Chapter-6

Sustainable land management (SLM)

Land

- **Land, in an economic sense, is defined as the entire material universe outside of people themselves and the products of people.**

- **It includes all natural resources, materials, airwaves, as well as the ground.**

Cont'd

- **All air, soil, minerals and water is included in the definition of land.**

- **Everything that is freely supplied by nature, and not made by man, is categorized as land.**

- **Land is the entire non-reproducible, physical universe, including all natural resources.**

Sustainable land management

- **Sustainable land management means managing land without damaging ecological processes or reducing biological diversity.**

- **It requires the maintenance of the following key components of the environment:**

- **Biodiversity: the variety of species, populations, habitats and ecosystems;**

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- **Ecological integrity: the general health and resilience of natural life-support systems, including their ability to assimilate wastes and withstand stresses such as climate change and ozone depletion; and**

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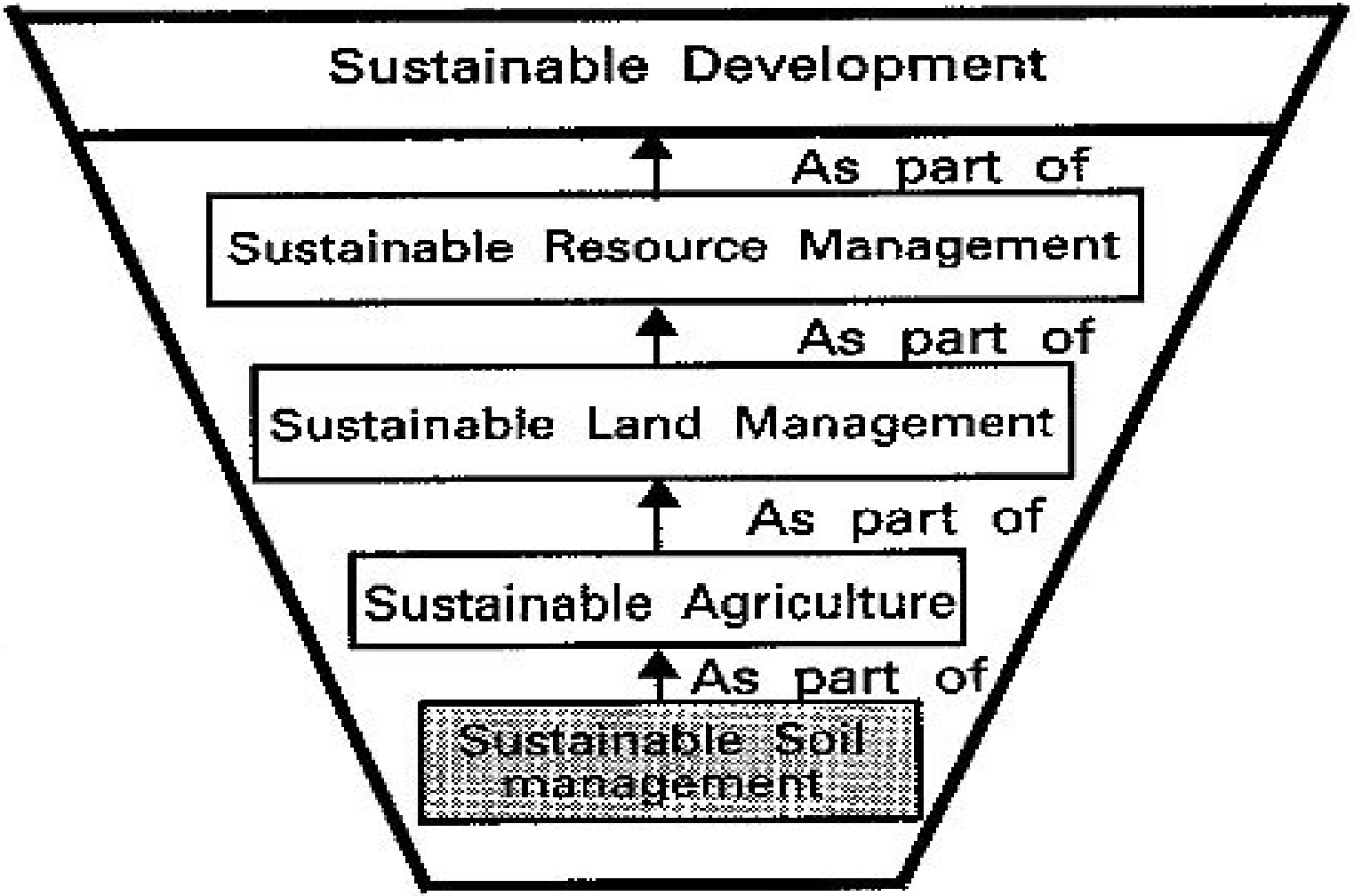
- **Natural capital: the stock of productive soil, fresh water, forests, clean air, ocean, and other renewable resources that underpin the survival, health and prosperity of human communities.**

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- ☑ **Land is often managed for multiple benefits, such as agricultural production, biodiversity conservation, water quality, soil health and supporting human life.**

- ☑ **To ensure long-term sustainability, land managers need to consider economic, social and environmental factors.**

Selecting Indicators to Evaluate Soil Quality
The Relationships among Sustainable Development, Sustainable Land ...
Sumber: agnet.org



LAND RENT COMPARED WITH MARKET VALUE

- **Land Market Value is the land rental value, minus land taxes, divided by a capitalization rate.**

- ✓ **Each of these terms is defined as follows:**

1. **Land Rental Value is the annual fee individuals are willing to pay for the exclusive right to use a land site for a period of time.**

- ✓ **This may include a speculative opportunity cost.**

Cont'd

2. **Land Taxes is the portion of the land rental value that is claimed for the community.**
3. **Capitalization Rate is a market determined rate of return that would attract individuals to invest in the use of land, considering all of the risks and benefits which could be realized.**
4. **Land Market Value is the land rental value, minus land taxes, divided by a capitalization rate.**

The Message

- **The Land Management paradigm is complex and highly interdisciplinary.**

- **Land and property must be viewed as an asset and a scarce natural resource.**

- **Proper management of land and properties is vital to achieving sustainable development.**

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- **Land policies are part of the national policies on promoting objectives such as economic development, social justice, equity and political stability.**
- **Relates to security of tenure, efficient land markets, real property taxation, land use control, environmental management etc.**

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- Land Administration Systems are concerned with the four land administration functions of land tenure, land value, land-use and land development.

Land Administration Systems …

Land Tenure:

1. **the legal surveys to determine the parcel boundaries;**
2. **the transfer of property or use from one party to another through sale or lease; and**
3. **the management and adjudication of doubts and disputes regarding rights and parcel boundaries.**

Land administration

- **Land administration is the way in which the rules of land tenure are applied and made operational.**

- **Land administration, whether formal or informal, comprises an extensive range of systems and processes to administer:**

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1. **land rights: = the allocation of rights in land;**

- ✓ **the delimitation of boundaries of parcels for which the rights are allocated;**
- ✓ **the transfer from one party to another through sale, lease, loan, gift or inheritance; and**
- ✓ **the adjudication of doubts and disputes regarding rights and parcel boundaries.**

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2. **land-use regulation: land-use planning and enforcement and the adjudication of land use conflicts.**

3. **land valuation and taxation: the gathering of revenues through forms of land valuation and taxation, and the adjudication of land valuation and taxation disputes.**

- ☑ Land administ**ration is implemented through sets of procedures to manage information on rights and their protection, such as:**

1. **Procedures for land rights include defining how rights can be transferred from one party to another through sale, lease, loan, gift and inheritance.**

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2. **Procedures for land use regulation include defining the way in which land use controls are to be planned and enforced.**

3. **Procedures for land valuation and taxation include defining methodologies for valuing and taxing land.**

- **Land administration requires *actors* to implement the procedures.**

- **In customary tenure regimes, the customary leaders may play the principal role in land administration, for example in allocating rights and resolving disputes.**

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- **In a more formal setting, land administration agencies may include land registries, land surveying, urban and rural planning, and land valuation and taxation, as well as the court systems.**

- **Where customary tenure has been recognized by the State, functional linkages are being developed between government and customary land administration bodies.**

LAND TENURE

- **Land tenure is the name given, particularly in common law systems, to the legal regime in which land is owned by an individual, who is said to "hold" the land (the French verb "tenir" means "to hold"; "tenant" is the present participle of "tenir").**

- **A landholder or landowner is a holder of the estate in land with considerable rights of ownership or, simply put, an owner of land.**

Land tenure…

- **Land tenure is the relationship, whether legally or customarily defined, among people, as individuals or groups, with respect to land.**

- **(For convenience, “land” is used here to include other natural resources such as water and trees.)**

- **Land tenure is an institution, i.e., rules invented by societies to regulate behavior.**

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- **Rules of tenure define how property rights to land are to be allocated within societies.**

- **They define how access is granted to rights to use, control, and transfer land, as well as associated responsibilities and restraints.**
- **In simple terms, land tenure systems determine who can use what resources for how long, and under what conditions.**

Land tenure….

- **Land tenure is an important part of social, political and economic structures.**

- **It is multi-dimensional, bringing into play social, technical, economic, institutional, legal and political aspects that are often ignored but must be taken into account.**

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- **Land tenure relationships may be well-defined and enforceable in a formal court of law or through customary structures in a community.**

- **Alternatively, they may be relatively poorly defined with ambiguities open to exploitation.**

Land tenure is often categorized as:

Private: **the assignment of rights to a private party who may be an individual, a married couple, a group of people, or a corporate body such as a commercial entity or non-profit organization.**

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- **For example, within a community, individual families may have exclusive rights to residential parcels, agricultural parcels and certain trees.**

- **Other members of the community can be excluded from using these resources without the consent of those who hold the rights.**

Land tenure is often categorized as:

- **Communal: a right of commons may exist within a community where each member has a right to use independently the holdings of the community.**

  - ✓ **For example, members of a community may have the right to graze cattle on a common pasture.**

Land tenure is often categorized as:

- **Open access: specific rights are not assigned to anyone and no-one can be excluded.**

- **This typically includes marine tenure where access to the high seas is generally open to anyone; it may include rangelands, forests, etc, where there may be free access to the resources for all.**

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- **(An important difference between open access and communal systems is that under a communal system non-members of the community are excluded from using the common areas.)**

Land tenure is often categorized as:

State: property rights are assigned to some authority in the public sector.

For example, in some countries, forest lands may fall under the mandate of the state, whether at a central or decentralized level of government.

At times it may be useful to simplify the representation of property rights by identifying:

1. **use rights: rights to use the land for grazing, growing subsistence crops, gathering minor forestry products, etc.**

2. **control rights: rights to make decisions how the land should be used including deciding what crops should be planted, and to benefit financially from the sale of crops, etc.**

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3. **transfer rights: right to sell or mortgage the land, to convey the land to others through intra-community reallocations, to transmit the land to heirs through inheritance, and to reallocate use and control rights.**

Modes of ownership and tenure

There are a great variety of modes of land ownership and tenure:

Traditional land tenure.

For example, most of the indigenous nations or tribes of North America had no formal notion of land ownership.

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- **When Europeans first came to North America, they sometimes simply disregarded traditional land tenure and simply seized land; more often, they accommodated traditional land tenure by recognizing it as aboriginal title.**

- **This theory formed the basis for (often unequal and often abused) treaties with indigenous peoples.**

Modes of ownership and tenure

Allodial title

- **a system in which real property is owned absolutely free and clear of any superior landlord or sovereign.**

- **True allodial title is rare, with most property ownership in the common law world (Australia, Canada, Ireland, New Zealand, United Kingdom, United States) being in fee simple.**

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- **Allodial title is alienable (transferable), in that it may be conveyed, devised, gifted, or mortgaged by the owner, and may also be distressed and restrained for collection of taxes or private debts, or condemned (eminent domain) by the government.**

Modes of ownership and tenure

Feudal land ownership

- **a system of mutual obligations under which a royal or noble personage granted a fiefdom (**the lands controlled by a feudal)
  - **— some degree of interest in the use or revenues of a given parcel of land**
  - **— in exchange for a claim on services such as military service or simply maintenance of the land in which the lord continued to have an interest.**

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- **This pattern obtained from the level of high nobility as vassals (slave) of a monarch (supreme ruler) down to lesser nobility whose only vassals were their serfs (a laborer legally bound to and obliged to serve a lord)**

Modes of ownership and tenure……

Fee simple.

- **Under common law, this is the most complete ownership interest one can have in real property, other than the rare Allodial title. The holder can typically freely sell or otherwise transfer that interest or use it to secure a mortgage loan.**

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- **This picture of "complete ownership" is, of course, complicated by the obligation in most places to pay a property tax and by the fact that if the land is mortgaged, there will be a claim on it in the form of a lien (**the legal right to keep or sell somebody else's property as security for a debt)

- **In modern societies, this is the most common form of land ownership.**

Modes of ownership and tenure

Native title.

- **In Australia, native title is a common law concept that recognizes that some indigenous people have certain land rights that derive from their traditional laws and customs.**

- **Native title can co-exist with non-indigenous proprietary rights and in some cases different indigenous groups can exercise their native title over the same land.**

Modes of ownership and tenure

Life estate.

☑**Under common law, this is an interest in real property that ends at death.**

☑**The holder has the use of the land for life, but typically no ability to transfer that interest or to use it to secure a mortgage loan.**

Modes of ownership and tenure

Easements

- **which allow one to make certain specific uses of land that is owned by someone else.**

- **The most classic easement is right-of-way, but it could also include (for example) the right to run an electrical power line across someone else's land.**

Modes of ownership and tenure

COMMON RIGHT

Ω **Rights to use a commons, which may include such rights as the use of a road or the right to graze one's animals on commonly owned land.**

Land Administration Systems …

=> Land Value:

1. **the assessment of the value of land and properties;**

2. **the gathering of revenues through taxation; and**

3. **the management and adjudication of land valuation and taxation disputes.**

LAND VALUE

- **Land that lacks utility and scarcity also lacks value, since utility arouses desire for use and has the power to give satisfaction.**

- **The air we breathe has utility and is generally considered important, since it sustains and nourishes life.**

- **However, in the economic sense, air is not valuable because it hasn't been appropriated and there is enough for everyone.**

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- **Thus there is no scarcity -- at least at the moment.**

- **This may not be true in the future, however, as knowledge of air pollution and its effect on human health make people aware that clean and breathable air may become scarce and subsequently valuable.**

Factors that Contribute to Land Value

1. **The physical attributes of land include quality of location, fertility and climate; convenience to shopping, schools and parks; availability of water, sewers, utilities and public transportation; absence of bad smells, smoke and noise; and patterns of land use, frontage, depth, topography, streets and lot sizes.**

2. **The legal *or* governmental forces include the type and amount of taxation, zoning and building laws, planning and restrictions.**

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3. **The social factors include population growth or decline, changes in family sizes, typical ages, attitudes toward law and order, prestige and education levels.**

4. **The economic forces include value and income levels, growth and new construction, vacancy and availability of land. It is the influences of these forces, expressed independently and in relationship to one another, that help the people and the assessor measure value.**

Land value tax

- **Land value taxation (LVT) (or site value taxation) is an ad valorem tax on the value of land.**

- **This ignores buildings, improvements, and personal property.**

- **Because of this, LVT is different from other property taxes on real estate — the combination of land, buildings, and improvements to land.**

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- **Every jurisdiction that has a real estate property tax has an element of land value tax, because land value contributes to overall property value.**

Land Value Analysis (LVA)

Land Value Analysis (LVA) was created by professional real estate operators in order to quickly conduct a land development feasibility study on any land parcel suitable for development.

Land Value Analysis (LVA) was designed for use by land developers and builders who know the land development business but may have only limited computer skills.

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- **LVA is totally automatic and easy to operate...no training is required.**

- **A novice PC operator can answer simple questions by filling the blanks and the Land Development Software will come up with a preliminary 'bottom line' in short order including Internal Rate of Return (IRR) and Net Present Value (NPV) for all participants.**

Land Administration Systems …

Land-Use:

1. **the control of land-use through adoption of planning policies and land-use regulations at national, regional/federal, and local levels;**

2. **the enforcement of land-use regulations;**

3. **the management and adjudication of land-use conflicts.**

Land use practices have a major impact on natural resources including water, soil, nutrients, plants and animals.

Land use information can be used to develop solutions for natural resource management issues such as salinity and water quality.

For instance, water bodies in a region that has been deforested or having erosion will have different water quality than those in areas that are forested.

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- **More recent significant effects of land use include urban sprawl, soil erosion, soil degradation, salinization, and desertification.**

- **Land-use change, together with use of fossil fuels, are the major anthropogenic sources of carbon dioxide, a dominant greenhouse gas.**

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- **Land use is a description of how people *utilize* the land and socio-economic activity - urban and agricultural land uses are two of the most commonly known land use classes.**

- **At any one point or place, there may be multiple and alternate land uses, the specification of which may have a political dimension.**

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Land use planning is the term used for a branch of public policy which encompasses various disciplines which seek to order and regulate the use of land in an efficient and ethical way, thus preventing land use conflicts.

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- **The Canadian Institute of Planners offers a definition that:**

- **"[Land use] planning means the scientific, aesthetic, and orderly disposition of land, resources, facilities and services with a view to securing the physical, economic and social efficiency, health and well-being of urban and rural communities“**

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- **Environmental planning, will often address the implications of development and plans upon the environment, for example Strategic Environmental Assessment.**

- **At the very local level environmental planning may imply the use of tools to forecast impacts of development decisions, including roadway noise, and pollution, surface runoff and flooding assessments.**

Land Administration Systems …

Land Development:

1. **the building of new infrastructure;**
2. **the implementation of construction planning;**
3. **the change of land-use through planning permission and granting of permits.**

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Land development refers to altering the landscape in any number of ways such as:

1. **changing landforms from a natural or semi-natural state for a purpose such as agriculture or housing**
2. **subdividing real estate into lots, typically for the purpose of building homes**
3. **developing property or changing its purpose, for example by converting an unused factory complex into condominiums**

Land Management

1. **Management of processes by which land resources are put into good effect.**

2. **Facilitation of economic, social, environmental sustainability**

3. **Underpinning and implementation of sound Land Policies**