Urbanscape dan Perubahan Iklim

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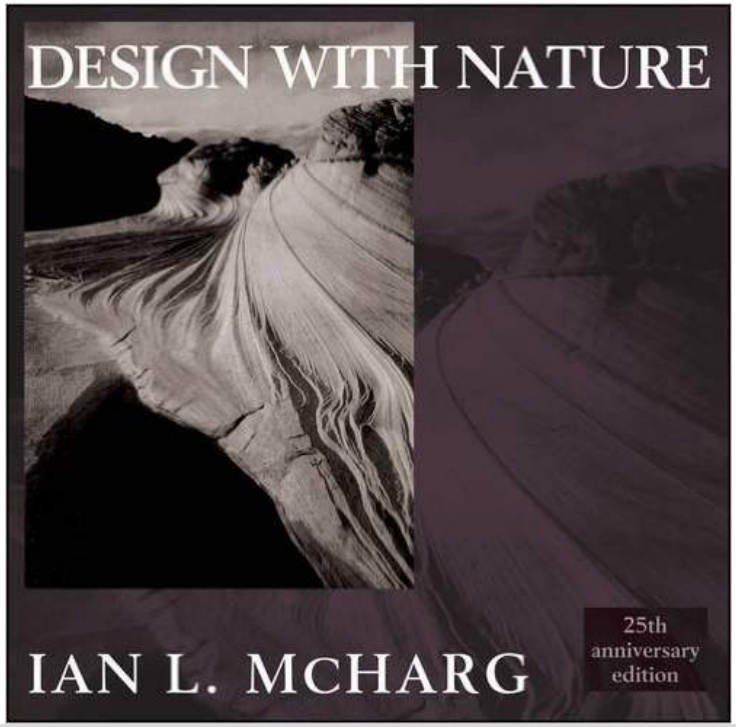
LANDSCAPE ARCHITECT

Director of PT. Tropica Greeneries

Rabu 7 Maret 2018

Ian McHarg, “Design With Nature

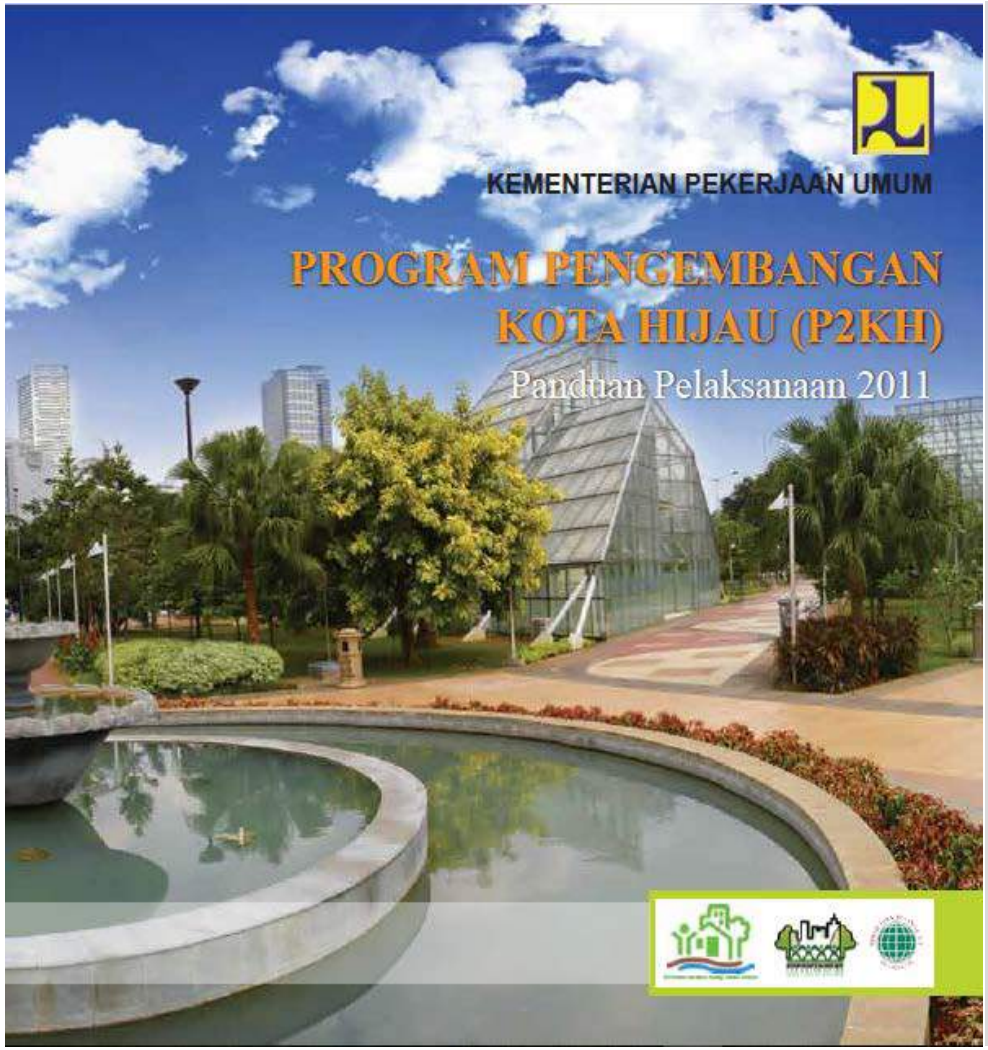


Landscape planners to conform to ecology, not to compete with it

Planting native species

Source : Mc Harg, Ian, 1969. *Design With Nature 25th anniversary edition*. USA

Peraturan Perundangan



Undang-Undang Nomor **26 Tahun 2007**, pembangunan **RTH** sebesar **30%** dari luas Total Wilayah, 20% RTH Publik dan 10% RTH Privat.

Pengalokasian ini ditetapkan dalam Perda tentang RT/RW Kota dan Kabupaten

Source : Kementerian Pekerjaan Umum dan Perumahan Rakyat 2011. *Program Pengembangan Kota Hijau (P2KH) Panduan Pelaksanaan 2011*. Jakarta : PUPR

Urbanscape

Reduce Heat Island Effect

Keep Water

Place for Social Interaction/ Community Gathering

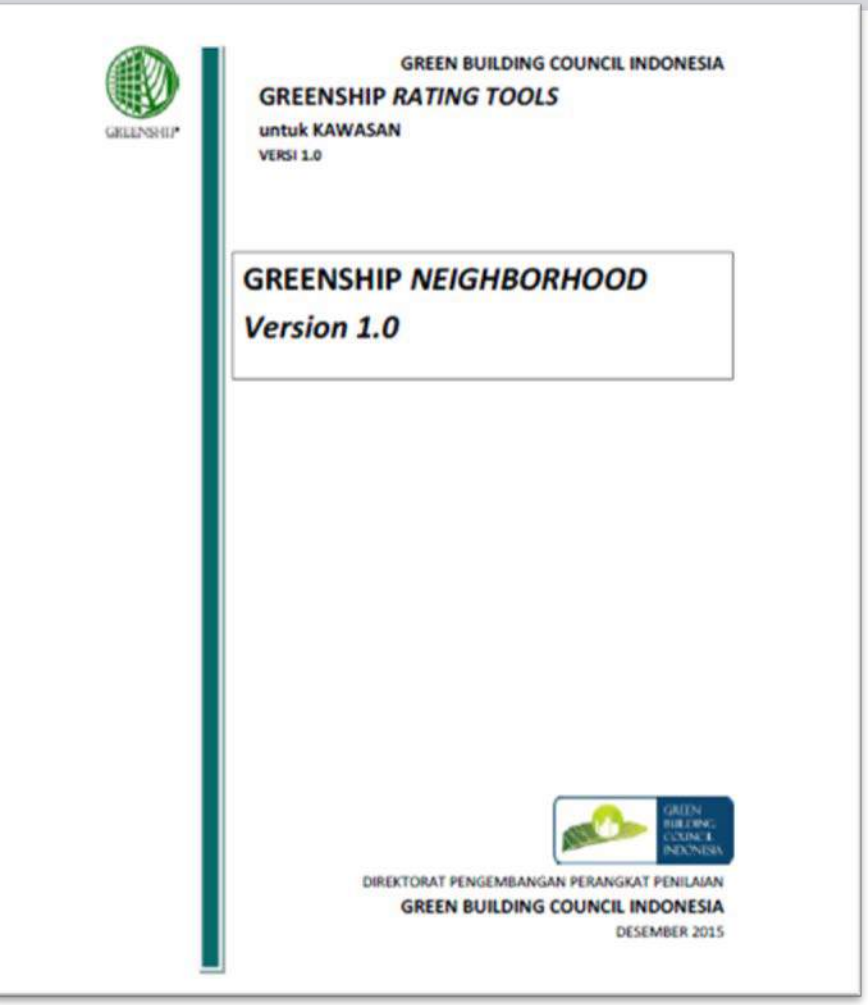
Biodiversity

Healthy/ Physical Activity

Reduce Noise

Productive Plant

GREENSHIP NEIGHBORHOOD 1.0



Manfaat Greenship Kawasan:

1. Menjaga keseimbangan ekosistem lingkungan, dan meningkatkan kualitas lingkungan sehat
2. Memimalkan dampak pembangunan terhadap lingkungan
3. Meningkatkan kualitas ikim mikro
4. Menerapkan asa keterhubungan, kemudahan pencapaian, keamanan, dan kenyamanan pada jalur pejalan kaki
5. Menjaga keseimbangan antara kebutuhan dan ketersediaan sumber daya dimasa mendatang

Source : Green Building Council Indonesia. 2015. *Greenship Neighbourhood Version 1.0* Jakarta : GBCI

Community Design Handbook

Integrate Nature and Design for Eugene's Climate

Evoke Sense of Place

Bring the Streets to Life

Leave a Building Legacy

Source : Eugene Planning Division. 2017. *Community Design Handbook*. Oregon (USA) : Planning and Development Department

BENEFITS OF URBAN TREES

Strategic placement of trees in urban areas can **cool the air** by between 2 °C and 8 °C.

Large urban trees are excellent **filters for urban pollutants** and fine particulates.

Mature trees **regulate water flow** and **improve water quality**.

A tree can absorb up to 150 kg of CO_2 per year, sequester carbon and consequently **mitigate climate change**.

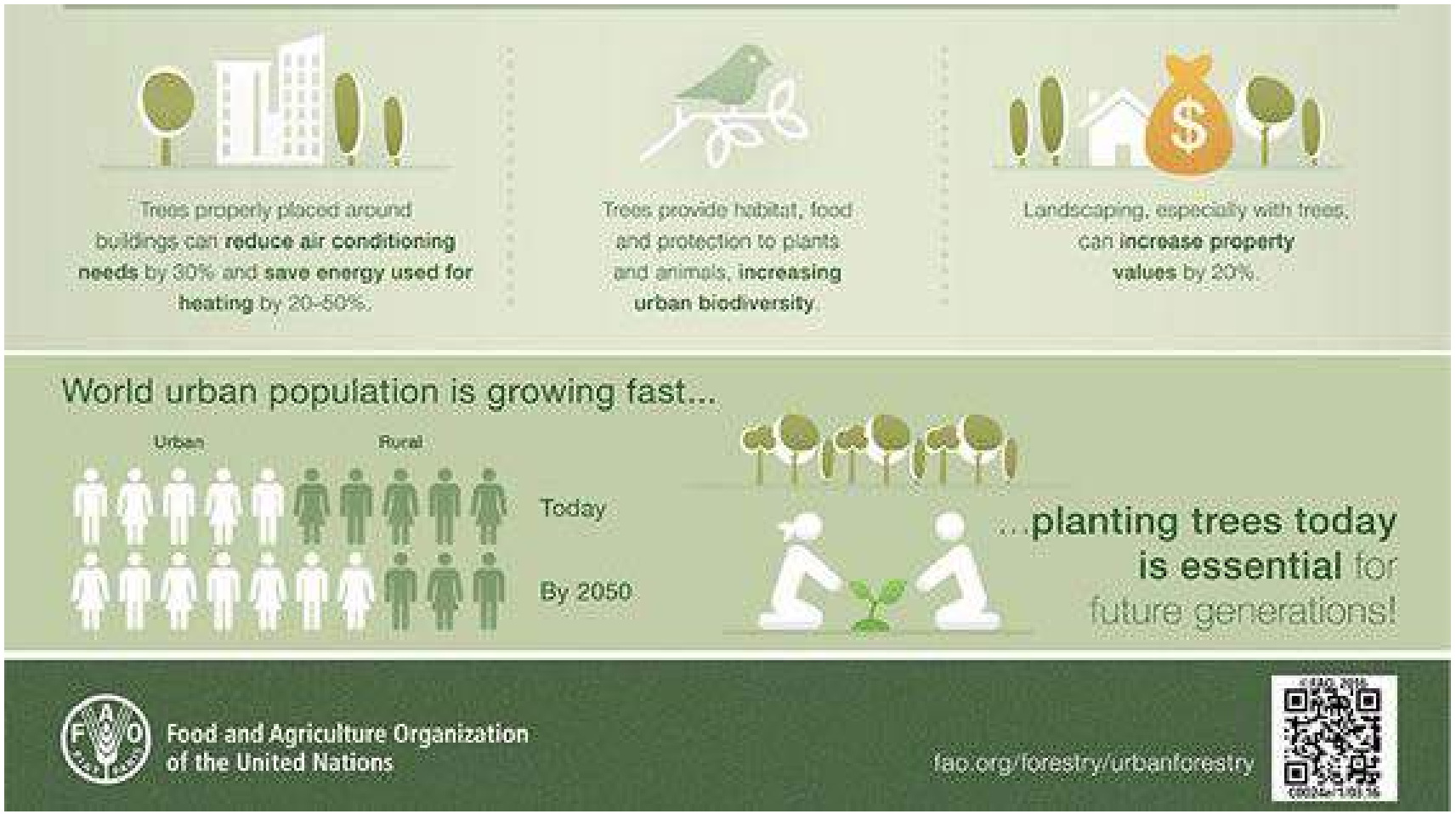
Wood can be used for **cooking and heating**.

Trees can **provide food**, such as fruits, nuts and leaves.

Spending time near trees **improves physical and mental health** by increasing energy level and speed of recovery, while decreasing blood pressure and stress.

Source : fao.org/forestry/urbanforestry

Food and Agriculture Organization of the United Nation



Source : fao.org/forestry/urbanforestry

Food and Agriculture Organization of the United Nation

THANK YOU

Integrate Nature and Design for Eugene's Climate

- Enhance the Regional Habitat Network
- Celebrate Important Natural Features
- Design for Climate and Natural Resiliency
- Conserve Energy and Natural Resources
- Bring Farms and Gardens into City
- Promote Outdoor Lifestyle

EVOKE A SENSE OF PLACE

- Reveal Eugene History
- Contribute to a Complete, Walkable Neighborhood
- Reflect the Value of Great Neighborhoods
- Celebrate Special Spaces
- Create Succesful Public Space
- Use Building Form and Natural Edges to Define Spaces

BRING THE STREETS TO LIFE

- Create a Network of Complete Streets
- Emphasize Walking, Biking and Riding Transit
- Enrich the Streetscape
- Support Community Comfort and Safety at all Hours
- Design Smart Parking and Circulation

LEAVE A BUILDING LEGACY

- Design for the Human Scale
- Engage the Street
- Fit the Neighborhood
- Invest in Quality materials
- Promote Visual Transparency

Design Guidelines

1. CONSERVE natural areas in private and public spaces and introduce new ones
2. PROVIDE links to nearby features through habitat corridors
3. UTILIZE abundant and continuous plantings and natural features along streets, alleys, paths, buffer strips and within developments

Design Guidelines

4. Introduce structures and gardens in urban area that provide the needs of native wildlife
5. Reduce light pollution and protect

Urban Environment Project

“The presence of high quality biodiversity in urban acres provides us with additional environmental and economic benefits including clean air and water, more attractive properties and recreational areas”

Celebrate important natural features

Know the natural potencies of cities/ local landscape

Unique community character

Culture

Aristotle

In all things nature, there is something of the marvelous

Celebrate important natural features

1. **INTEGRATE** and restore waterways, wetlands, and other natural features into site design.

2. **EMPHASIZE** and **RESPECT** the natural topography in site layouts, circulation and building designs.

3. **PRESERVE** and frame views of special places and landscape features.

4. **PRESERVE** significant site features such as trees, groves, or boulders.

5. **RELOCATE** significant site features elsewhere, preferably on-site, when they cannot be preserved.

6. **BLEND** the transition or **EMPHASIZE** the contrast between natural areas and landscaping areas.

Design for climate and natural resiliency

Our climate is changing, and with this change comes an increase in extreme weather, varying

temperatures, and unreliable precipitation. Attention to adaptability and resilience in

the design of neighborhoods, infrastructure, and buildings helps us to prepare for the unpredictable.

This preparation can lead to significant benefits in safety and health in the

event of dangerous weather and other hazards, and can help the community and individuals

avoid costly repairs. Many solutions, especially those techniques learned from the traditional

architecture of the region, are low-tech and inexpensive to integrate. These solutions can make daily living more enjoyable, sustainable, and cost-effective.

Design for climate and natural resiliency

DESIGN GUIDELINES

1. **AVOID** designated flood plains, landslide- or fire-prone locations when alternatives are available. When development within them is necessary, use current best practices to mitigate potential impacts.

2. **REDUCE** summer heat gain with shade trees and light-colored roofing and paving.

3. **DESIGN** building and site systems for flexibility and adaptability

4. **DESIGN** resilient buildings with passive techniques, such as awning and canopies, operable windows, water reuse, and insulation, in order to remain inhabitable and comfortable during an extended interruption of utilities

Conserve energy and natural resources

Eugeneans place a high value on sustainability, something demonstrated by a broad range of actions: from overarching policy decisions by city leadership about land use and emissions to the daily choices of individual citizens about how we get around town and what products we buy.

One of the sectors with the greatest impact on energy use, resource consumption and greenhouse gas emissions is the way we build and use our homes, schools, workplaces and other buildings. The energy use in building construction and operation also becomes a significant cost that is ultimately borne by us as property owners, end users, or taxpayers.

As a community that respects and protects the natural environment, what we build and how we build it must be carefully considered

Design guidelines

1. **INCORPORATE** low impact storm water management strategies into site design.
2. **PLANT** native and drought tolerant trees and shrubs.
3. **DESIGN** buildings and landscapes to conserve, store and reuse water.
4. **ORIENT** street and building design for maximum solar access in the winter, and plant trees for maximum summer shade.
5. **INCLUDE** provisions for onsite renewable energy or connect with a shared district renewable energy network.

Design guidelines

6. **CONSERVE** existing buildings through adaptive reuse, renovation or historic preservation
7. **INCORPORATE** solutions from the tradition of northwest architecture that are attuned to the specifics of our climate and natural resources.
8. **MAXIMIZE** energy efficiency through design that considers the construction, on-going operation and performance, and maintenance of buildings.
9. **BUILD** with durable, local materials with low embodied energy and a long life span.

Bring farms & gardens into the city

The world-class agricultural soils surrounding Eugene support a diversity of crops, including filberts, hops, grapes, honey, herbs, and vegetables. This proximity to our farming heritage has fostered a thriving local food movement, supporting farms both large and small, and providing alternatives to food imported from other regions and countries. Urban agriculture extends this productivity into the city, and can take many forms: community gardens that provide food to neighborhoods, backyard gardens for household produce, urban farm animals, fruit trees and common gardening space in apartment courtyards, and rooftop container gardens that supply restaurants. The close connection to the source of our food increases our knowledge about what we eat and how it is produced, while also encouraging healthy eating habits.

Design guidelines

1. **PROVIDE** space for small-scale and specialty farming and food production as a transition between urban development and adjacent agricultural lands.

2. **LOCATE** housing clusters around small-scale farms to allow for shared farming and agrarian lifestyles.

3. **CONNECT** areas of denser housing with public or private community garden space.

4. **CREATE** opportunities for urban agriculture in new residential development.

5. **PLANT** edible landscapes, such as berries and fruit trees, in privately owned, semi-private, semi-public, and public areas.

Promote outdoor lifestyles

Eugene is a destination for track and field enthusiasts from around the world and all who enjoy active lifestyles. From ridgeline trails to a network of bicycle lanes, from the diverse parks and recreation facilities to the Ruth Bascom Riverbank Path system, residents and visitors share a wealth of opportunities for activity. Not only do these resources help keep Eugeneans fit and healthy, but when people go outdoors we meet neighbors, build community, and learn about our natural surroundings. Outdoor lifestyles draw new people and new business to the city, and encourage us to stay and invest our talents and resources. As options for safe, active transportation increase, the city becomes less dependent on automobiles and fossil fuels.

Design guidelins

1. **CONTRIBUTE** to the network of large, interconnected and flexible parks and public spaces to serve a wide variety of community activities and needs.

2. **PRIORITIZE** open space as a central, organizing element in neighborhoods and large development sites.

3. **CREATE** a well-connected hierarchy of public spaces in activity centers.

4. **PROVIDE** clear pedestrian and bike connections to and between public spaces that are attractive and safe for all ages; maximize new connections to existing public spaces.

5. **LOCATE** higher-density housing adjacent to parks and natural features.

Landscape architect play a critical role in protecting our communities

As a landscape architects. It’s imperative that we learn from nature and use our knowledge of environmental processes in designing places that can reduce the risk, adapt to climate change, and function as great public open space that is ecologically and aesthetically rich

Donna Walcavage (Http:/Www.stantec.com/About-us/People/W/Walcavage-Donna.html)

Roof Garden

Environmental Benefits

Economic Benefits

Social Benefits