



Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences



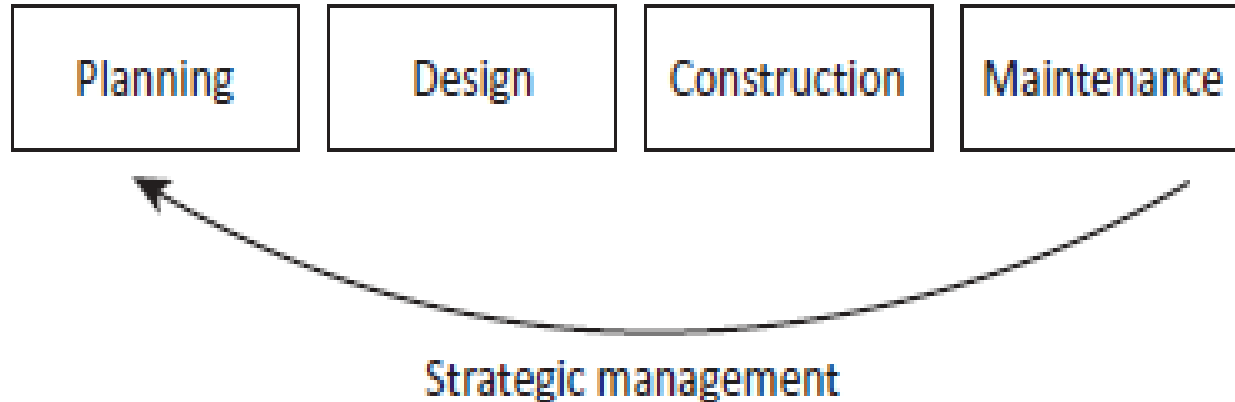
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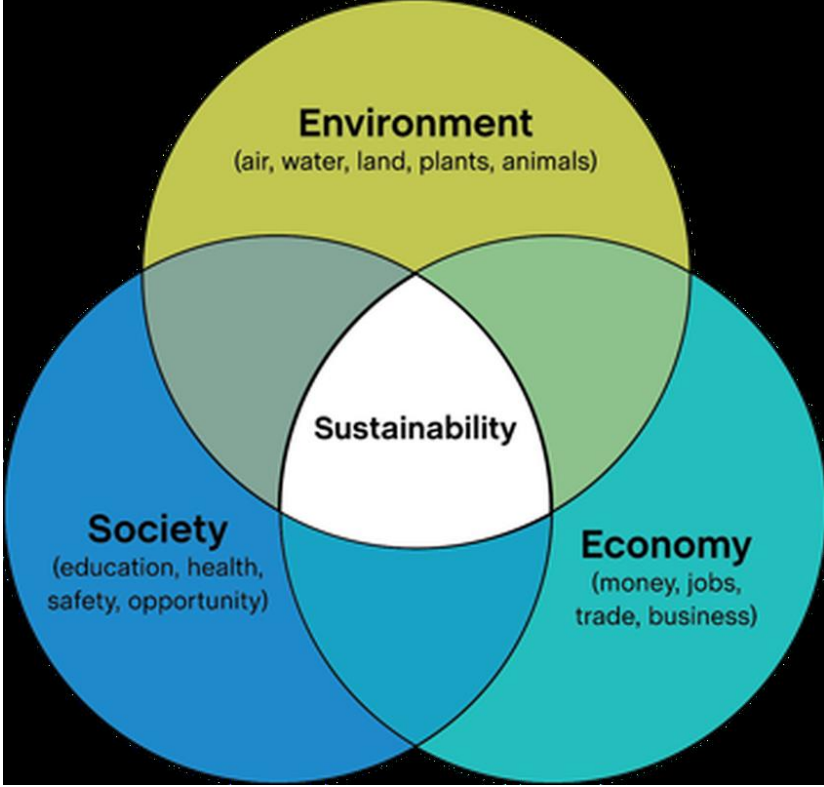
Sustainable Management of Urban Forests

What is environmental, economic and social sustainability in management of urban open spaces?

Strategic Management – the long term perspective



Jansson, M., N. Vogel, H. Fors & T.B. Randrup (2018) The governance of landscape management: new approaches to urban open space development, Landscape Research, DOI: [10.1080/01426397.2018.1536199](https://doi.org/10.1080/01426397.2018.1536199)



Current challenges

- Globalization
- Demographic changes
- Urbanization
- Individualization
- Knowledge and network society
- Knowledge acceleration
- Climate change / Energy shortages



Application of knowledge about nature

Inspired and supported by nature

Maintain and enhance natural capital

Sustainability – is a way of thinking

Economically
Environmentally
Socially

Ecosystem Services – is a systematization

Supporting
Provisioning / Regulating
Cultural

Nature-based *Solutions* – are actions

Inspired by nature -
Supported by nature -
Copied from nature -



Thomas B. Randrup
och Johan Östberg

Hållbar
grönyte-
skötsel

Bæredyg-
tig drift
af grønne
områder

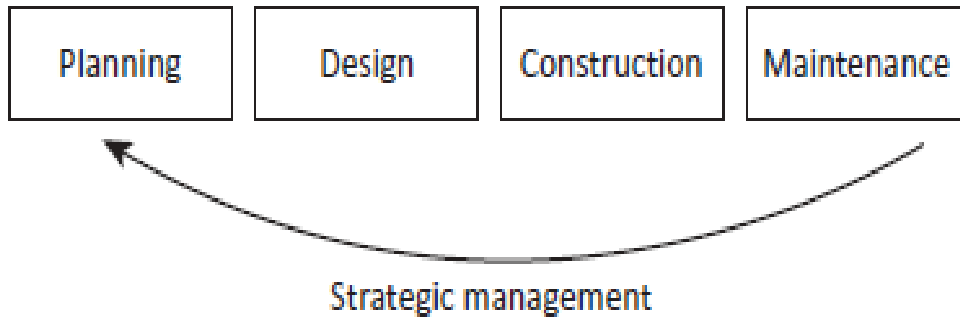
LTV-rapport 2017



**What is Sustainable
Maintenance?**

**How and when can a
green space
manager claim that
sustainable
maintenance is
performed?**

<http://www.movium.slu.se/partnerskap?article=partnerskapsprojekt-om-hallbar-gronyteskotsel>



Strategic management* *Operational maintenance

- **Place specific**
 - context dependent
- **Long sighted**
- **Nature based**
- **Dynamic**
- **Inclusive**
- **Multifunctional**

Materials

Strategies

Operations

Trees – biological sustainability

Materials

**Plant material adapted for local climate
Rich species variety**

Strategies

**Strategy for planting and maintaining trees.
Design and construction to minimize use of chemicals
Trees to offer several ecosystem services**

Operations

**Promote natural growing conditions, and processes
e.g. the water cycle.
Pruning and collection of leaves and fruit is minimized.**

Trees – economic sustainability

Materials

Strategies

Operations

Life-cycle analysis

Planting based on inventory

Co-management within departments

Communication / dialogue with citizens

No more maintenance than what is justified by cultural, biological and social purposes

Trees – social sustainability

Materials

**User involvement to provide a sense of identity.
Species to preserve or develop several ecosystem services.**

Strategies

**Strategy communicates the trees' values to politicians, citizens and managers.
Strategy specify co-management.**

Operations

**Communication with citizens / engagement in planning as well as in maintenance.
Competence development of staff.
Always trained personnel.**

Sustainable Trees

Materials

Plant material /seeds adjusted to the local climate

Life-Cycle analysis

User involvement

Strategies

Inventory and Strategy

Integrated design, construction and maintenance

Co-management

Operations

Nature-based growing conditions (simplicity)

Maintenance justified by cultural and social needs

Communication

Competence development

NbS inspired Maintenance

- An attempt to combine Sustainability, ESS and NBS
- Accelerate sustainability transitions by bridging short term and long term perspectives
- 'Nature-based' is holistic and activity driven
- Combines strategy making, planning, materials and operations