be integrated in the spatial planning system through the usual legal, regulatory and procedural means by which authorities ensure that the goals and objectives outlined in the plans are guide and influence development decision and activities within a defined geographical area.

- **Zoning regulations**
    - Zoning regulations divide the study area into different zones with specific land use categories and corresponding development regulations. They ensure compatibility, control building densities, and protect the environment and community interests.
- **Development guidelines/building code**
    - These guidelines or building code provide design principles, standards, and specifications for new developments, such as building heights, setbacks, architectural styles, open space

requirements, and environmental considerations. They promote aesthetic and functional coherence in urban and rural areas.

- **Environmental impact assessments (EIA)/Strategic Environmental Assessment (SEA)**
    - EIA evaluate the potential environmental impacts of proposed development projects. They identify and assess the potential adverse effects on natural resources, ecosystems, and local communities, and propose mitigation measures to minimize negative impacts. Currently, SEA has been introduced in land use planning. It is a systematic process used to evaluate the potential environmental impacts of policies, plans and programs before their implementation. SEA is considered as proactive approach to integrate environmental considerations into decision-making processes, ensuring that environmental concerns are taken into account early in the planning stage. Within the context of spatial planning, SEA involves the environmental effects of proposed plans, considering factors such as land use changes, infrastructure development, transportation networks and urban expansion. It helps to identify potential environmental risks, opportunities for mitigation and alternatives approaches to minimize adverse impacts. SEA follows a number of steps. SEA is a well-established practice in environmental planning and sustainable development [13].
- **Infrastructure development plans**
    - These plans focus on the provision of essential infrastructure, such as transportation networks, water supply systems, sanitation facilities, and energy networks. They guide the efficient allocation of resources and infrastructure investments in line with development objectives.
- **Urban design frameworks**

- Urban design frameworks provide guidelines and principles for creating well-designed and visually appealing urban spaces. They emphasize connectivity, walkability, public space design, and architectural aesthetics to create vibrant and sustainable urban environments.

2.9.2 Methods and technical tools of Spatial Planning

Spatial planning employs a combination of various technical tools and methods to support decision-making, analysis, and community engagement. These methods include:

- **Geographic Information Systems (GIS)**
    - GIS technology, as a technical tool, enables planners to collect, analyze, and visualize spatial data, such as land use patterns, population distribution, transportation networks, and environmental features. It aids in identifying spatial patterns, assessing impacts, and supporting evidence-based decision-making.
- **Remote sensing**
    - Remote sensing techniques, including satellite imagery and aerial photography, provide valuable data for land cover classification, change detection, and monitoring of environmental conditions. Remote sensing supports spatial analysis and facilitates informed decision-making in spatial planning.
- **Spatial modeling**
    - Spatial modeling involves the use of mathematical and computational models to simulate and forecast the impacts of different planning scenarios. It allows planners to assess the potential outcomes of alternative strategies, helping in decision-making and policy formulation.
- **Scenario planning**

- Scenario planning involves the development and analysis of different future scenarios based on varying assumptions and conditions. It helps planners understand the potential implications of different development paths and identify strategies to achieve desired outcomes.

➢ **Participatory mapping**

- Participatory mapping engages local communities in the planning process by allowing them to contribute their knowledge, preferences, and spatial information. It enhances community participation, fosters local ownership, and ensures that planning decisions align with the needs and aspirations of the residents

➢ **Spatial analysis techniques**

- Spatial analysis techniques, such as overlay analysis, proximity analysis, and spatial statistics, allow planners to identify spatial relationships, assess spatial patterns, and evaluate the suitability of different locations for specific uses. Spatial analysis provides valuable insights for informed decision-making.

2.9.3 Legal Framework for Spatial Planning

Many countries have reformed their planning laws in recent years to enable significant changes to their planning systems. A number of good examples of on the need for reforms and the reforms in spatial planning and respective planning laws can cited from a number of European countries [37].

The reform has been in response to the fact that the planning laws in some countries have not kept pace with the reality of spatial development and the pressures on the system. Planning laws are being reformed to make planning systems more effective, flexible, and responsive to the needs of communities and the environment. Planning laws are also being reformed to give local communities and other stakeholders more say in the planning process, although planning laws could also sometimes be reformed to make the

planning process more strict and provide more power to higher authorities. In general, the reform initiatives in spatial planning laws are directed at modernizing the planning systems, address emerging challenges and enhance sustainability.

One of the key goals of planning law reform is to shift the focus of planning from physical land use regulation to an "integrative spatial planning approach." This shift results in:

- More effective coordination of sectoral actions that have a cross-sectoral spatial dimension;
- More flexibility in the planning process;
- Greater responsibility for operating the system for authorities at the regional and local levels while ensuring conformity and adequate supervision;
- More effective participation by local communities and other stakeholders;
- The ability of planning authorities to recoup a proportion of the financial gain from the allocation of development rights to private developers to pay for externality effects and provide local community benefits; and
- Giving due consideration of environmental impacts of development so that adverse impacts are mitigated and/or compensated.[47]

2.9.4 Decision-making process

Generally, in an open, democratic, and mixed market society, national and regional governments should devolve decision-making to local stakeholders and investors whenever possible. However, there are some critical issues that need to be decided in a top-down manner, such as:

- Protecting critical natural capital
- Taking up major inward investment opportunities
- Protecting heritage assets from speculative activities
- National infrastructure assets and corridors
- Facilitating decisions on major energy infrastructure developments

- Imposing common development land taxes

National and regional decisions of major importance need to be binding on all levels and with all actors, and to follow a process that ensures accountability. These decisions should respect agreed policy statements wherever possible and be accompanied by clear explanations when they do not. All levels of government should be offered an opportunity to play a part in the decision-making process. Law and policy need to explain the criteria by which authorities at the national level may intervene in regional and local decisions. Generally, central intervention in decisions normally made at lower levels should be limited to matters of national and international significance or issues of potential national controversy. [47]

2.9.5 Policy Statements

National and regional policy statements play a critical role in effective integration of actions among levels of government and between sectors. These statements should include a clear set of general goals and principles for spatial planning, as well as targets and indicators.

Countries should produce national spatial development plans or perspectives that communicate and elaborate upon national planning policies. The preparation of "national spatial development report' will facilitate the preparation of such framework. However, the preparation of national policy framework is contingent upon a high degree of capacity, an in-depth understanding of the spatial development trends and their implications as well as high degree of political consensus. This should be based on a "bottom-up" as well as "top-down" approach to policy development. Policy statements should be generally binding on all levels but allow for some discretion where there is good reason. The form of expressing national goals and policies for spatial development requires careful consideration. Laws may be used to make policy statements, but this may be unwieldy and difficult to adapt or update. A more flexible and transparent approach is ideal.

There will be a need for a variety of forms of policy statements at national, regional, and local levels. Some will have little flexibility, while others may offer more discretion to decision makers. The degree of flexibility or rigidity depends to some extent on the scale of development. Where local governments and planning systems are not well established, it is better to have clear and unambiguous statements that allow for less discretion. National spatial development policy statements should be seen to apply to all parts of government and all those with a specific role in managing spatial development. These statements are not just directives for the spatial planning system. They are an important mechanism for integrating the disparate actions of government departments, the private sector, and communities. They should be used as a basis for formulating proposals as well as for deciding on them. [47]

2.9.6 Spatial Strategies

Spatial strategy is a document that provides an overview of the proposed pattern of spatial development of a territory and incorporates the territorial impacts of sectoral policies. It aims to maximize sustainable development by encouraging and guiding the spatial distribution of development, redevelopment, and investment, and coordinating infrastructure. The process of formulating the spatial strategy should be based on the examination of alternative spatial development options that are subject to consolation and screened through the strategic environmental assessment.

Spatial strategies enhance vertical policy integration and help to coordinate spatial development across different levels of government. They do this by interpreting national spatial priorities for a given territory and enabling lower-level administrations to cooperate on policy formulation. Spatial strategies also provide guidance for local policy frameworks and for public and private investment. They give a sense of direction and priorities but leave discretion for decisions to be made at the local level when appropriate.

Spatial strategies are prepared for regions, which can be administrative or functional. The formulation of spatial strategies is usually within the

competence of regional government, but there are examples where local governments voluntarily cooperate on the formulation of a spatial strategy for the whole functional region whose boundary crosses the existing administrative boundaries, as in the case of metropolitan region.

The collective participation of stakeholders in government, civic society, and business is crucial to the success of spatial planning. The spatial strategy can be used to encourage other sectors to address the spatial dimension of their activities and understand how their activities relate to decisions in other sectors. Engaging sectoral interests in the spatial planning process[13] can be a challenge. National and regional governments can support the process by linking elements of sectoral funding to the spatial strategy. Some incentive will also come from the binding nature of the strategy on local-level policy frameworks, proposals, and regulation.

Finally, the spatial strategy should be comprehensive in its ability to consider all important aspects of development. It should be "spatial" in the sense that its primary role and value is in coordinating the territorial impacts of spatial development, and "strategic" in the sense that it identifies the general location of development at the level of the settlement or sub region but does not designate detailed boundaries.

2.9.7 Spatial Framework Plans

The spatial framework plans provide general guidance on planning proposal and supporting policy statements. The framework plan is made for the

[13] Spatial planning strategy formulation and spatial planning process are interrelated aspect within the broader framework of managing land use and development in a geographical area. Spatial strategy formulation serve as a critical phase within spatial planning process providing the overarching strategic directions and goals that inform the creation of detailed plans and implementation measures. The strategies inform the subsequent planning activities by defining the vision, goals and strategic priorities, which are then translated into specific plans, regulations and projects through the spatial planning process. In essence, spatial strategies set the framework and direction for the detailed spatial planning exercises. However, although both share common goals, vision and spatial aspects, they differ in scope, focus or level of detail and their position in the planning hierarchy.

geographic area of local government or clusters of local governments together with their functional areas including the adjoining rural areas to regional and national level. Correspondingly, the scale in terms of the level of of the extent of analysis, planning, or implementation ranges from local to regional, state and national levels. Spatial frameworks can be legally binding when enshrined in laws, regulations or statutes. But they can also serve as a guiding document or principles that inform the decision making without being legally binding and adherence to these frameworks is encouraged in the planning and development process.

The spatial framework plans are intended to guide and coordinate proposals for development and provide a general reference for land use regulations. [47]

The framework plan should be a corporate statement of policy from the planning authorities involved, in partnership with other key delivery agencies. It should coordinate the spatial aspects of their sectoral policies in the areas of economic development, transport, environmental protection, health, education or agriculture. The framework plan should be closely interrelated with public investment programs, should highlight the spatial dimension of sectoral policy, and should show where policy fits together and where it does not.

Ensuring collaboration in the development of a spatial framework plan among local authorities is important though usually challenging. This is a critical requirement if effective planning is to be achieved and the costs of non-coordination and fragmented development which arises from competition between local authorities and agencies is to be either minimized or avoided. National governments should play a key role in encouraging sectoral interests and administration to cooperate, so that the plan has a high-priority status for government. [47]

Where local government units are small, national or regional governments may have to prescribe the areas for which framework plans are to be prepared – this is especially important for ensuring coordinated development of urban

areas that are contiguous with surrounding rural areas. Governments may also need to offer incentives or apply sanctions in order to encourage effective cooperation on planning. Government funding, grants and support for infrastructure should be tied to the creation of joint inter-authority planning frameworks. [47]

The plan must be binding for regulation and development management, but the degree of prescription will be dependent upon local circumstances. In general, the framework plan must adopt a minimalist approach concentrating on priorities, key challenges and places where change is anticipated and should reflect the dynamics of spatial development, highlighting trends and uncertainties. In some countries, framework plans are detailed with specific allocations for each parcel of land. As in traditional master planning approach, this type of approach has been shown generally to be inflexible and difficult to keep up to date. It tends not to reflect the realities of great uncertainty in spatial development and public investment, although detailed and binding specification will be needed where there is some certainty of delivery. Elsewhere, criteria-based policies that set out objectives for particular types or general locations of development have been shown to be a very effective way to manage change at this level. So the framework plan will be a mix of detailed and binding proposals with general policies and proposals. It should also be closely interrelated with other methods of shaping spatial development such as incentives or subsidies. [47]

The framework plan should be formulated through a participatory process which allows stakeholders to express their views on draft proposals, to recommend alternatives and, where necessary, to make formal objections to the preferred option of the planning authority. Finally, the plan should demonstrate conformity with national and regional policies, although in most cases, it will be necessary for the framework plan to be approved by a higher authority. [47]

2.9.8 Land-use Regulations and Development Management

Most development decisions should be made at the local level, based on criteria set out in policy documents adopted by the local authority after consultation with higher levels of government. All development proposals above certain parameters must be authorized by the local authority, and each sectoral interest must be consulted about particular decisions. However, local decisions should be strongly directed by agreements reached among sectoral interests at regional and framework levels. For proposals that are not identified in strategies and plans, the general framework provisions and criteria will apply. In other words, the system should encourage local decision-making, but within a framework of regional and national agreements. This ensures that local decisions are made in a way that is consistent with broader goals and objectives.

Development management decisions should be made by elected bodies at the appropriate level, and the decision-making process should be transparent, impartial, and fair. This means that the planning authority should make documentation widely available and open its meetings to the public. In some cases, where the local political system is not firmly established, a separate committee made up of representatives from the civic, community, and business sectors may be appropriate for decision-making. Routine decisions may be delegated to officers, but any decisions that involve third parties should be finalized by the main decision-making body. In other words, the decision-making process for development management should be open and accountable, with all stakeholders having a voice.

Planning law should identify which types of development require national or regional government approval, based on the principle of subsidiarity. Most decisions should be made at the local level, with national government setting overarching policy and regional government providing guidance. If higher levels of government intervene, they should consult with local authorities and other stakeholders. Zoning by-laws are a common approach to land-use planning in Europe. They are detailed regulations that allocate development

rights and are checked against development proposals before permits are issued. This approach requires a lot of planning capacity and can be difficult to keep up to date. Zoning by-laws can be rigid and inflexible, but they can also be valuable for protecting environmental assets. However, their inflexibility has led to some plans falling out of date and being bypassed by informal agreements or unauthorized development. Zoning by-laws are a powerful tool for land-use planning, but they also have some drawbacks. It is important to strike a balance between ensuring that development is regulated in a way that protects the public interest and allowing for flexibility to meet the needs of changing communities.

Traditional zoning by-laws work well when the public sector is the main developer and development patterns can be predicted with certainty. However, they are not well-suited to market-led development processes, where there is great uncertainty and a variety of development proposals from different sources. To address this, some countries are implementing new zoning procedures that offer more flexibility in interpreting zoning plans and evaluating development proposals. This does not necessarily reduce the effectiveness of zoning plans, but it does change their nature. Instead of trying to predict development in advance, zoning plans can be more responsive to unexpected but positive development proposals. Zoning by-laws are still a valuable tool for land-use planning, but they need to be adapted to meet the challenges of contemporary spatial development processes.

In addition to zoning by-laws, other tools can be used to make land-use regulation more simple and effective. These include national codes on energy efficiency and building design, as well as less prescriptive guidance on development. National codes can be an effective way to improve the quality of development across large territories, especially where local governments lack capacity. They can also be welcomed by the private sector, which values working towards common standards. Less prescriptive guidance can be used to ensure good coordination between transport, land use, health, and education. This can help to create more sustainable and livable communities.

Overall, these tools can make land-use regulation more effective and efficient, while still ensuring that development meets important public policy goals.

Investors often have to deal with multiple regulatory bodies when developing a project. Some countries have combined regulatory bodies, but this can be complicated and difficult to implement. A "one-stop shop" approach, where investors can deal with all regulators through a single point of contact, is often more effective. Regulatory bodies should work together in a complementary and consistent way. Developers need a clear understanding of the permitting process and what is required at each stage. Regulatory bodies should coordinate their efforts to ensure that they are all working towards common objectives. This coordination can be facilitated by involving regulatory bodies in the preparation of strategic and framework plans, and by linking incentives such as regional and urban policy funding to the provisions of the framework plan. [47]

2.10 Spatial Planning and Levels of Government

The major functions of spatial planning, in respect to administration and decision making, are performed at the different levels of government: national, regional and local each with its own specific focus and jurisdiction.

Generally, at a national level, national spatial planning frames spatial development at national level, guides planning functions and activities at lower levels of government. Moreover, as a policy tool of national –regional planning, it seeks to distribute economic activities social welfare fairly between regions. At a regional level, spatial planning shapes regional development. At local or municipal level, spatial planning is mainly concerned with land use planning regulating land and uses of properties. Generally, these two dimensions of spatial planning; namely functional and administrative are used to make a comparative analysis of the scope of spatial planning between countries. [32]

It should be emphasized here that the allocation of competencies/responsibilities among the different levels of governments is

dedicated by the principle of subsidiarity in which decisions should be made in as much as possible at the lowest tier of government. However, in many instances this could not be achieved because of lack of capacity of those levels to achieve the desired spatial planning outcomes. [47]

2.10.1 National Level

National governments, based on the constitution and other relevant laws, formulate a national spatial framework of planning tools and procedures which determines the competencies to be exercised and by which actors in the government are those competencies to be exercised. At the national level, governments formulate strategic frameworks, policies, and legislation that guide spatial development across the entire country. National-level planning provides a broad vision and direction for spatial development and ensures coordination among regions.

Some of the key roles of national governments in spatial planning, which could be modified to fit local context of countries, include:

- Promoting a shared strategic vision and establishing priority outcomes for spatial development through unambiguous policy statements, and the positive role that spatial planning plays in achieving those outcomes;
- Developing a legislative framework that enables the creation of spatial planning instruments and policy at different spatial scales through democratic and participatory procedures;
- Utilizing incentives and sanctions to ensure effective cooperation across sectors and administrative boundaries as well as between levels of government;
- Supervising spatial planning at the regional and local levels to ensure adherence to laws and probity in procedures; promoting conformity of policies and actions among jurisdictions;
- Monitoring spatial development trends and the impact of spatial planning, and making use of indicators and targets;

- Taking the lead in providing the necessary evidence base of data and information on the state of the spatial development and the impact of spatial planning;
- Ensuring that other national ministries and departments understand the effects of their policies and actions on spatial development and the need for coordinated policy and action among all departments when delivering priority spatial outcomes;
- Supporting and advising regional and local governments and helping to build capacity at all levels, both in terms of professional expertise and political leadership;
- Providing an appeals procedure whereby citizens and businesses can object to local and regional decisions, through arbitration, mediation and, if necessary, making binding decisions on unresolved local cases;
- Managing and directly regulating issues of national and international significance in collaboration with regions and local authorities, for example in relation to the designation of sites of national significance that should be protected from development;
- Creating "national agencies" to act as liaisons when working in partnership with regional and local governments on matters needing urgent and special attention, such as major reconstruction zones. [47]

2.10.2 State or Regional Level

State or regional planning involves the translation of national policies and frameworks into regional development plans. It takes into account regional specificities, priorities, and resources while aligning with national goals. Regional planning ensures spatial coherence and balance within each region.

Specifically, the main tasks at the regional level are to interpret and adapt national policies and priorities to regional conditions, to provide a strategic plan which addresses the functional planning relationships and overall development patterns, and to provide guidance and assistance to local authorities in the creation of local planning instruments. State or regional government should use spatial planning as a tool to ensure a measure of

coherence and integration among a number of strategies, including economic development, environmental resources, sustainable development, rural development, heritage, and culture and tourism that are undertaken in the state or region. This will normally be done through an integrated strategy that provides an analysis of the territorial impacts of all government policy and encourages action promoting the complementarity of measures. Some important roles of state/regional government in spatial planning include:

- Preparing spatial strategies using 15- to 20-year projections for the overall development of the state/region by collaborating with regional and local stakeholders;
- Designating and protecting areas of critical natural capital such as recreational areas, water resources and mineral resources;
- Planning and delivery of regionally significant infrastructure that crosses local authority boundaries;
- Using appropriate environmental assessment and appraisal methodologies for regionally significant plans and projects;
- Supervising local spatial planning to ensure conformity with national and regional strategies, and to ensure that decision-making procedures are followed;
- Ensuring that local authorities collaborate in their planning so that critical cross-cutting issues are addressed (particularly on the urban-rural fringe) and the sensible planning of functional planning areas is achieved;
- Monitoring and providing information and analysis on regional spatial development trends for national and local governments;
- Assisting in capacity-building at the local level through guidance, training, and interpretation of legislation; and
- Providing a means of appeal on contested matters and mediating disputes between local authorities.[47]

2.10.3 Local Level

Local-level planning focuses on implementing spatial plans and regulations within municipalities, cities, or local communities. The implementation and

planning decisions at local levels should be made with reference to policies established at national and regional levels and implemented using detailed plans prepared and adopted at the local level.

Local spatial planning instruments will usually be in the form of frameworks and regulatory plans. This involves the development of local development plans, zoning regulations, and land use guidelines tailored to the specific needs and characteristics of the local area. It is very important that local government should work in partnership with regional government to ensure conformity of local policies and decisions with regional strategies. The role of local government in spatial planning will thus include:

- Establishing the priorities for action on spatial development for the local area in partnership with local stakeholders and regional bodies;
- Preparing a simple planning framework that identifies the main geographical areas of change, the priority desired outcomes and planning policies, and also explaining the contribution that will be made by different departments and sectors to realizing the desired outcomes;
- Preparing regulatory planning instruments setting out decision rules for the locality (these tasks will often be done in collaboration with other authorities across larger territories);
- Engaging with the community on the preparation of planning policies and proposals and ensuring that local concerns are voiced in regional arenas;
- Taking proactive measures to encourage development that is in accordance with the agreed planning framework, for example in making effective use of land in public ownership;
- Creating project partnerships across the public, private and community sectors to deliver specific proposals;
- Rigorously enforcing strict adherence to planning procedures and dealing promptly with unauthorized developments; and
- Monitoring the implementation of policies and proposals, decision-making and spatial development trends affecting the locality.

It is recommended the national governments should apply the principle of subsidiarity in the allocation of competences and make efforts to build the capacity of lower levels to take on spatial planning tasks. National governments (including states in federal systems) must create the conditions for effective spatial planning at the regional and local levels, including enacting framework legislation that provides an outline of planning tools and procedures. The regional level will take the lead in the preparation of spatial strategies in order to coordinate the impacts of sectoral policies. Local governments should have primary responsibility for managing and regulating development within the policy framework, though this may require that groups of authorities work collaboratively to cover functional areas and build capacity. [47]

3. Land Use Planning

3.1 Definition and Process

Land use planning involves the systematic assessment, organization, and allocation of land for various purposes both for urban and rural areas. In principle, it is a process that aims to make the most efficient and sustainable use of land resources while considering various factors like environmental sustainability, economic development, social needs, equity and community wellbeing. It is crucial for managing urban growth, preserving agricultural areas and natural resources, preventing urban sprawl and ensuring adequate infrastructure development and creating livable communities. It involves collaboration with various stakeholders.

Land use planning focuses on the specific allocation and regulation of land for different uses and activities by relevant authorities from up from national through regional down to local levels. Land-use planning is the process of deciding how land should be used in the future. It is concerned with the location, intensity, form, amount, and harmonization of land development for different purposes, such as housing, industry, recreation, transportation, education, nature, agriculture, and cultural activities. Land-use plans are

proposals for how land should be used, based on a government policy. It is a conscious decision about how land should be used in the future. It is important to consider all of the different needs of society when making these decisions, and to ensure that development is done in a way that is compatible with the environment and sustainable for future generations. [3, 13]

It involves determining the most appropriate uses for specific parcels of land, considering factors such as zoning regulations, development suitability, and community needs. Land use planning aims to balance competing land use demands, promote efficient use of land resources, and ensure compatibility between different land uses. It aspires to achieve environmental conservation, containment of urban sprawl, minimization of transport costs, prevention of land use conflicts, and a reduction in exposure to pollutants.

Land use planning, therefore, ensures that land as a resource is used in a sustainable and equitable manner. More specifically, land use planning can accrue a number of benefits:

- It can help to protect the environment by preventing the development of land in sensitive areas.
- It can help to reduce urban sprawl by encouraging the development of compact, walkable communities.
- It can help to improve the efficiency of transportation systems by reducing the need for long commutes.
- It can help to promote social equity by ensuring that everyone has access to affordable housing and other essential services.

The process of land use planning, like other planning process, has the following basic elements:

- Definition of the goals of the plan that specifies the social, environmental, and economic goals that the plan is trying to achieve
- Collection of data about the land including information about the physical characteristics of the land, the current land use, and the needs of the people who live in the area.

- Analysis of the data which involves assessing the environmental, social, and economic impacts of different land use options.
- Development of the plan in which decisions are made about how the land will be used in the future. The decision must be founded on the active engagement of the stakeholders.
- Plan validation and adjustment if necessary.
- Plan implementation involving putting the plan into action and monitoring its effectiveness.
- Monitoring and evaluation by which the implementation of the land use plan is checked, and its effectiveness evaluated. This helps to ensure that the plan is meeting its goals and that it is being implemented in a way that is beneficial to everyone

The process of land use planning must ensure public participation so that the plan reflects the needs and concerns of everyone who will be affected by it. Moreover, it must be conducted within the context of existing legal and regulatory frameworks so that the plan is consistent with national, state, and local laws.

3.2 Types of Land Use Planning

There are many types of land use planning, but some of the most common include:

- Strategic planning focuses on the long-term development of an area. It typically involves identifying the area's development goals and objectives, and then developing a plan to achieve those goals.
- Comprehensive planning takes a holistic approach to land use and guide land use decisions across an entire jurisdiction. It integrates various aspects such as transportation, housing, infrastructure, and environmental considerations to create a cohesive and sustainable land use strategy.

- Sectoral Land Use Planning focuses on specific sectors or industries, such as agriculture, tourism, or industrial development[14]. It aims to optimize land use within each sector by identifying suitable locations, defining guidelines and regulations, and promoting sector-specific development objectives.
- Development Control and Site-Specific Planning is a regulatory process that governs individual development proposals, ensuring compliance with land use regulations, building codes, and design standards. Site-specific planning involves detailed planning for specific sites or projects, considering site-specific characteristics, environmental impact, and design requirements.
- Zoning divides land into different zones, each with its own specific use. For example, a zone might be designated for residential use, commercial use, or industrial use.
- Master planning[15] is used to develop a detailed plan for a specific area. It typically includes information about the area's infrastructure, transportation, and other amenities.
- Planning for special area is used to develop plans for specific areas, such as parks, historic districts, or waterfront areas.

Land use planning encompasses several types and approaches, each with its own characteristics and objectives. The specific type of land use planning that is used will vary depending on the specific needs of the area. For example, if an area is facing rapid growth, strategic planning may be used to develop a

[14] In the Ethiopian context, it is very essential to integrate both urban and rural land use planning at the Woreda level.

[15] The master planning approach in Ethiopia is no more functional. Following global/British experience, it has been replaced by 'Structure Planning approach". Two levels are recognized as urban plans for larger urban centers, namely; structure plan and local development plans. This approach is anchored in the Urban Plan implementation Proclamation 574/2008. A recent policy document entitled 'Strategic Plan Implementation" recognizes four types of planning hierarchies; namely; structure plan, strategic plan, basic plan and sketch plan corresponding to the predefined hierarchies of urban centers in the country.

long-term plan for the area's development. If an area is experiencing environmental challenges, comprehensive planning may be used to develop a plan that addresses those challenges. And if an area is home to a specific type of development, such as a park or a historic district, master planning may be used to develop a detailed plan for that area. Finally, urban land use planning is the process of regulating the use of land in urban areas. [48, 49]

3.3 Approaches to land use planning

There are different approaches to land use planning, but some of the most common include:

- **Top-down planning** is characterized by a strong central government that sets the goals and objectives of the plan, and then devolves responsibility for implementation to lower levels of government or to private sector actors.
- **Bottom-up planning** is characterized by a more decentralized approach to planning, with local communities playing a leading role in setting the goals and objectives of the plan, and in implementing it.
- **Integrated planning** takes a holistic view of land use, and considers the interaction of different land uses, as well as the relationship between land use and other factors, such as transportation, infrastructure, and the environment.
- **Sustainable planning** seeks to develop land in a way that is environmentally, socially, and economically sustainable.
- **Innovative planning** uses new and innovative approaches to land use planning, such as the use of technology, the involvement of the public, and the use of market-based instruments. Some examples include; Adaptive Reuse of an elevated railway into linear park, High Line park, New York City, USA, Urban Growth Boundary containing urban sprawl, in Portland, Oregon, USA, Sustainable building Design of the Crystal, London, UK, Car Free Neighborhood of Vauban, Freiburg, Germany,

and Sustainable Urban Development Project of Masdar City, Abu Dhabi , UAE.

3.4 Land use and Spatial Planning: Similarities and differences

Land use planning is concerned with the specific use of land, while spatial planning is concerned with the overall spatial organization of land and its uses.

Land use planning and spatial planning are both planning processes that are used to manage the use of land. However, there are some key differences between the two.

- Land use planning is focused on the specific use of land, such as residential, commercial, transportation infrastructure, industrial or agricultural. It typically involves zoning regulations, environmental impact assessment and other tools to ensure that land is used in a way that is consistent with the goals of the plan.

- Spatial planning is a more holistic approach at the supra-local level that considers the interaction of different land uses, as well as the relationship between land use and other factors, such as transportation, infrastructure, and the environment. It typically involves a more strategic approach to planning, and it may include tools such as strategic planning, master planning, and environmental impact assessment.

Spatial planning and land use planning share common objectives and methodologies, but they differ in terms of their scope and focus. While spatial planning is generally concerned with balanced interests and optimized allocation of functions across the space given, land use planning is concerned with the correct/proper occupancy of land defined by the spatial plans as well as building rules and regulation. Both approaches involve a systematic and iterative process that includes data collection, analysis, stakeholder engagement, goal setting, plan formulation, and implementation. They both rely on tools such as GIS, remote sensing, and participatory approaches to support decision-making and community engagement.

The key difference lies in the scale and breadth of their application. Spatial planning operates at a broader scale, encompassing regional or national spatial issues and considering various sectors and stakeholders. It provides a strategic framework that guides land use planning and ensures coherence and integration of land use with other spatial elements. Land use planning, on the other hand, focuses on more localized and specific land use decisions within a defined jurisdiction, addressing the detailed regulations, guidelines, and site-specific considerations.

Nevertheless, it is important to integrate spatial planning and land use planning. Spatial planning provides the overarching strategic framework, goals, and policies, while land use planning translates those strategies into practical guidelines and regulations at the local level. The integration ensures the alignment of local land use decisions with broader spatial development objectives, promoting coherence, efficiency, and sustainability in the allocation and management of land and resources.

4. International Experience in Spatial Planning: An Example of Germany

Looking at international experiences in spatial planning can provide valuable insights and lessons that can be applied to the Ethiopian context. Several countries have successfully implemented spatial planning strategies and achieved positive outcomes in terms of sustainable development, efficient land use, and improved quality of life for their citizens. A good example is Spatial Planning in Germany.

4.1 Spatial Planning in Germany

Germany has developed a highly regarded spatial planning system that emphasizes long-term vision, public participation, and sustainability. The German experience highlights the importance of strategic planning, regional coordination, and effective governance structures. Lessons from Germany include the need to integrate sustainability principles into spatial planning, establish clear governance mechanisms, and involve stakeholders in decision-making processes.

Germany is a federal country with four levels of government. Below the national government, 16 federal states exist. At an intermediate level, there are 402 administrative districts and at the local level 11 092 municipalities. For historical reasons three of the federal states – Berlin, Hamburg, and Bremen – cover only the territory of individual large cities and combine the functions of states and the municipal level. While smaller municipalities usually belong to a district, larger ones with roughly 100 000 or more inhabitants are independent of districts and combine the functions of municipal and district administration. Germany is a federal country with three levels of administration: namely, the federation, the state (Länder) and municipalities. The planning system also recognizes another level, namely at regional level. [33]

This decentralized political structure is also reflected in the system of spatial planning in Germany, in which there is a statutory division of competencies and responsibilities between the three levels, each with its own legal

framework, organizational structures and substantive focus. This is shown in the Figure below. [36]

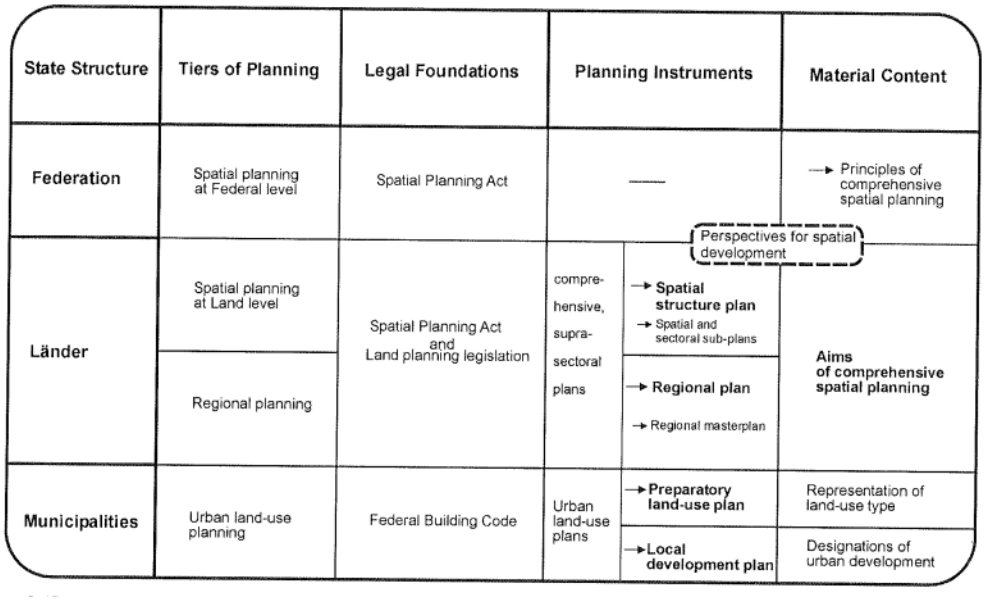


Figure 1: The German Planning System [44]

Each level of planning is executed on the basis specific legal basis. However, each of these levels are closely linked with each other in accordance with the so called 'Principle of Countervailing Influences" (or "feedback principle")" as well as through statutory requirements that demand for the exchange of information, participation and coordination and adherence to designation or guidelines contained in certain plans emanating from a higher spatial levels. Therefore, the spatial planning system requires coordination between the three levels of governments as well as between the different sectoral planning having a spatial dimension. [11]

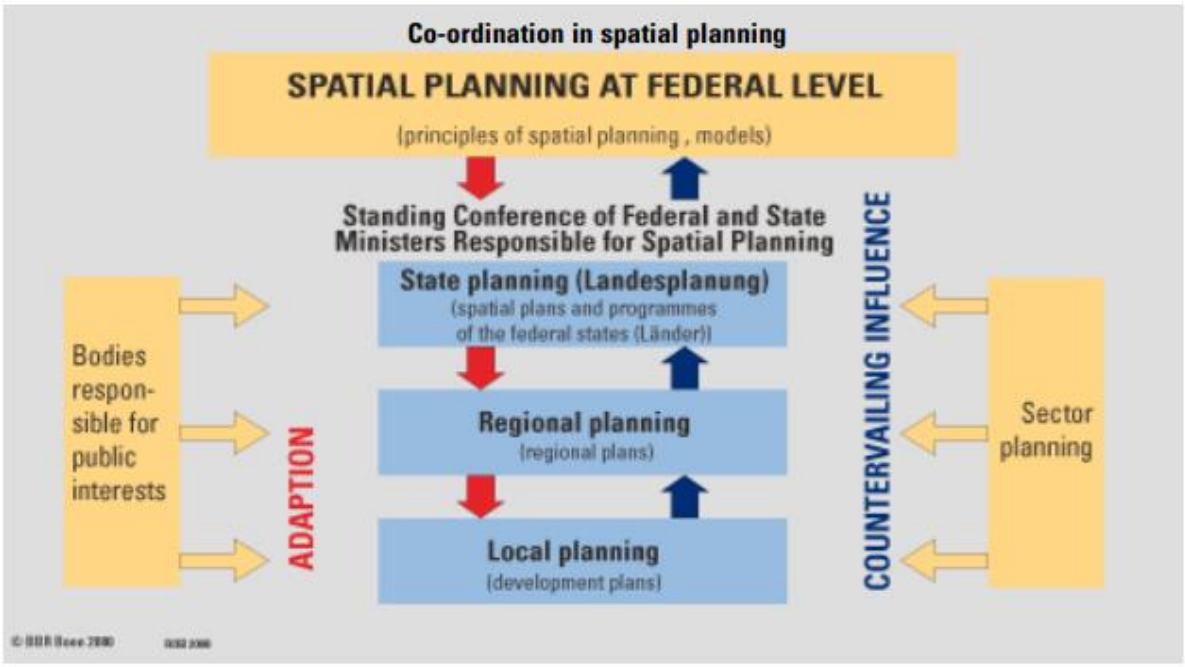


Figure 2: Principle of Countervailing Influences or Integration [11]

Two basic concepts define spatial planning in Germany. These are the concepts of 'Raumordnung" (Spatial ordering) which is a comprehensive framework for planning set by the Federal Government and the concept of "urban development and order". The Federal Constitutional court in 1954 defined "Raumordnung" as

> "…a comprehensive (i.e. supra-sectoral), supra-local and superordinate tier of planning aimed at establishing spatial order and setting the direction for development. The attribute "comprehensive" emphasizes the function of co-coordinating and harmonizing those elements of the various types of sectoral planning which have spatial impacts. "Supra-local" indicates that the territory affected by this tier of planning extends beyond the boundaries and jurisdictions of local authorities. Taken together, the comprehensive and supra-local dimensions of "Raumordnung" justify the "superordinate" status it enjoys in the German planning system. Accordingly, in deciding on plans and measures with spatial impacts, all planning authorities or agencies are required to take account of and to adhere to what are known as the requirements of comprehensive spatial planning. Plans and other measures are deemed

to have spatial impacts when they involve taking or occupying land, or where they influence spatial development or the function of an area." [44]

4.1.1 Spatial Planning Laws

The German spatial planning system is based on a legal framework, which includes the Basic Law, the Federal Spatial Planning Act, and the state spatial planning laws. These laws are exercised at the federal, state and local level as explained below.

4.1.1.1 Federal Level

The Basic Law guarantees the right to spatial planning and establishes the federal government's responsibility for coordinating spatial development. The Federal Spatial Planning Act sets out the goals and principles of spatial planning and the procedures for the preparation of spatial plans, goals and principles of spatial planning in Germany, and it also establishes the federal government's role in spatial planning. The most important spatial planning laws at the national level in Germany are the following:

- Spatial Development Concept and Strategy in Germany (Raumordnungspolitisches Gesamtkonzept für Deutschland): The Spatial Development Concept and Strategy in Germany is a high-level document that sets out the overall goals and principles of spatial planning in Germany. It is updated every 10 years.
- Spatial Planning Report (Raumordnungsbericht): The Spatial Planning Report is a comprehensive report that provides an overview of the current state of spatial development in Germany. It is published every 2 years.
- Federal Spatial Planning Guidelines (Raumordnungsleitbilder): The Federal Spatial Planning Guidelines are a set of guidelines that provide more detailed guidance on how to implement the goals and principles of spatial planning in Germany. They are updated every 5 years.

4.1.1.2 State Level

The state spatial planning laws elaborate on the Federal Spatial Planning Act and set out the specific goals and policies for the respective states. The spatial planning laws at the state level in Germany are based on the Federal Spatial Planning Act (Raumordnungsgesetz, ROG) and the state spatial planning laws. The ROG sets out the goals and principles of spatial planning in Germany, and the state spatial planning laws elaborate on these goals and principles and set out specific requirements for the states. The most important spatial planning laws at the state level in Germany are the following:

- **State Spatial Planning Acts (Raumordnungsgesetze der Länder)**
    - The State Spatial Planning Acts are the main legal basis for spatial planning in the states. They set out the goals and principles of spatial planning in the states, and they also establish the state governments' role in spatial planning.
- **Regional Plans (Regionalpläne)**
    - The Regional Plans are spatial plans that are developed by the states. They cover large areas of land and identify areas for different types of land use, such as residential, commercial, industrial, and agricultural.
- **Local Plans (Flächennutzungspläne and Bebauungspläne)**
    - The Local Plans are of two types and are spatial plans that are developed by municipalities. The Flächennutzungspläne serve as preparatory land use plans and the Bebauungspläne are binding land use plans

The spatial planning laws at the state level in Germany give the state governments a significant role in spatial planning. The state governments are responsible for developing spatial plans for their territories, and they also have the power to approve or reject spatial plans that are developed by municipalities.

4.1.1.3 Local Level

The spatial planning laws at the level of municipalities in Germany are based on the Federal Spatial Planning Act (Raumordnungsgesetz, ROG) and the state spatial planning laws. The ROG sets out the goals and principles of spatial planning in Germany, and the state spatial planning laws elaborate on these goals and principles and set out specific requirements for municipalities. The spatial planning laws at the level of municipalities in Germany give municipalities a great deal of discretion in how they plan their territory. However, the laws also impose a number of requirements on municipalities, such as the need to ensure that their plans are consistent with the goals and principles of spatial planning at higher levels.

The most important spatial planning laws at the level of municipalities in Germany are the following:

- **Preparatory Land Use Plan (Flächennutzungsplän)**
    - The Preparatory Land Use Plan is a general plan that outlines the future development of a municipality. It covers the entire territory of the municipality or different municpalities and identifies areas for different types of land use, such as residential, commercial, industrial, and agricultural.
- **Binding Land Use Plan (Bebauungsplan):**
    - The Binding Land Use Plan or also named as binding zoning plan is a more detailed plan that specifies the use of land in a particular area. It includes maps, regulations, and other information about the planned use of land.
- **Land Use Ordinance (Baunutzunngsverordnung):**
    - The Development Ordinance is a set of regulations that govern the development of land in a municipality. It includes rules about the size and type of buildings that can be built, the density of development, and the protection of the natural environment.

4.1.2 Levels of Spatial Planning

Spatial planning is an area-related public sector task that is subdivided into comprehensive (or overall) planning focusing on the supra-local (spatial planning) and local levels (urban land-use planning) as well as sectoral planning.

The comprehensive spatial planning is conducted at four levels: National, state, regional and municipal. Specifically, the four levels of spatial planning are;

1. Comprehensive Spatial Planning at Federal Level (Raumordnung)
2. Comprehensive Spatial Planning at State Level (Landesplanung)
3. Regional Planning
4. Urban Land-Use Planning

In addition to the comprehensive spatial plans exercised at different levels, sectoral planning is also exercised in parallel in order to produce sectoral plans that are designed to prepare and implement systematic programs of measure needed to support development within a specific and clearly defined sector. Sectoral planning is the task of the relevant sectoral authority which is defined by the federal level legislations As the sector plans is usually transcends the boundaries of local governments, there is a specific legislation (spatial planning clause) that requires the sector plans to align and coordinate with those of the comprehensive spatial planning, namely; state-level spatial planning and regional planning. A good example of sectoral planning is road infrastructure planning. There is road at the Federal Level, the so called Bundesstrassen, at the State Level known as as Landestrassen, at District Level called Kreisstrassen and at Communal or Local Level known as Gemindestrassen. All these infrastructure plan need to be properly integrated in the respective plans. [44]

Comprehensive Spatial Planning at Federal Level (Raumordnung)

The German basic law of empowers the federation to enact framework of legislation (i.e., spatial planning act) for spatial planning dealing with the

fundamental aspects of spatial planning and to matters of general goals and principles while leaving the tasks of preparing detailed and binding goals for spatial development to the lower tier of government, namely the States. Moreover, the federation is also responsible for the matters regarding the spatial structure of the whole country that is to be addressed by the comprehensive spatial planning. Nevertheless, the federation is required to prepare a number of binding rules in form of 'principles of spatial planning". These principles lay down the material guideline for spatial order and development and for ensuring the 'ordered' structure of the federal territory. Accordingly, any plan and measure having a spatial impact be it in the preparation or in the decision-making phase, have to take into account these guidelines. The lower tier of government (or the State) is required to elaborate the guidelines by adding more concrete details and substances in the aims of spatial planning when developing their respective spatial structure plans.

Functionally, the comprehensive spatial planning strives to realize the principles of spatial planning in the framework of achieving the vision of sustainable spatial development. Furthermore, the federal-level spatial planning has to promote coordination and collaboration among the states (States) so as to develop a national spatial development framework; named as "Perspectives for the Spatial Development of the Federal Territory and of Regions Extending beyond the Boundaries of Individual State" that is based on the spatial structure plans of each of the states. This common framework facilitates cooperation with the European Union plans and cross border cooperation in spatial planning with the neighboring countries.

In addition to the role of the federation in terms of approving framework of legislation and carrying out the responsibilities stated in the spatial planning act, it has also important legislative and administrative functions related to public policy issues with impact on the spatial structure and development of the Federal territory. These includes sectoral plans, like the transport, with profound spatial impact, capital investment and grants as well as financial and taxation systems. Finally, the relevant authority for federal level spatial planning

is also required to present at fixed intervals to the Federal parliament, the Bundestag, the "Spatial Development Report". The report includes an audit report of the current state of the spatial structure of the country, current trends in spatial development, both planned and implemented, in the whole country, as well as information on Federal and EU plans and statements of on spatial impact of EU policies. [44]

Comprehensive Spatial Planning at State Level (Landesplanung)

The comprehensive spatial planning at the level of the state/land is known as "Landesplanung" which is defined as a component of public administration accountable for preparing comprehensive and superordinate spatial structure plans and coordination of plans and measures with spatial impact. Therefore, 'Landesplanung" has both planning functions and coordination of spatial development and achieving the desired spatial structure. The legal basis of the spatial plan is specified in and regulated by the spatial planning act and in more detailed manner in the specific spatial planning legislation of each state/Land which grant it a number of planning instruments.

The planning function of the comprehensive spatial planning empowers each state and the city states, to produce comprehensive and superordinate spatial structure plans for their respective territories. In accordance with the basic principles of spatial planning outlined in the "Spatial Planning Act", the spatial structure plans at state level are required to formulate mid-term "aims of spatial planning" relevant to their territory and by adding more concrete details of those specified in the spatial planning act as well as ensuring their consistency with the goals of sustainable development. As per the Landesplanung and relevant federal laws, all plans and planning measures as well as private sectors involved in the delivery of public tasks are required to respect those binding aims.

The spatial structure plans are the central instruments of State-level planning. The planning process, from the inception to the approval of spatial structure plans, follows three common and consecutives procedures in all States;

namely, drafting, participation and formal approval. The final stage is the most important stage in which the plan is formally approved and acquires legal status and thus becomes binding. This binding legal status is achieved through formal acts of legislation, inform of resolutions adopted the state governments and approvals/declarations of commitment by the state planning authorities. After all these stages, the aims of the spatial planning laid down in the spatial structure plans are published and become available to the public. It is to be emphasized that the material contents of the aims of spatial planning consist of long-term, supra-sectoral goals that are directed at improving the spatial and settlement structure as well as sectoral spatial structure goals that are intended to create or safeguard the spatial preconditions for implementing the sectoral policies. [44]

There are five key planning elements of the spatial structure plans that are derived from the aims of spatial planning and are of conceptual and instrumental importance. These planning elements are zones/land-use categories, central-place systems, axes, functions and planning targets, guide values, target values.

1. Zones/land-use categories, with similar structure and intended to pursue similar purposes, include
    a. High density node urban areas characterized by high population density and higher proportion built up areas of the settlement,
    b. Spatial –order zones that are composed of high-density areas and the outlying areas around the rim and areas linked with high levels of commuting between them. Priority is given here to containing urban sprawl, promoting transit-oriented settlement along clearly defined development axes and protection of open spaces between the development axes.
    c. Rural areas comprise all of those areas located outside spatial-order zones and are characterized by the prevalence of a range of development problems. This is particularly true of the so called structurally weak areas which are below the national average in

the living standards and are likely to lag behind the rest of the country.

2. Central – place system is a key instrument of development and is founded on the principle of hierarchy of settlements which ensures the provision of all the required public and private services as well as employment in all parts of the country. The supply of services is based on the hierarchy of the settlements or "central – places". There are three levels of central-places: namely; low-order, intermediate-order and high-order centers. The spatial planners, both at the federal and state levels, have catalogues of levels of infrastructure to be provided corresponding to each of these levels ore hierarchy of the central – places. Moreover, these catalogues also serve as a check list for public-sector planning and reference or guidance for public and private investment.
3. Axis serves as a planning element that is composed two types of axes. The first category is supra-local transport or communication axes which includes a network of transport and supply infrastructure enhancing exchange of goods, service and people, providing locational advantages along the areas they pass, stimulating development and connecting major agglomerations with peripheral areas. The second category is the settlement axes which are intended to promote linear concentration of settlement development that is accessible with public transport and thereby contribute to the development of the desired settlement structure and preservation of open spaces. [9 &44]
4. Functions: These are specific tasks given to the municipalities or regions in accordance with the federal and state – level spatial planning laws governing the territorial and functional division of responsibilities.
   There are two types of functions.
   - The first category includes functions with spatial dimension, namely: nature protection and the conservation of landscapes, agriculture, forestry, water management, regeneration of the air and the climate,

tourism, leisure and recreation and protection of raw-material resources.

- The second functional categories are the municipal functions which are divided into primary and secondary functions. The key functions are: central-place, industrial and commercial, service, residential, agricultural, tourism and recreational functions.

5. Planning targets, guide values and target figures. These are numerical values for a particular planning area expressing the desired or anticipated development of population size, jobs, housing, human settlements and of infrastructure endowment. They provide guidance on common standards to be applied by all public planning agencies and they could either be binding targets, or they may serve simply as guidance for a defined period with certain degree of flexibility. [44]

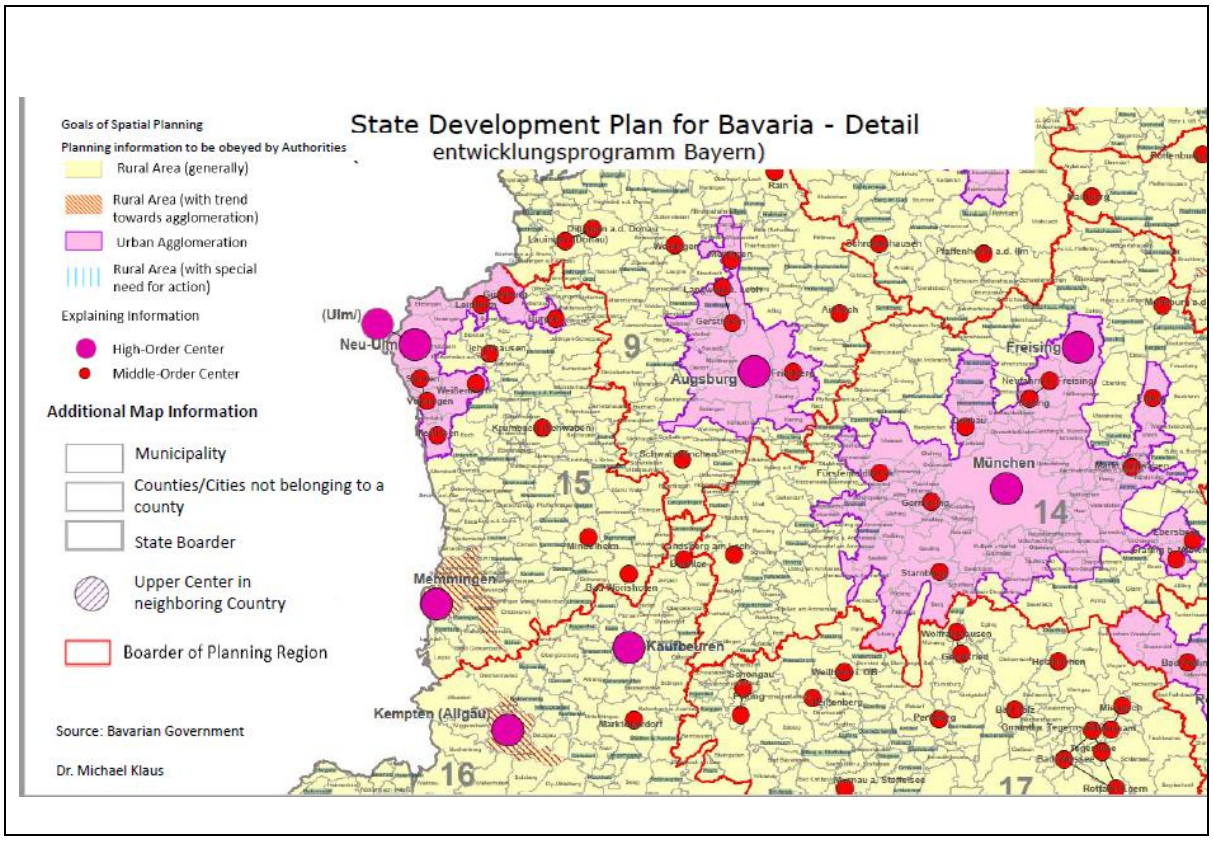


Figure 3: An example of spatial plan at the state level: The example of Bavaria

Regional Planning

Regional planning in Germany is the responsibility of the state and is regulated by the Federal and state spatial planning act. It is intermediate tier of planning covering the section of the territories or regions of the state. It lies between the comprehensive spatial planning at the state level and the local or municipal urban land use planning [44]. However, the spatial planning act does not provide a definition of what a "region is" as this is left to each individual states. Moreover, as there is no commonly agreed definition of the region by planning scholars, the definition and delineation of regions is largely left to political decisions.

Regional planning is regional tier of physical planning. It is derived from the respective the spatial structure of the state and is concerned with broad, supra-local and cross-sectoral, foresighted planning for the spatial and settlement structural development of a region. The size of the planning regions varies from one state to another in Germany and the plans produced are given variety of names: regional plan, regional development plan or area development plan. [9]

There has been recently an amendment to enable the states to produce a new type of spatial planning at a regional level intended for high density nodes or urban areas (metropolitan areas) characterized by spatial connectedness. The new "regional master plans" (Regionalerflächennutuzungsplan) incorporate both regional plans and the preparatory land use plan that is specifically produced jointly by the local authorities that fall in the planning region. The regional master plan, as a component of both regional plan and preparatory land use plan, must be consistent with the spatial planning act of the state and the federal building code respectively. [44].

Regional planning, as a part of state-level planning, falls under the state planning function. However, in terms of actual organization and planning policy, it can be implemented jointly by state and local governments. Accordingly, the spatial planning act provides the states two options for the

organization and administration of regional planning. Regional planning can be implemented either by regional planning associations that consist of municipalities and counties formed for the purpose of regional planning or by the state planning authorities. In the case of administration of regional planning by the state planning authorities, there exists a formal procedure enabling local authorities to participate in regional planning process. [44]

Despite the organizational variations in regional planning across Germany, there are core elements that are common to all regional plans in the country. These are territorial matters as well as settlement structure, open space structure and infrastructure.

The settlement structure that is to be addressed in regional planning is the designation of central places of different hierarchy that are designed to provide different ranges of services, infrastructure and functions to their catchment areas (the so called "decentralized concentration') regardless of their level development and allocation of areas for settlement development.

The open space structure component of regional planning ensures the provision of "habitat and nature conservation, regional, multifunctional green belts, ventilation corridors, local recreation, as well as areas for flood control and the extraction of near surface mineral resources". In terms of infrastructure, regional planning allocates sites and routes for transport infrastructure, location and areas for utility services, for fright handling and wind power plants or adopts for the designation of sectoral plans. [9]

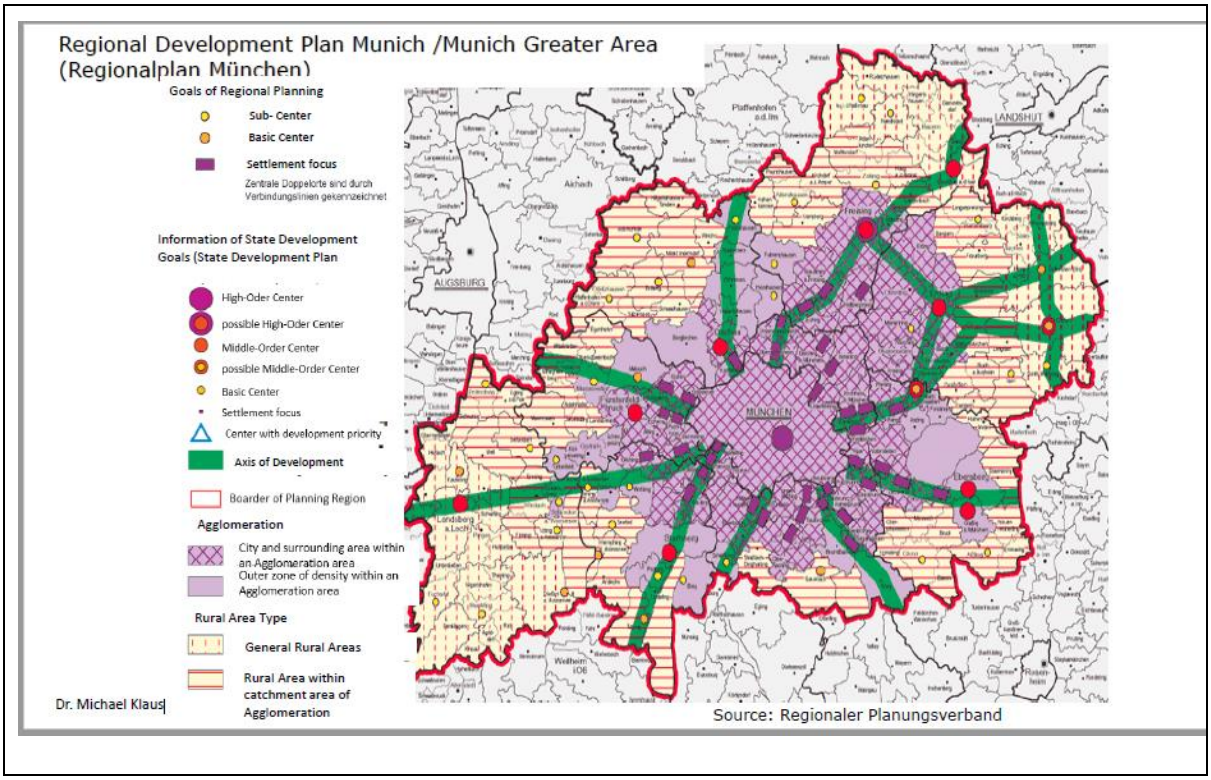


Figure 4: An Example of regional plan: The case of greater area of Munich

Urban Land-Use Planning

In accordance with the federal building code and autonomy given to the municipalities by the constitution, municipalities are empowered to plan the development of their territories through the instrument of urban land use planning. The urban land – use plan must be consistent with the aims of the comprehensive spatial planning set at the state level and regional planning.

Urban land use planning enables the municipalities to prepare and organize the use of plots in the entire municipality for building and other types of uses specified in the federal building code. The urban land use plans should ensure socially equitable use of land for the common good of the community and in line with the principles of sustainable development, contribute to securing an environment fit for human beings and protect and develop the natural foundation of Life [44].

Urban land use planning has the power to assign areas of land for specific uses (such as residential uses, uses for public uses), impose restrictions (such as maximum proportions of plots to be used for construction, maximum number

of floors/stories), attach preconditions (such as fixing proportion of dwellings for certain social groups) and setting measures to be taken before certain use is allowed (such as noise insulation). [44]

Urban land – use planning has two stages and hence two instruments. These two planning stages/instruments are the preparatory land-use plan [16] (Flächennutzungsplan – FNP) and the binding land-use plan (Bebauungsplan – B-Plan).

The preparatory land–use planning (or zoning plan) is the first stage of urban land-use planning. The plan covers the entire municipal territory. It is intended to enhance urban development with the municipality while at the same time safeguarding the foreseeable needs of the municipality. Therefore, the plan outlines the use to which land is to be put to meet the current and the foreseeable needs of the community in keeping with the spatial planning and development goals of the municipality. The plan has no direct legal rights but is only binding for public authorities (or the planning authorities) but not to other parties. [44]

The binding land-use plan, known as the "local development plan", is prepared by municipalities or planning authorities for a section of the municipal territory requiring planning interventions and is authorized by local parliament. It must be developed on the basis of the preparatory land-use plan. The local development plan is adopted by the municipal council in form of by-law and is legally binding not only to public authorities but also to the general public as it forms the legal basis for granting or denying construction permits. It contains legally binding directives on urban development and structure as well as other related measures, such as land assembly, expropriation and urban redevelopment. [44]

The two municipal plans are similar in a sense that both adhere to the basic principles of planning and procedures and are different in terms of the size of

[16] A preparatory land-use plan for a region can be produced by regional authority if member municipalities falling within region agree to do so.

the plan area, the degree of concrete and specific details of the plan contents, legal status and legal effects.

The building code governs the possible planning elements to be included in both the preparatory and bind land – use plans. These are listed in specific sections of the building code. [9]

Accordingly, the planning elements to be included in the preparatory land – use plan are:

1. The areas designated for development in terms of general types of use, specific types of use and the general density of built use ,
2. Facilities and infrastructure for the public and private provision of goods and services, in particular public amenities and facilities serving the community such as schools, churches, and health, cultural, and social facilities,
3. Land for supra-local and local transport,
4. Land for utilities,
5. Green and open spaces, sports and recreation areas,
6. Areas where uses are restricted on environmental protection grounds,
7. Water bodies, ports and harbors, as well as areas for water management, flood control, and drainage,
8. Areas for filling, excavation, and the extraction of mineral resources,
9. Agricultural land, forest and woodland areas,
10. Areas for measures to protect, preserve, and develop the natural environment and landscape.

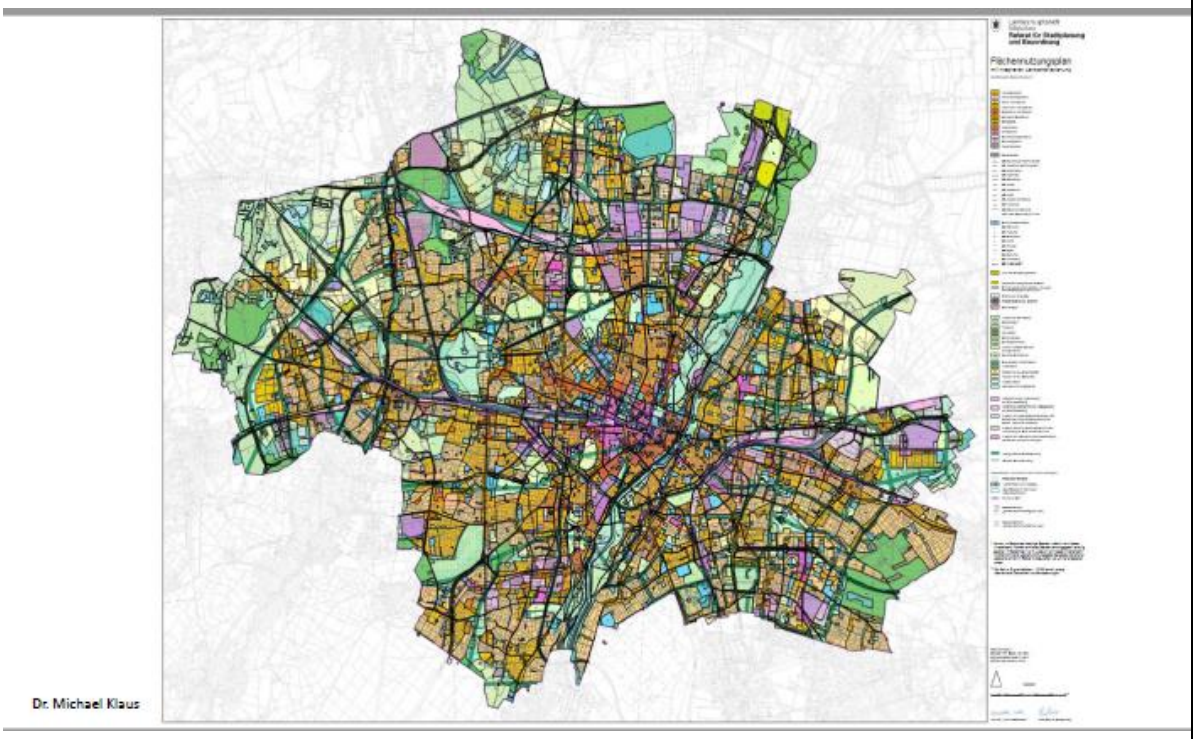
On the other hand, the binding land-use plan determines:

1. Category and intensity of built use,
2. The type of development, lot coverage, and positioning of physical structures,

3. Land for ancillary structures,
4. Traffic areas and special purpose traffic areas,
5. Service areas,
6. Areas for waste disposal and drainage, including the retention and seepage of rainwater,
7. Public and private green spaces,
8. Water bodies,
9. Agricultural and forest areas,
10. Incineration bans (plants) and the use of renewable energies,
11. Protected areas and pollution control,
12. Planting and care of trees, shrubs and greenery of any other kind,
13. The setting of time-limits and conditions for designations on special urban development grounds.

The descriptions of the preparatory land-use plan and the designations of the binding land use plan can be given in graphic or textual form which is specified in the "Plan Notation Ordinance", which applies throughout Germany. The ordinance lays down the details for graphic representation and designation. The following maps show the planning elements generally addressed in preparatory land-use plan (Flächennutzungsplan – FNP) and the binding land-use plan (Bebauungsplan – B-Plan).

Preparatory Land – Use Plan



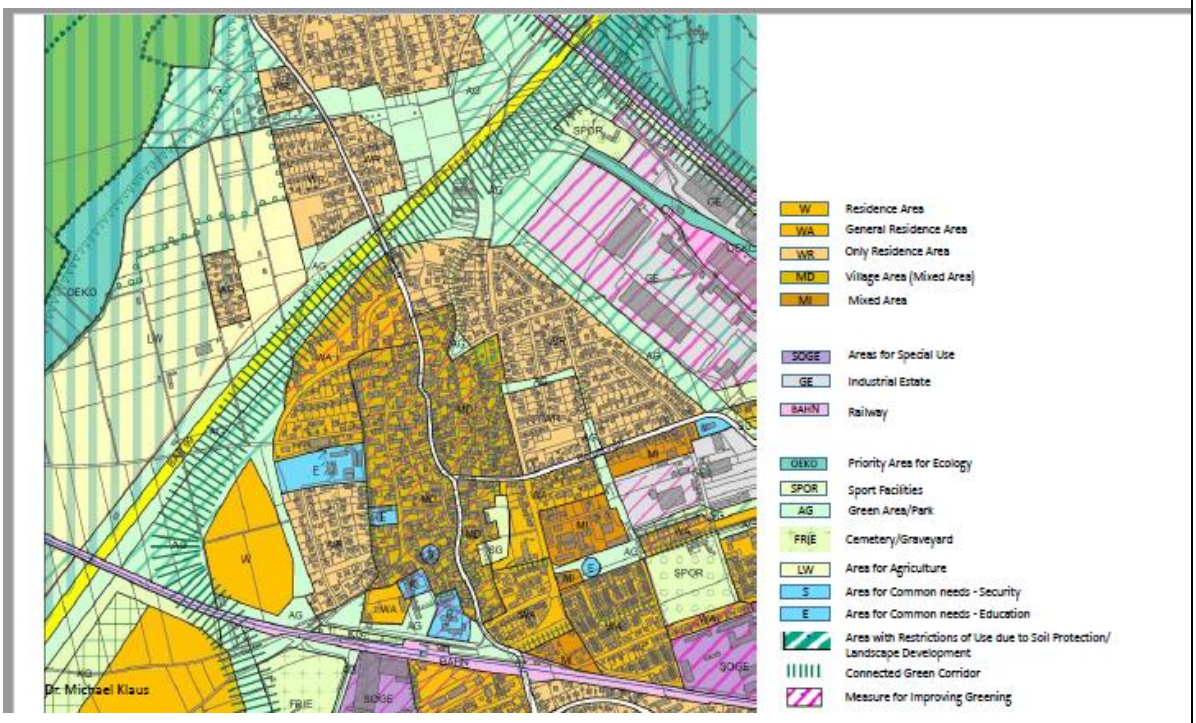


Figure 5: Preparatory land use plan: An example

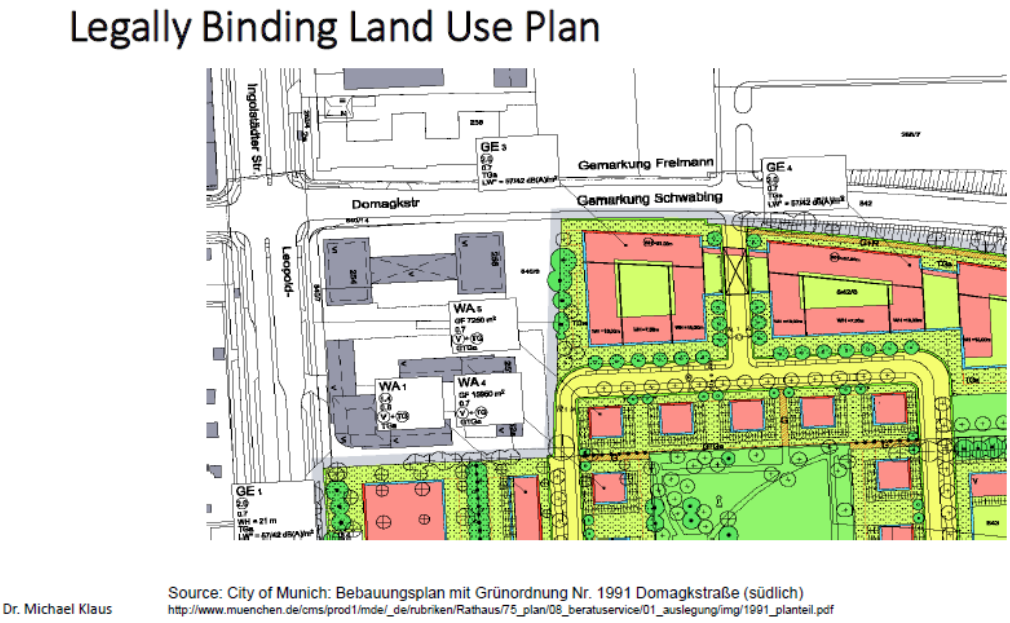


Figure 6: Legally binding land use plan: An example

4.2 Key Lessons for Spatial Planning to Ethiopia

The German case study in spatial planning offers several key lessons and insights that are applicable to spatial planning in Ethiopia.

- **Integrated Approach**
  - Adopt an integrated approach that considers the social, economic, environmental, and cultural dimensions of spatial planning. Integration ensures that planning decisions are comprehensive and account for associated sectors, multiple factors and perspectives.
- **Stakeholder Engagement**
  - Emphasize meaningful and inclusive stakeholder engagement throughout the planning process. Involving diverse stakeholders, such as local communities, civil society organizations, and the private sector, fosters ownership, inclusivity, and accountability.
- **Adaptive Planning**
  - Implement adaptive planning strategies that allow for flexibility and responsiveness to changing circumstances and emerging

challenges. Adaptive planning enables adjustments and refinements to plans as new information and circumstances arise.

- **Sustainability Principles**
  - Integrate sustainability principles into spatial planning, with a focus on resource efficiency, environmental conservation, and social equity.
- **Knowledge and Data-driven Decision Making:**
  - Strengthen data collection, analysis, and management systems to support evidence-based decision making. Access to reliable and up-to-date data enables informed planning decisions, facilitates monitoring and evaluation, and improves the effectiveness of interventions.

5. Experiences, Challenges, and Relevance of Spatial Planning in Ethiopia

The section provides a review of the spatial planning experiences discusses challenges and concludes with forwarding recommendations in spatial planning in light of the global experience.

5.1 An Overview of Spatial Planning in Ethiopia

Spatial planning in Ethiopia has a rich historical background that has evolved over time to address the country's urban and regional development needs. The earliest initiatives can be traced back to the early 20th century when urban planning departments were established in major cities like Addis Ababa and Dire Dawa. However, it wasn't until the 1960's that formal spatial planning policies and regulations were introduced.

During the imperial era, the Addis Ababa Master Plan of 1963 marked a significant milestone in urban development planning in Ethiopia. This plan aimed to guide the growth and development of the capital city, taking into account various factors such as population growth, infrastructure needs, and environmental considerations. In subsequent years, regional planning bureaus were established in the 1980's, expanding spatial planning initiatives across the country.

Spatial planning in Ethiopia has emerged as a significant tool for addressing the complexities and challenges associated with rapid urbanization, land management, and sustainable development. The country has undertaken notable efforts to incorporate spatial planning principles into its development policies and practices, reflecting a growing recognition of the importance of holistic and integrated approaches to land use management.

5.1.1 Growth and Transformations Plans

One prominent experience in spatial planning in Ethiopia lies in the formulation and implementation of the Growth and Transformation Plans (GTP's) of Ethiopia from 2010 to 2020 have four key foci regarding urban development [27 & 30]:

- **Enhancing the capacity of urban governments**
    - The GTPs have focused on strengthening the capacity of urban governments to plan, manage, and deliver urban services. This has included providing training and technical assistance to urban officials and strengthening the financial and institutional capacity of local governments.
- **Improving urban infrastructure**
    - The GTP's have invested in improving urban infrastructure, such as roads, water supply, and sanitation. This has helped to improve the quality of life of urban residents and has made cities more attractive to businesses and investors.
- **Expanding access to basic services**
    - The GTP's have also focused on expanding access to basic services, such as education, healthcare, and social protection, in urban areas. This has helped to improve the well-being of urban residents, particularly the poor and vulnerable.
- **Promoting sustainable urban development**
    - The GTP's have also emphasized the importance of sustainable urban development. This has included promoting green cities, climate-resilient cities, and inclusive cities.

These comprehensive plans outline the country's development objectives, strategies, and sectoral priorities, with a particular emphasis on achieving spatially balanced growth, equitable resource allocation, and sustainable urbanization. The GTP's have served as guiding frameworks for spatial development at both national and regional levels, facilitating targeted investments in infrastructure, housing, and services in urban and rural areas alike.

5.1.2 Ten Years Development Plan: A Pathway to Prosperity

The long term ten years development plan of Ethiopia for the period 2021 – 2030, entitled as "Ten Year Development Plan: A Pathway to Prosperity, 2021-2030" [36] envisages making the country "African beacon of prosperity"

through creating the necessary condition for achieving all rounded prosperity. The plan distinguishes three categories of focus areas, namely:

1. Productive sectors: agriculture, manufacturing, mining
2. Service sector: tourism
3. Enabling sectors: energy, transport, sustainable finance, innovation and technology, urban development, irrigation, human capital development

Important form the perspective of spatial planning is urban development plan. According to this ten years development plan, the main objectives of the urban development plan are to develop cities/towns in a way that facilitates the development of both urban and rural areas in a coordinated manner; to create a system by which cities/towns are managed in a participatory and decentralized way; to create job opportunities; to make residential areas conducive for living by designing an efficient system of land and housing provision; to develop integrated and standard infrastructure and services; to improve greening and sanitation services so that cities/towns are loveable and resilient to economic, social, environmental and ecological shocks. It highlights the following key objectives of the urban development plan [36]:

- **Coordinated development of urban and rural areas**:
  - The plan seeks to ensure that the development of cities and towns is coordinated with the development of rural areas. This is important to ensure that the benefits of urbanization are shared by all segments of society, and that rural areas are not neglected.
- **Participatory and decentralized management**
  - The plan emphasizes the importance of participatory and decentralized management of urban development. This means that local communities should be involved in the planning and implementation of urban development projects.
- **Job creation**
  - The plan aims to create jobs in urban areas. This is important to reduce poverty and inequality, and to make cities more livable.

- **Housing**
    - The plan seeks to provide affordable housing in urban areas as well. This is important to ensure that everyone has access to decent housing.
- **Infrastructure**
    - The plan aims to develop integrated and standard infrastructure and services in urban areas. This is important to improve the quality of life in cities and to make them more resilient to shocks.
- **Greening and sanitation**
    - The plan also emphasizes the importance of greening and sanitation in urban areas. This is important to improve the environment and to make cities more livable.

The urban development plan, in the framework of the 10-year development plan, is a comprehensive and ambitious plan that aims to address the challenges of urbanization in Ethiopia and to achieve the above broad objectives; it has set different targets to achieve these objectives. A look at these targets, reveal the importance of urban planning/spatial planning in achieving the objectives. The overall trend of urban plan shall be based on national and regional development plans and aims at strengthening rural-urban linkages, inter-urban linkages and the integration of development plan and land use. The essence of urban plan is ensuring rapid and equitable development that specifying and co-coordinating the role to be played by the governments, investors and the public. The plan should ensure broad participation and mutual benefits of the three organs through continuous consultation forums to be created. The plan should also ensure that the public will become the owners of the works to be done. [36]

The ten years national plan has identified implementation strategies. One of these strategies stresses the importance of balanced regional and local development and competitiveness. It points that though development plans implemented in the previous periods at regional and local levels were based on the national development plan, these plans lack national implementation

mechanisms to ensure alignment and consistency of lower levels plans with the national development plan. The failure of successful implementation of national plans at local levels is attributed to lack of capacity in plan preparation process, weak implementation, and monitoring and evaluation system and financial shortfalls. The ten years plan aims at enhancing investment flows and infrastructure development that are directed at utilizing the country's natural and human resources in line with regional and local development plans. This approach will facilitate the implementation of national development goals which will be internally consistent within a regionally and locally development goals. However, the details of the implementation modalities of the national planning sectoral at regional and local levels goals including the spatial planning and legal frameworks are yet to be worked out. [36]

5.1.3 National Urban Development Spatial Plan

Currently, spatial planning policies in Ethiopia are guided by the National Urban Development Spatial Plan (NUDSP) issued by the Ministry of Urban Development and Construction in 2016. [8] It is a comprehensive assessment of the country's urban development, which identifies the key challenges and opportunities facing Ethiopia's urban areas and proposes a set of strategic interventions to address them. The vision for Ethiopia's Urban Future (2035) addresses the location, size and function of key urban settlements across the country in 2035, how they are linked together and how they interact with their hinterlands, and more generally how the development and functioning of the urban sector can promote the achievement of national development goals. Three scenarios for future spatial organization and functioning of the urban sector, namely corridor development urban, dispersed urban scenario and polycentric urban scenario were assessed and compared. Among the three scenarios, the polycentric scenario is found to the best in achieving country's urban policy objective of bringing about balanced and equitable urban and regional development, reducing the primacy of Addis Ababa and increasing agricultural productivity by linking it with industrialization and urbanization.

The NUDSP provides a comprehensive framework for urban and regional development, emphasizing sustainable urban development and land use, inclusive and participatory urban development, and climate-resilient urban development. It encourages the integration of spatial planning principles into regional and local planning processes and promotes participatory decision-making.

The vision is to be implemented in three consecutive stages over a period of 20 years. The initial stage will involve the development of metropolitan and major secondary urban clusters, moving through the second stage of accelerated development of the remaining secondary urban centers and finally to the stage of accelerated development of hinterlands of all identified clusters, taking 5, 9 and 11 years respectively for completion. The achievement of NUSDP vision 2035 rests on the preparation proposed a set of spatial plans (or urban and regional plans) for different hierarchies of urban areas and rural centers that ranges from regional urban development spatial plans of large urban agglomerations through urban cluster spatial plans, structure plans, strategic plans, basic plans and development schemes or plans for rural centers. [8]

5.1.4 Regional Development Spatial Plan

At present there is a project underway for preparing the Regional Development Spatial Plans (RDSP) fro each of the Ten Regional States. The RDSP will cover the period from 2022-2040 corresponding to the planning period of National Urban Development Spatial Plan (NUDSP). The RDSP will be aligned with the NUDSP is directed at improving intra-region urban and rural cluster development and connectivity, promoting development of secondary cities based on their potentials, and ensuring sustainable development and protect ecological assets. It will ensure the functional hierarchies and interconnected urban systems of each region as set in the NUDSP and align itself to the existing spatial planning instruments including the city-wide structure plans and the NUDSP so as to fill in the gap of spatial planning

information at the regional level and guide more balanced, integrated and sustainable spatial development.[28]

The plan preparation for each of the states will consider the regional context, emerging national and regional strategic directions, principles and polices. It is intended to be participatory engaging all stakeholders that will include the federal government and its organizations, the respective regional government and its bureaus and agencies, local governments, civil society organizations, business associations, the general public at large, as well as experts in urban planning and urban development. The output will be a regional development spatial plan that will ensure efficiency in land-use, strategic regional infrastructure network, settlement growth planning. It will also include implementation strategies of the regional development spatial plan. [28]

Finally, Ethiopia has been engaged on the preparation and implementation of spatial plans at various scales for a number of years now. The formulation of master and structure plans for cities and towns, regional development plans, and corridor development plans has played a crucial role in guiding urban growth, protecting agricultural lands, and fostering balanced regional development. These spatial plans aim to ensure efficient land use, facilitate strategic infrastructure development, and promote economic opportunities, all while taking into consideration environmental conservation and social inclusivity. Despite the existence of spatial planning policies, their effective implementation faces several challenges. Limited institutional capacity, including a shortage of trained professionals and financial resources, hinders the execution of spatial planning initiatives. Inconsistencies and gaps in legislation and coordination between different levels of government also pose obstacles to the smooth implementation of spatial planning policies.

5.2 Challenges in Spatial Planning

Despite the progress made in spatial planning, Ethiopia faces several challenges that impede its effective implementation:

- **Institutional Capacity**

- The successful implementation of spatial planning necessitates robust institutional capacity and technical expertise. However, Ethiopia often grapples with limited human resources in terms of qualified planners, GIS specialists, and other professionals well-versed in spatial analysis and planning techniques. Strengthening institutional capacity through targeted training programs, knowledge exchange initiatives, and collaborations with academic institutions and international partners is imperative to overcome this challenge.

- **Data Availability and Quality**
  - Accurate and up-to-date data is the backbone of effective spatial planning. Unfortunately, Ethiopia continues to face challenges related to data availability and quality. Inadequate data on land cover, land use patterns, population dynamics, infrastructure networks, and environmental indicators hampers comprehensive analysis and evidence-based decision-making. Efforts should be directed towards enhancing data collection methodologies, establishing robust data management systems, and promoting data sharing and accessibility among relevant stakeholders.
- **Limited Stakeholder Engagement**
  - Meaningful stakeholder engagement is crucial for the success of spatial planning initiatives. However, Ethiopia often experiences limited awareness, low levels of participation, and inadequate collaboration among communities, interest groups, and civil society organizations. These factors undermine the inclusivity and effectiveness of spatial planning processes, as they fail to capture diverse perspectives and local knowledge. Encouraging active participation, fostering dialogue through public consultations and participatory workshops, and integrating local aspirations and

traditional practices into planning efforts are pivotal steps in addressing this challenge.

- **Enforcement and Compliance**
  - Ensuring the enforcement and compliance of spatial plans and regulations poses a significant challenge in Ethiopia. Inconsistent implementation, weak enforcement mechanisms, and non-compliance with planning regulations contribute to haphazard urban expansion, land fragmentation, and unsustainable development practices. To tackle this challenge, efforts should focus on strengthening regulatory frameworks, enhancing monitoring and enforcement mechanisms, and raising awareness among stakeholders about the importance of adhering to spatial planning guidelines and regulations.

5.3 Relevance of Spatial Planning in Ethiopia

Spatial planning is highly relevant for addressing the development goals of Ethiopia. The country faces significant challenges related to rapid urbanization, land degradation, inadequate infrastructure, and regional imbalances. Spatial planning offers a comprehensive and integrated approach to address these challenges and achieve sustainable and inclusive development.

Firstly, spatial planning helps guide urban growth and manage urbanization processes. By promoting compact and well-designed cities, spatial planning can optimize land use, minimize urban sprawl, and ensure the efficient provision of infrastructure and services. It enables the creation of livable and resilient urban environments that enhance the quality of life for urban residents.

Secondly, spatial planning contributes to sustainable land management and environmental conservation. It helps identify and protect valuable natural resources, biodiversity hotspots, and sensitive ecosystems. Through land use zoning, environmental impact assessment, and sustainable land management

practices, spatial planning minimizes negative environmental impacts and promotes the sustainable use of land resources.

Thirdly, spatial planning plays a crucial role in promoting regional balance and reducing regional disparities. By guiding investment and development activities across different regions, spatial planning aims to achieve equitable distribution of resources, economic opportunities, and social services. It supports the creation of vibrant and sustainable rural areas, enhancing the livelihoods of rural communities and reducing migration pressures.

Furthermore, spatial planning aligns with Ethiopia's national development strategies, such as the GTP's and the Sustainable Development Goals (SDG's). It provides a framework for translating these goals into actionable spatial plans and strategies, ensuring their effective implementation at the local and regional levels.

Spatial planning holds immense relevance within the Ethiopian context, aligning with the country's development aspirations and offering viable solutions to address various challenges. Ethiopia's rapid urbanization, burgeoning population, and increasing demand for infrastructure and services necessitate effective land management and coordinated spatial development.

Spatial planning provides a comprehensive framework to tackle these challenges by promoting efficient land use, guiding urban growth, and ensuring equitable distribution of resources and services. By integrating social, economic, and environmental considerations, spatial planning can facilitate the development of inclusive and resilient cities, protect valuable natural resources, and enhance the overall quality of life for all Ethiopians.

Moreover, spatial planning aligns seamlessly with Ethiopia's national policies and strategies, including the Growth and Transformation Plans, the Sustainable Development Goals (SDG's), and the Climate Resilient Green Economy Strategy.

In conclusion, Ethiopia has made commendable progress in embracing spatial planning as a vital instrument for sustainable development. By capitalizing on its experiences, addressing the identified challenges, and recognizing the significance of spatial planning, Ethiopia can effectively harness the benefits of this approach to guide its urban and regional development, promote sustainable land management practices, and ultimately improve the well-being and prosperity of its citizens.

5.4 Current State and Implementation of Spatial Planning Policies

As a basic policy and plan document guiding urban/spatial development, at present the National Urban Development Spatial Plan (NUDSP) provides a comprehensive framework for spatial planning, emphasizing sustainable development, social inclusion, and environmental protection. It encourages the integration of spatial planning principles into regional and local planning processes and promotes participatory decision-making. [8]

Despite the existence of spatial planning policies, their effective implementation faces several challenges. Limited institutional capacity, including a shortage of trained professionals and financial resources, hinders the execution of spatial planning initiatives. Inconsistencies and gaps in legislation and coordination between different levels of government also pose obstacles to the smooth implementation of spatial planning policies.

5.5 Case Study of Spatial Planning in Ethiopia

Addis Ababa, as the primate, capital and largest city of Ethiopia, is experiencing formidable spatial planning challenges due to rapid urbanization and population growth. The city has gone through a number of urban plans since its establishment in 1880's. One notable example is the Addis Ababa master plan 1986 under the framework of Ethio-Italian technical cooperation with Ethiopian and Italian professionals. It was indeed the last detailed master plan during the period as it was the most exhaustive and detailed master plan the city ever had and was designed to guide the development of the city for 20 years [4]. However, for a number of reasons, the plan was never

implemented. The city government in 1998 established an office to revise the 1986 master plan. It adopted a new approach, the so called "Structural and Action Oriented Strategic Planning" to guide the spatial development the city for ten years period extending to 2010. This approach was a divorce from the traditional detailed master or comprehensive planning approach of the past. The plan was then revised and was then intended to guide the city's development for the period 2013-2023. However, the plan, because of conflicting interests with Oromia regional government regarding the planning and management of issues spilling over the city's boundary, the plan was forced to be revised and currently Addis Ababa is guided by the structure plan 2017-2027. [2]

This structure plan is the tenth development plan for the city. The plan aims to guide the sustainable growth of the capital city, addressing urbanization challenges, and promoting economic development. Furthermore, the plan aims to promote compact, efficient, and sustainable urban growth, enhance transportation systems, and ensure equitable access to services and amenities for all residents. It focuses on improving transportation infrastructure, expanding housing options and providing essential services while preserving green spaces and protecting natural resources. The plan incorporates principles of compact city design, mixed land-use development, and efficient public transportation systems. By integrating various sectors and stakeholders, the plan aims to create a more inclusive and sustainable urban environment for the residents of Addis Ababa. [2]

Case studies in spatial planning demonstrate the tangible benefits of spatial planning in addressing specific development challenges and achieving sustainable outcomes. They exemplify the importance of hierarchical and yet integrated spatial planning that is guided by national, regional and local planning laws, transparency and active stakeholder engagement, and coordination between different sectors and levels of government. By learning from these experiences, Ethiopia can further enhance its spatial planning practices and contribute to its developmental aspirations. The overall trend of

spatial plans shall be based on national and regional development plans and aims at strengthening rural-urban linkages, inter-urban linkages and the integration of development plan and land use at different spatial levels. Finally, a spatial plan should ensure broad participation and mutual benefits of the governments, investors and the public through continuous consultation forums to be created. The plan should also ensure that the public will become the owners of the works to be done.

5.6 Challenges and Limitations Faced in Spatial Planning

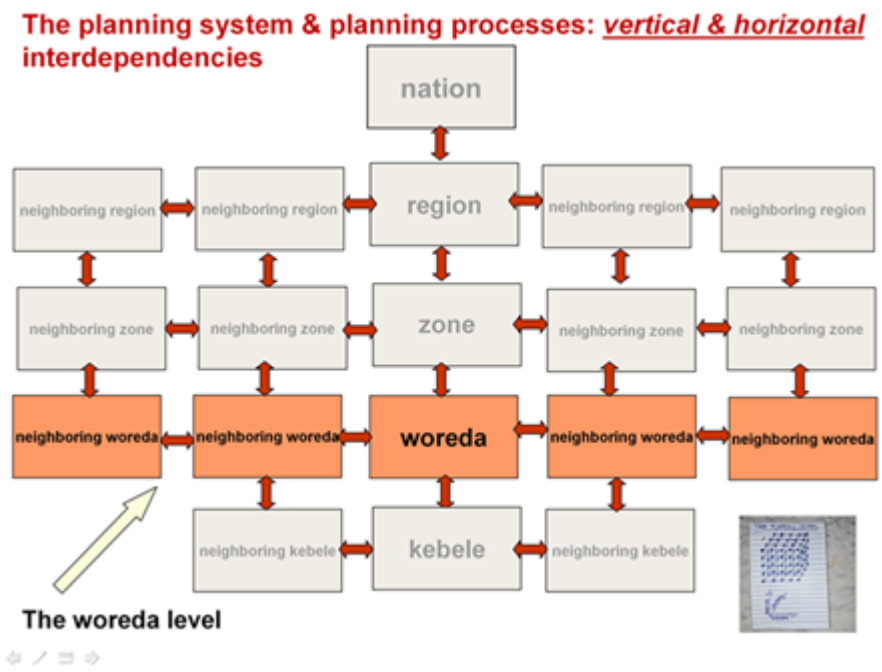
Spatial planning in Ethiopia encounters several challenges and limitations that hinder its effectiveness. Prominent among them are:

- **Limited Data Availability**:
  - Access to accurate and up-to-date data, particularly at the local level, is essential for evidence-based decision-making in spatial planning. However, data collection and management systems are often inadequate, making it difficult to obtain comprehensive information for spatial analysis and planning.
- **Institutional Capacity and Coordination**
  - Insufficient institutional capacity, including a lack of skilled planners and inadequate coordination between different government entities, undermines the effective implementation of spatial planning initiatives. Strengthening institutions and establishing coordination mechanisms are crucial for successful spatial planning.
- **Rapid Urbanization and Informal Settlements**
  - The rapid pace of urbanization in Ethiopia, coupled with the prevalence of informal settlements, presents challenges to spatial planning. The informal nature of these settlements makes it difficult to integrate them into formal planning processes, leading to issues of land tenure, service provision, and infrastructure development.

5.7 Key Recommendations for Spatial Planning in Ethiopia

To strengthen spatial planning in Ethiopia, several key recommendations can be considered:

- **Capacity Building**
  - Enhance the capacity of planning institutions at all levels through training programs, knowledge sharing, and technical support. This includes developing skills in data collection and analysis, spatial modeling, and participatory planning approaches.
- **Legislative Reforms**
  - Review and update existing legislation to create a comprehensive and coherent legal framework for spatial planning. Clarify roles and responsibilities of different government entities, streamline approval processes, and address gaps in the regulatory framework.
- **Stakeholder Engagement**
  - Promote active participation and engagement of communities, civil society organizations, private sector actors, and academia in the spatial planning process. Foster inclusive decision-making processes, incorporate local knowledge and aspirations, and ensure transparency and accountability.
- **Establishing/ Strengthening of a horizontally and vertically well-coordinated and sectorwise** well integrated overall planning (system) for national and regional spatial planning, urban and rural land use planning with clearly defined objectives, rules and contents related to the respective territorial unit (e.g. nation, region, zone, woreda, kebele) as shown in the Figure below.



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- **Development of a national spatial framework** - framing the existing regional legislations and not contradicting them - which emphasizes on a better and earlier cooperation and coordination of the main key actors (especially all relevant administrative sectors & public agencies- responsible for the public needs and interests at the respective regional and Woreda levels; in addition especially civil society & citizens and private businesses etc. at the Woreda level, to establish reliable, legally secure land use plans, especially and properly defining land as:
  - Areas for urban development (urban and peri-urban areas)
  - Areas to be kept free from urban development as a base for: agricultural development, forestry development, other open space uses and functions and thereby dealing as a legal and reliable base for future responsible land investments.
- **Legislative framework- especially to consider**:
  - Objectives of federal spatial planning as precondition which need to be considered for regional spatial planning.

[17] Mayer, Ralf Gerhard (GIZ- PILUP Project)

- Objectives of regional spatial planning as precondition which need to be considered for rural and urban Land Use Planning at Woreda level.
- -Minimum content of regional spatial plans: axis, central places, matrices of functions), main functions of bigger settlement areas (especially of central places), upper limits for space consumption defined in respective regional plans as frame especially for residential and industrial development at Woreda Level, also as a base to derive prioritization of projects with spatial relevance.
- List all stakeholders (public agencies/ public authorities/ who need to get included in each respective planning level procedure which deal with public needs/ public issues/ public interests or list the public needs/ public issues/ public interests themselves in the respective federal and regional law
- Define the process of stakeholders participation (procedure, time limits, provisioning of necessary information) through incorporation/ embedding in federal law and respective regional laws.
- Define the procedure of an ensured citizens' participation at the local level (procedure, time limits, provisioning of necessary information) whilst applying a Human Rights Based Approach and Gender Transformative Appoach in the sense of leave no-one be-hind and embed those instructions for action in the federal law and respective regional laws.
- Define how duly collecting and weighing of public and private interests should be carried out and embed these instructions for action in the federal law and respective regional laws.
- Include the "neighbours" and let them participate at each planning level of the respective planning entity in the planning procedure (neighbouring Kebels, neighbouring Woredas, and

neighbouring regions). Embed those instructions for action in the federal law and respective regional laws).

- Develop/ revise/ establish adequate regulations at federal and respective regional levels, e.g.:
  - ✓ State Planning Act as scope at the federal level, Land Use Ordinance (Baunutzungsverordnung) (as scope at the Federal level)
  - ✓ Notation symbol Ordinance (as scope at the Federal level) (Planzeichenverordnung)
  - ✓ Building ordinances for the respective regions

➢ **Monitoring and Evaluation**

- Establish robust monitoring and evaluation mechanisms to assess the effectiveness of spatial planning policies and interventions. Regularly review and update plans based on monitoring results and feedback from stakeholders, enabling adaptive management and continuous improvement.

By implementing these recommendations, Ethiopia can enhance the relevance and effectiveness of spatial planning, leading to sustainable and inclusive urban and regional development.

6 Conclusion

6.1 Summary of Key Findings

This paper has provided a comprehensive examination of spatial planning in Ethiopia, focusing on its concepts, features, challenges, and relevance. The analysis has shed light on the experiences and initiatives undertaken in Ethiopia, while also drawing valuable lessons from successful international examples. The findings highlight the significance of long-term vision, integrated approaches, stakeholder engagement, institutional capacity building, and the incorporation of sustainability principles in spatial planning. These key findings serve as a foundation for guiding future spatial planning efforts in Ethiopia.

However, the implementation of spatial planning in Ethiopia faces several challenges. Limited institutional capacity remains a significant barrier, with a need for training and education programs to enhance the skills and knowledge of planning professionals. Insufficient data availability and quality pose further obstacles, calling for improvements in data collection systems, the establishment of spatial data infrastructure, and the integration of Geographic Information Systems (GIS) and remote sensing technologies. Additionally, weak stakeholder engagement and limited enforcement mechanisms hinder the effective implementation of spatial plans, highlighting the necessity for participatory approaches and governance structures that promote inclusive decision-making and accountability.

The key findings discussed in this paper have important implications for the future of spatial planning in Ethiopia. These implications guide the formulation of strategies and actions necessary to overcome the existing challenges and achieve sustainable and inclusive development outcomes.

Firstly, it is imperative to strengthen the institutional capacity for spatial planning in Ethiopia. This involves investing in training and education programs to enhance the skills and competencies of planning professionals. By equipping

them with the necessary tools and knowledge, Ethiopia can build a capable workforce capable of effectively formulating and implementing spatial plans.

Secondly, it imperative to develop a comprehensive national spatial planning framework: Ethiopia should establish a national spatial planning framework that sets out the vision, objectives, and strategies for spatial development encompassing as well rural development. This framework should align with national development goals and provide guidance for regional and local planning initiatives. It should also emphasize the integration of sustainability principles, stakeholder engagement, and adaptive management approaches.

Additionally, establishing coordination mechanisms between different levels of government and planning institutions is crucial for fostering collaboration and ensuring coherent and integrated spatial planning practices.

Furthermore, enhancing data availability and quality is essential for evidence-based decision-making in spatial planning. Ethiopia should focus on improving data collection methods, enhancing data management systems, and establishing mechanisms for data sharing and integration. By doing so, planners will have access to accurate and up-to-date information, enabling them to make informed decisions and develop spatial plans that address the unique characteristics and challenges of each region.

Promoting stakeholder engagement and participation is another critical implication for future spatial planning in Ethiopia. Inclusive decision-making processes that involve local communities, civil society organizations, and the private sector foster a sense of ownership and ensure that the diverse perspectives and aspirations of stakeholders are taken into account. Public consultations, community workshops, and the utilization of online platforms for engagement and feedback can facilitate meaningful participation, leading to more socially and politically acceptable spatial plans.

Integrating sustainability principles into spatial planning practices is paramount for addressing the environmental and social challenges faced by Ethiopia. This

includes promoting compact city designs that optimize land use, encourage mixed land-use development, and reduce urban sprawl. Sustainable transportation systems, such as prioritizing public transportation and non-motorized modes of transport and promoting transit-oriented development, can enhance mobility and reduce congestion and carbon emissions. Furthermore, incorporating green infrastructure, such as parks, urban forests, and sustainable water management practices, can improve environmental quality and enhance resilience to climate change impacts.

Finally a mechanism should be developed to monitor and evaluate spatial plans. Regular monitoring and evaluation of spatial plans are crucial to assess their effectiveness and identify areas for improvement. Establishing mechanisms for ongoing monitoring and evaluation will enable adaptive management and ensure that spatial plans remain responsive to changing needs and circumstances. Monitoring should encompass aspects such as land use changes, infrastructure development, environmental impacts, and social equity considerations.

By considering these recommendations, Ethiopia can strengthen its spatial planning practices, achieve more sustainable and inclusive spatial development outcomes, and effectively address the complex challenges associated with urbanization and urban sprawl, economic growth, poverty, unemployment and environmental sustainability. Spatial planning has the potential to shape Ethiopia's future, providing a roadmap for balanced and harmonious spatial development that is in harmony with the national, regional and local government structures and responsibilities and ensuring mutual benefits for all actors.

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