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Land Use and Spatial Planning

Enabling Sustainable Management of Land Resources

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Preface

Competition for land is increasing as demand for multiple land uses and ecosystem services rises. Pressures for the conversion of agricultural land to other uses such as reforestation and biofuels are raising underpinned by issues related to food security, renewable energy, and emerging carbon markets. This is happening in tandem with greater demands from land systems for the supply of ecosystem services (provisioning, regulating, supporting, and cultural). Managing increasing competition for the supply of these services while accounting for different stakeholders' interests requires efficient allocation of land resources. Land use planning can aid in finding a balance among competing and sometimes contradictory uses, while promoting sustainable land use options.

This Brief identifies and discusses evidence of land use planning, spatial planning, territorial (or regional) planning, and ecosystem-based or environmental land use planning as tools that can strengthen land governance, improve economic opportunities based on sustainable management of land resources, and develop land use options that reconcile conservation and development objectives.

Case studies analyzed show that as process and/or instrument, spatial and land use planning can contribute to sustainable land management (SLM) through, inter alia, protecting natural capital, including lands of agricultural significance from urban and peri-urban encroachment; ensuring land use reflects land capability or land suitability; preventing or limiting vegetation clearing; avoiding the occurrence, and/or planning for the rehabilitation, of degraded land and contaminated sites; promoting conservation and enhancement of ecological corridors; and accounting for sea-level rise and increased storm surge, arising from coastal development (Australia 2008, 2011, 2013).

Land use planning can also contribute to protecting the quality and quantity of freshwater resources, to enhancing management of areas prone to natural disasters (e.g., floodplains), and to protecting natural habitats from destruction and fragmentation. In areas of communal land tenure, land use planning assists in the sustainable management of rangelands, inter alia, resolving issues related to competing land uses and land tenure conflicts, and strengthening land governance.

The main policy messages arising from this Brief are:

1. Comprehensive land use planning is an instrument for sustainable land management, concurrently advancing sustainable development (Walsh 2006); it creates the preconditions required to achieve a type of land use that is environmentally sustainable, socially just and desirable, as well as economically sound (GIZ 2012).
2. Land use planning should be approached from both land cover and land functionality perspectives, as the latter is a nexus to other transversal land issues.
3. Land use planning is centered around a participatory definition of future land uses; it is, therefore, a useful approach whenever natural capital and biodiversity are to be protected, restored, and/or rehabilitated, and unexplored land use potential has to be identified and evaluated.
4. Land use and spatial planning can: (a) reconcile land use with environmental concerns and resolve potential conflicts between sectoral interests and potential uses (ESPON 2012); (b) clarify customary land tenure of communal lands and increase land tenure security.
5. Policy responses to coordinate human activities with environmental conservation—alongside suitable financial, legal, and technical support—are needed to guide land use planning in supporting sustainable land management, and to help resolve conflicting land use demands.
6. The integration of cross-sectoral policies (e.g., land use, energy, and water management) into a single planning instrument at the regional level, based on an understanding of territorial dynamics, can bolster sustainable land management.
7. Planning at the regional scale enables the cumulative impacts of future development on the natural capital of a region to be accounted for, and the sharing of responsibility for protection and management across a wider number of stakeholders.
8. As a process undertaken at national and/or territorial level, following well-established principles of participation, integration, and assessment of land and water potential, LUP can address systemic issues of policy and institutional coherence, multi-stakeholder partnership, and high-quality data availability, identified as essential factors to strengthen the means of implementation of the Sustainable Development Goals.

Sydney, Australia — Graciela Metternicht
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Key Definitions

Best practice: a procedure that has been shown by research and experience to produce optimal results and that is established or proposed as a standard suitable for widespread adoption (Merriam-Webster, n.d.).

Ecosystem restoration: the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed (SER 2004).

Land use planning: the systematic assessment of land and water potential, alternatives for land use and economic and social conditions in order to select and adopt the best land use options. Its purpose is to select and put into practice those land uses that will best meet the needs of the people while safeguarding resources for the future FAO 1993.

See Table 2.1 for:

- **Ecological land use planning**;
- **Integrated land use planning**;
- **Participatory land use planning**;
- **Regional land use planning**;
- **Rural territorial land use planning**; **and**
- **Spatial land use planning**.

Multi-functional landscapes: landscapes which serve different functions and combine a variety of qualities (i.e., different material, mental, and social processes in nature and society occur simultaneously in any given landscape and interact accordingly); ecological, economic, cultural, historical, and aesthetic functions coexist in a multi-functional landscape (ESPON 2012).

Peri-urban zone: area between an urban settlement and its rural hinterland. Larger peri-urban zones can include towns and villages within an urban agglomeration. Such areas are often fast changing, with complex patterns of land use and landscape, fragmented between local and regional boundaries (Zivanovic-Miljkovic et al. 2012).

Policy: a course or principle of action adopted or proposed by an organization or individual (Dictionaries, n.d.). Strategies provide a means to implement policies. Actions describe specific elements within a strategy.

Sustainable use: the use of components of biological diversity in a way, and at a rate, that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of the present and future generations (Convention on Biological Diversity 1992).

Sustainable land management (SLM): adoption of land use systems that, through appropriate management practices, enable land users to maximize the economic and social benefits of land, while maintaining or enhancing the ecological support functions of its resources (soil, water, vegetation, and animal resources) (Liniger et al. 2011). SLM combines technologies, policies, and activities aimed at integrating socioeconomic principles with environmental concerns, so as to simultaneously maintain or enhance production, protect the potential of natural resources, and prevent (or halt) soil, vegetation, and water degradation, while being economically viable and socially acceptable (Smyth and Dumanski 1993).

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