

**MINGGU VI**  
Friday, March 24, 2017

MATA KULIAH PILIHAN  
**MANAJEMEN JASA LANSKAP**  
ARL 333 : 2 (2-0) 2



DEPARTEMEN ARSITEKTUR LANSKAP  
FAKULTAS PERTANIAN  
INSTITUT PERTANIAN BOGOR  
24 March 2017

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**MATERI PERKULIAHAN**  
MG I - UTS

MG	TOPIK	URAIAN	TUGAS	DOSEN
I	PENDAHULUAN Ruang Lingkup dan Definisi	Kontrak Perkuliahan; Ruang Lingkup dan Definisi Jasa Lanskap	Tugas Resensi	KAS
II	<b>MANAJEMEN JASA LANSKAP</b> Management Plan & Jenis-jenis Jasa Lanskap	Jasa Ekosistem; Jasa Lingkungan; Jasa Lanskap	Tugas Resensi	KAS
III	<b>JASA LANSKAP:</b> Keragaman Vegetasi dan Karbon Tersimpan	Horizontal dan Vertical Diversity Index Aboveground dan Belowground	Tugas Analisis	KAS
IV	<b>JASA LANSKAP:</b> Manajemen Sumber Daya Air dan Udara	Kuantitas dan kualitas air Kuantitas dan kualitas udara	-	KAS
V	<b>JASA LANSKAP:</b> Keindahan dan Kenyamanan Lanskap	Keindahan <i>terrestrial</i> dan <i>spatial</i> Nilai Kenyamanan Lanskap	Tugas Analisis	KAS
VI	<b>JASA LANSKAP:</b> Lanskap Sejarah dan Budaya	Nilai Manfaat Lanskap Sejarah dan Budaya	Tugas Analisis	KAS
VII	<b>JASA LANSKAP:</b> Agrowisata dan Agroforestri	Potensi Agrowisata dan Agroforestri	-	KAS
VIII	UTS			

\*) Pokok/Sub-pokok bahasan dapat berubah, disesuaikan dengan kasus yang sedang hangat didiskusikan.

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**MATERI PERKULIAHAN**  
MG IX - UAS

MG	TOPIK	URAIAN	TUGAS	DOSEN
IX	Coupling Landscape Ecology with Natural Landscape Management	Penjelasan tentang perubahan paradigma dan pendekatan dalam pengelolaan lanskap alami	-	SWI
X	Landscape Structure and Multi-scale Management	Konsep dan studi kasus	Tugas makalah	SWI
XI	Landscape Function and Cross-Boundary Management	Konsep dan studi kasus	Tugas makalah	SWI
XII	Landscape Change and Adaptive Management	Konsep dan studi kasus	Tugas makalah	SWI
XIII	Landscape Integrity and Integrated Management	Konsep dan studi kasus	Tugas makalah	SWI
XIV	Review	Presentasi	-	SWI
XV	Review	Presentas	-	SWI
XVI	UAS			

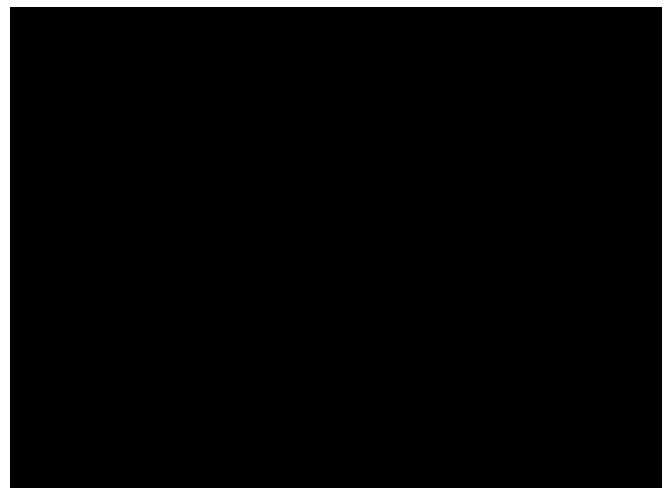
\*) Pokok/Sub-pokok bahasan dapat berubah, disesuaikan dengan kasus yang sedang hangat didiskusikan.

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**MG VI**  
**JASA LANSKAP:**  
**LANSKAP SEJARAH**  
**DAN BUDAYA**

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## CP MINGGU VI

Mahasiswa mampu menjelaskan Jasa Lanskap Sejarah dan Budaya

dan

mampu mengaplikasikannya dalam proses perencanaan, desain dan manajemen lanskap

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## ES: Great Green Hope



Ecosystem services (ES):  
The processes by which nature renders benefits for people

## LS Categories

1. Provisioning



2. Regulating



3. Supporting



4. Cultural

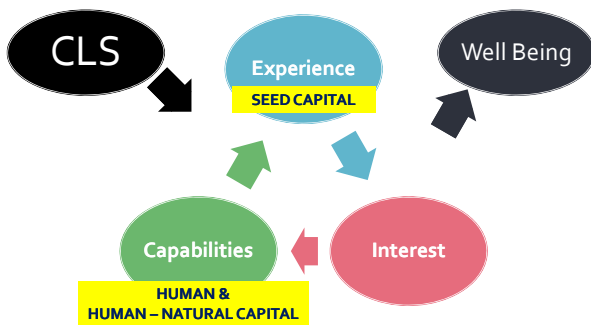


## LS Supply Types

1. Supply services of **physical assets** that produce direct benefits to people
2. Services carried out by ecosystems in **regulating** environmental processes
3. **Support services**, which do not provide direct benefit to people but are required for functioning of ecosystems
4. Services related to **cultural and spiritual needs** of the community

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## CLS - CAPITAL - WELL BEING



## CULTURAL LANDSCAPE



## Cultural Landscape Services [CLS]

- **The intangible benefits** that people receive from ecosystems through spiritual enrichment, cognitive development, reflection, recreation and aesthetics experience, including cultural systems, social relations and the aesthetic value.
- **The contribution** of the ecosystem to the intangible benefits (experience, skills) that people derive from human-ecological relationships
- Those which **satisfy** the needs of daily life, as a function of information, as comfort and gratification services, as comfort services, or as services for satisfaction of socio-cultural needs.

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## CLS is important

CLS constitute an important category of services at a landscape scale, as they are able to express the "sense" of a place and the identity of a community interacting over time in a specific area.

Physical, emotional and psychological benefits of cultural products are often only implicitly expressed through indirect manifestations.

CLS are treated as a residual category since they are difficult to assess --> Therefore poorly integrated in landscape management plans.

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(Dis)service	Definition
Spiritual services	Sites of spiritual, religious, or other forms of exceptional personal meaning
Educational values	Sites that widen knowledge about plant and animal species
Inspiration	Sites that stimulate new thoughts, ideas or creative expressions
Aesthetic values	Sites of particular beauty
Social relations	Sites serving as meeting points with friends
Sense of place	Sites that foster a sense of authentic human attachment, in German language commonly epitomized as <i>Heimat</i> ("home")
Cultural heritage values	Sites relevant to local history and culture
Recreation and ecotourism	Sites used for recreational activities (walking, dog walking, horse riding, swimming, gathering wild foods, angling, hunting, etc.)
Unpleasantness	Sites that are neglected, abused, damaged, or unpleasant
Scariness	Sites that feel dangerous or threatening
Noisiness	Sites that are disturbingly noisy

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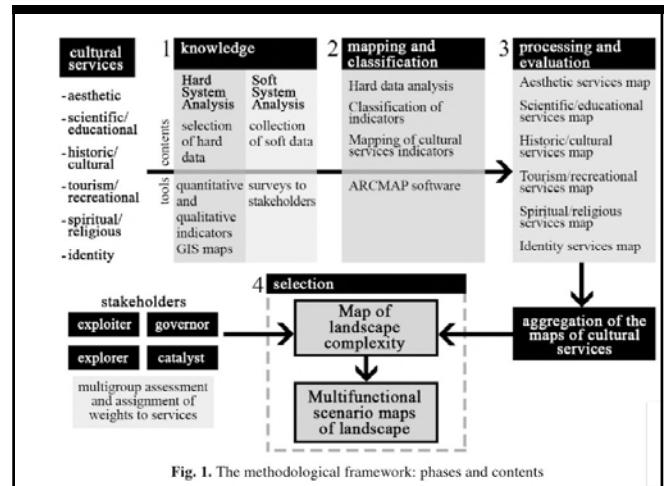


Fig. 1. The methodological framework: phases and contents

## THE BEST PLANNED CITY is CLS





**Table 1. Comparison of typologies of cultural services in different ecosystem service classifications.**

Human Well-being Dimensions	Cultural Service Classifications				
	MEA (2003)	Research Box et al. (2009)	de Groot et al. (2010)	TEEB (2010)	Haines-Young and Potschin (2010)
Enjoyment	Aesthetic values		Aesthetic	Aesthetic appreciation	Aesthetic
	Recreation and ecotourism	Recreation (leisure and activities)	Recreational	Recreation and tourism	Recreation
Personal fulfillment	Educational values	Learning	Education and science		Information and knowledge
	Knowledge systems (traditional and formal)				
Health	Spiritual and religious values	Spiritual	Spiritual and religious inspiration	Spiritual experience	Spiritual
	Inspiration	Inspiration	Inspiration for culture, art, and design	Inspiration for culture, art, and design	
Social fulfillment		Escapism		Mental and physical health	
	Social relations	Calm			Community activities
	Cultural heritage values	A sense of history and continuity	Cultural heritage and identity		Heritage
	Cultural diversity				
	Sense of place	A sense of place		Sense of place	

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**Table 2. Landscape services classification based on Common International Classification of Ecosystem Services (CICES) classification (Haines-Young and Potschin 2010). New proposed services are indicated in bold.**

Theme	Class	Group
Provisioning	Nutrition	Terrestrial plant and animal foodstuffs
		Freshwater plant and animal foodstuffs
		Marine plant and animal foodstuffs
	Potable water	
Material	Biotic materials	
	Abiotic materials	
Energy	Renewable biofuels	
	Renewable abiotic energy sources	
Regulation and Maintenance	Daily activities	Place to live
		Place to work
	Regulation of wastes	Bioremediation
		Dilution and sequestration
	Flow regulation	Air flow regulation
		Water flow regulation
	Regulation of physical environment	Mass flow regulation
		Atmospheric regulation
	Regulation of biotic environment	Water quality regulation
		Pedogenesis and soil quality regulation
Regulation of the spatial structure	Lifecycle maintenance and habitat protection	
	Pest and disease control	
Cultural and Social	Health	Gene pool protection
		Connection of spaces
	Enjoyment	Buffer disturbing use
		Provision of spatial complexity of the place
Self-fulfillment (personal)	Mental health	
	Physical health	
	Passive enjoyment	
	Active enjoyment	
	Way-finding	
	Scientific resources	

**Table 3. Description of the new services proposed for the classification of landscape services and their related concepts.**

Class	Group	Definition	Related Concepts
Daily Activities	Place to live	Provision of a space for residential location, a home.	Carrier functions (de Groot 2006); Provision of space (Antrop et al. 2012)
	Place to work	Provision of open spaces or urbanized areas where people develop their job.	Carrier functions (de Groot 2006); Provision of space (Antrop et al. 2012)
	Place to move	Provision of spatial communication. It is not only related to transport networks but also to open spaces that allow people to commute, travel, or just access other services.	Carrier functions (de Groot 2006); Provision of space (Antrop et al. 2012)
Regulation of the Spatial Structure	Connection of spaces	Ability to facilitate ecological, visual, or functional connectivity between different areas.	Connectivity (Forman 1995)
	Buffer disturbing use	Ability to separate incompatible uses and temper negative interactions from an ecological or perceptual point of view.	Buffer zone (Forman 1995, Bennet and Malongoy 2006)
Health	Physical health	Related to the degree of diversity and richness of landscape elements that may improve possibilities for exploration, resilience, and visual absorption capacity.	Diversity (Forman and Godron 1986), heterogeneity (Forman 1995), and complexity (Kaplan and Kaplan 1989, Fry et al. 2009)
	Mental health	Contribution to the enhancement of physical fitness by facilitating walking or other alternative ways of transportation and the practice of open air sports.	Physical health (TEEB 2010)
Enjoyment	Passive enjoyment	Opportunities to relax, recover from stress, escape from our daily routine, find tranquility, be calm, or just fulfill our need of mental space.	Mental health (TEEB 2010), calm and escapism (Research Box et al. 2009)
		Employment of attractive vistas, a quiet place to read a book, the possibility of seeing wildlife, or cultural heritage.	Aesthetic appreciation, values (MEA 2003, de Groot et al. 2010, Haines-Young and Potschin 2010, TEEB 2010), and heritage (Haines-Young and Potschin 2010, de Groot et al. 2010)

Personal Fulfillment	Way-finding	Provision of cues that enhance our spatial orientation, our sense of where we are, and how to get where we are going.	Orientation (Lynch 1960, Kaplan and Kaplan 1998)
	Scientific resources	Source of research for a wide range of fields such as history, geography, botany, ecology, geology, or archaeology.	Information and knowledge, knowledge systems, and science (MEA 2003, de Groot et al. 2010, Haines-Young and Potschin 2010)
	Didactic resources	Opportunities to learn about rock formation, flora and fauna species, past civilizations, or traditional farming practices.	Education, educational values, and learning (MEA 2003, Research Box et al. 2009, de Groot et al. 2010)
	Spiritual experience	Provision of sacred places for religious practices or sites connected to legends or myths.	Spiritual experience and religious values or inspiration (MEA 2003, Research Box et al. 2009, de Groot et al. 2010, Haines-Young and Potschin 2010, TEEB 2010)
Social Fulfillment	Source of inspiration	Inspiration for art, literature, music, architecture, cinema, or advertising.	Inspiration for culture, art, and design (MEA 2003, Research Box et al. 2009, de Groot et al. 2010, TEEB 2010)
	Social interactions	Provision of social surroundings separate from the two usual social environments of home and the workplace that provide opportunities for social encounters.	Community activities, social relations (MEA 2003, Haines-Young and Potschin 2010)
	Place identity	Contribution to shaping of community identity by providing cues and distinguishing it from others.	Sense of place, place identity, cultural diversity, and cultural identity (MEA 2003, Research Box et al. 2009, de Groot et al. 2010, TEEB 2010)
	Sense of continuity	Provision of stable reference points through the life course.	Sense of history, sense of continuity (Research Box et al. 2009)

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## VALUING CLS – SPATIAL ANALYSIS

The methodology of analysis enables to elaborate all the information relating to landscape sensitivity and to summarize them into a synthetic index: **the Sensitivity Index (SI)**.

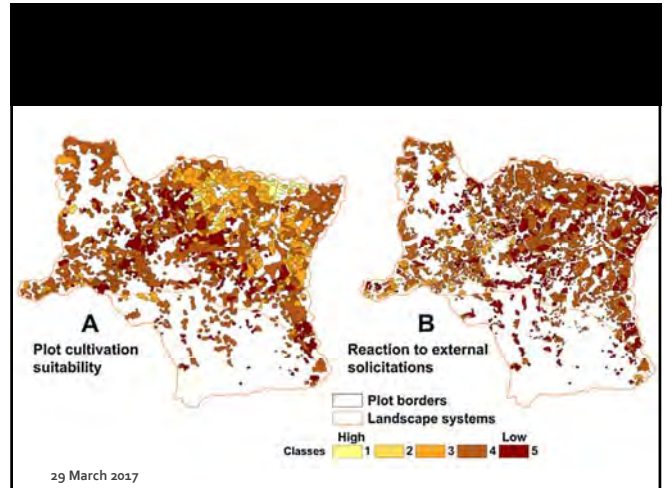
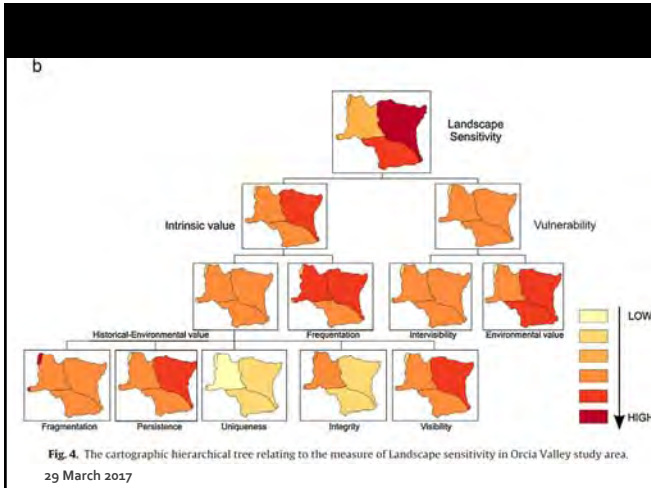
The **landscape sensitivity analysis** is carried out via a geographical multi-criteria decision making technique, by using the **Saaty's Hierarchical Analysis**. Evaluation criteria, attributes, sub-attributes valuation classes and scores are shown in detail in Table 1.

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Territorial Analysis: Criteria, attributes, sub-attributes, valuation classes and scores.

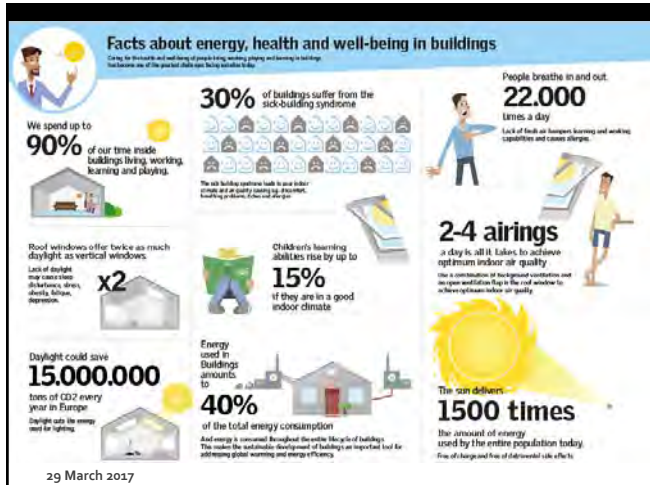
Valuation classes		Score
<b>CRITERION: Intrinsic Value</b>		
Attribute: Historical-Environmental Value		
Sub-attribute: Fragmentation	Shannon Dominance Index <math>< 0.2</math>	3
	<math&gt;0.2 &lt;="" 0.3&lt;="" \text{shannon="" dominance="" index}="" math&gt;<="" td=""> <td>2</td> </math&gt;0.2>	2
	<math&gt;0.4 &lt;="" 0.6&lt;="" \text{shannon="" dominance="" index}="" math&gt;<="" td=""> <td>1</td> </math&gt;0.4>	1
	<math&gt;\text{shannon &gt;="" 0.6&lt;="" dominance="" index}="" math&gt;<="" td=""> <td>0</td> </math&gt;\text{shannon>	0
Sub-attribute: Persistence	>10% of territory affected by modifications	3
	From 10% to 50% of territory affected by modifications	2
	<math>< 10\%</math> of territory affected by modifications	1
Sub-attribute: Uniqueness	>5% of territory unsolved	3
	3-5% of territory unsolved	2
	1-2% of territory unsolved	1
	<math>< 1\%</math> of territory unsolved	0
Sub-attribute: Integrity	ratio from 1.1 to 1.4	3
	ratio from 1.31 to 5	2
	ratio >5	1
Sub-attribute: Visibility	ratio >0.15	3
	ratio from 0.11 to 0.15	2
	ratio from 0.01 to 0.10	1
	ratio = 0	0
Attribute: Fragmentation	>25% of affected territory	3
	from 10% to 25% of affected territory	2
	from 1% to 10% of affected territory	1
	0% of affected territory	0
<b>CRITERION: Vulnerability</b>		
Attribute: Intervisibility	high	3
	medium	2
	low	1
	null	0
Attribute: Environmental Value	>30% of territory occupied by significant environmental areas	3
	6-30% of territory occupied by significant environmental areas	2
	1-5% of territory occupied by significant environmental areas	1
	0% of territory occupied by significant environmental areas	0

Score: 0 = null, 1 = low, 2 = medium, 3 = high.



**LS - CLS**





## MESH - SDGs

Mapping Ecosystem Services to Human well-being for the Sustainable Development Goals

<http://www.naturalcapitalproject.org/mesh/>

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## TUGAS ANALISIS

1. Tentukan SDGs yang berkaitan dengan topik penelitian Anda.
2. Berikan penjelasan yang jelas, lugas dan argumentatif mengapa SDGs tersebut sangat relevan bagi penelitian Anda.

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## TERIMA KASIH

Atas perhatian dan kerjasamanya dalam tatap muka kali ini

**SAMPAI JUMPA  
PADA KULIAH MINGGU DEPAN**

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