5 TOWARDS SUSTAINABILITY – PLANNING, INCENTIVES AND REGULATIONS

Finland is not among the leaders in applying sustainable construction and energy technologies. This calls for reorientation of policy, including incentives, regulation, education, and planning itself.

In building scale, zero- and plus-energy houses are realistic in short to medium term. The real challenge is to establish a low-carbon or even carbon-neutral Greater Helsinki region. This may be achieved through a concerted, participatory action on buildings, ecosystems and transport.

Crucial issue is how to create social demand for radically green solutions in home, neighbourhood and work. Sustainability should be joyful!

5. TOWARDS SUSTAINABILITY – PLANNING, INCENTIVES AND REGULATIONS

5.1 Institutions help making choices in relation to common good
5.2 Zero Emission Towns
5.3 “Microcore”
5.4 Environmental functions of green areas
5.5 Eco-tech farming, “Green Pods”
5.6 “Powerscape”
5.7 Building regulations’ main emphasis on demanding high level of sustainability
5.8 Addition to legislation. Part one:Buildings.
5.9 Addition to legislation. Part two: Neighbourhoods & Municipalities

5.1
Institutions help making choices in relation to common good

Entry *Towards City 2.0* states*:* “We need institutions to help us see personal choices in relation to the common good, and to ensure that public decisions carried out through official representatives protect the ‘Commons’”. ’Commons’ are, in the entry, the core values and a shared vision of the desired future. They are defined by the elected regional assembly and the HMR mayor.

The idea attempts to safeguard but also develop further the ‘commons’ as a driver for individual innovation and behavioural change. ‘Commons’ can also be seen as a check and balance routine for public decision making. The productive turn is expected from the innovative capacity of the ‘one million magnets’, i.e. the inhabitants and peer groups.

In entry *Emerald*, saving energy is encouraged by an Eco Bonus Card system.

5.2
Zero Emission Towns

The entry *Towards City 2.0* suggests a rich variety of strategies to achieve more sustainable solutions: bottom-up, top-down, commons and social entrepreneurship.

As 80% emission cuts are not easily achieved through incremental change, the entry suggests a top-down strategy: total tax freedom for zero emission towns (ZET). Such politically decided incentive should lead to very positive economic circle. With no income tax, the residents of a ZET are “rolling in money”. Ideally, a zero emission zone thus becomes an attractive model.

***

In Britain, Urban Enterprise Zones (UEZs) encourage development in blighted neighborhoods by offering entrepreneurs and investors tax and regulatory relief if they start businesses in the area. The experience shows that area-based easing of regulations or monetary incentives do also have negative externalities, which should be taken in account in Zero Emission Zones.

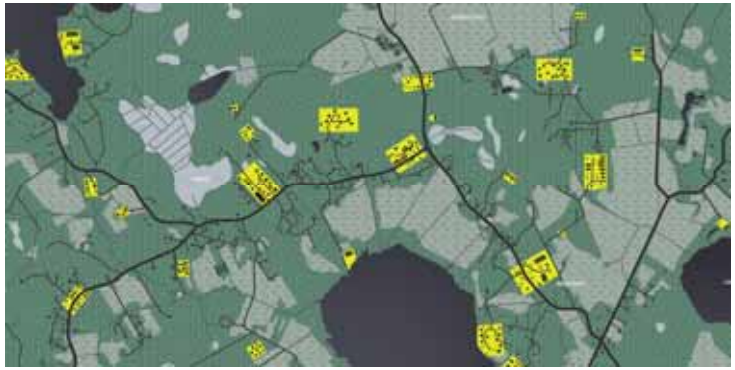
5.3
“Microcore”

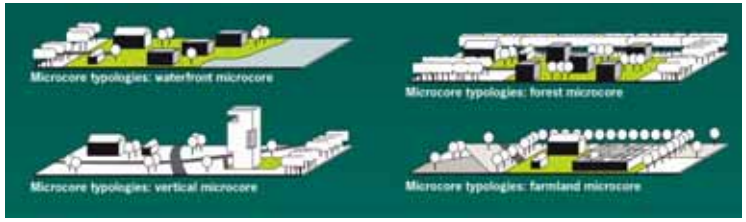
To stop the increase of urban sprawl, the entry *Metroscape Helsinki* proposes a new model for development: there will only be roughly two types of settlements: ”Cores” (cities, towns etc.) and ”Microcores” (smaller units). (See also e.g. idea cards 2.4, 3.2 & 8.2.)

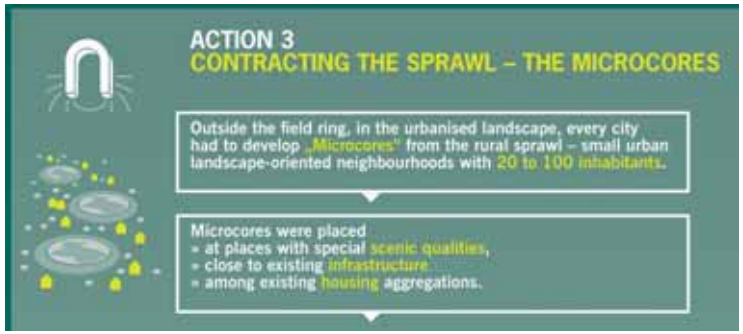
Microcores are landscape-oriented neighborhoods with 20 to 100 inhabitants. All Microcores have to be self-supplying in terms of energy and match the sustainability objectives. Microcores introduce landscape orientated housing and a model for “zero-energy-neighborhoods”.

Microcores intend to overcome the traditional boundaries of the separation of urban functions: they contain dwellings, handicraft businesses, creative campuses etc.

The implementation of the Microcores is a step-by-step development. Every community may decide whether to provide more new housing in Cores or in Microcores. Microcores establish a new way of urbanisation that can react to demographic trends in a flexible way and can offer a broad variety of places for different lifestyles.



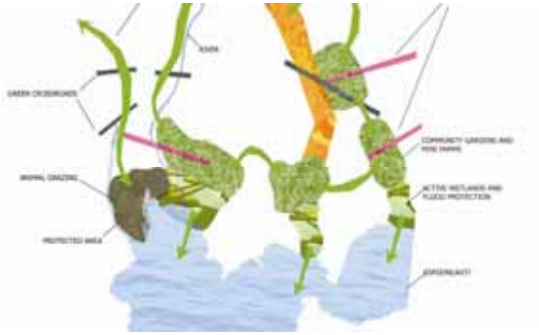


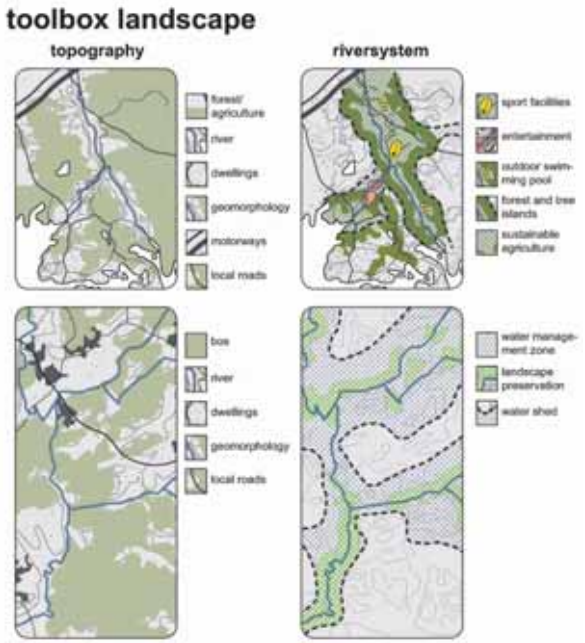


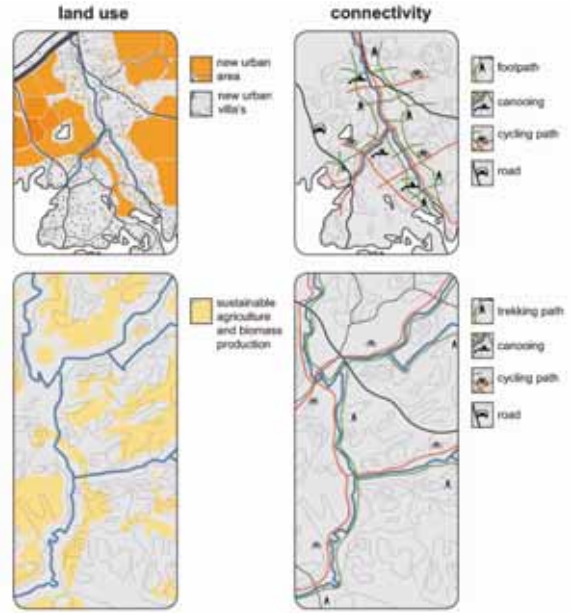
5.4
Environmental functions of green areas

The entry *Thirdlife* proposes that the rivers and valleys will be developed both as a spatial and as an ecological network. The need for enlarging the river capacity and the creation of water retention are foreseen important to capture the consequences of heavier rains and droughts due to climate change. The land use of the open landscapes is to take into account the demands for sustainable water management. The watersheds adjacent of the rivers form logical boundaries for the distinctive water management areas.

According to the entry *Emerald,* the urgency of ecological issues and the need to reduce leisure travel logically lead to investing in the quality and integrity of the green network. Some green areas will have environmental functions such as floodwater protection, water treatment, energy production, recycling and composting. Active wetlands are part of flood protection.



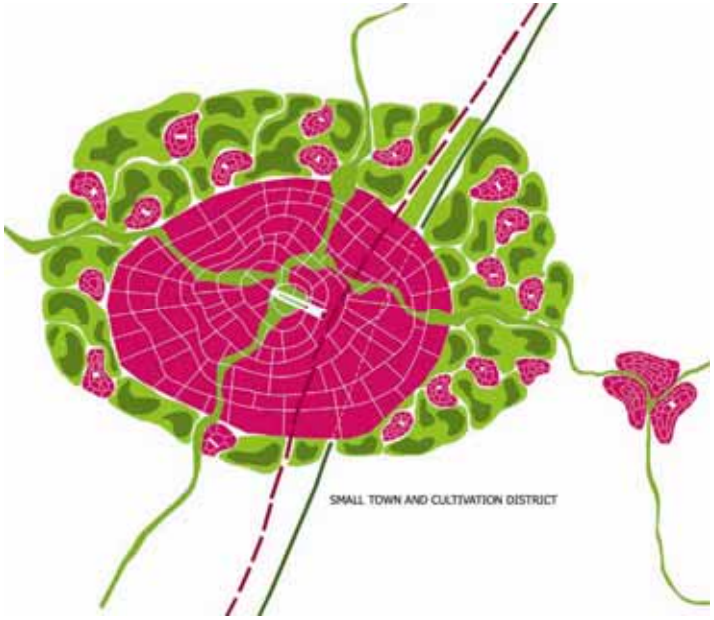


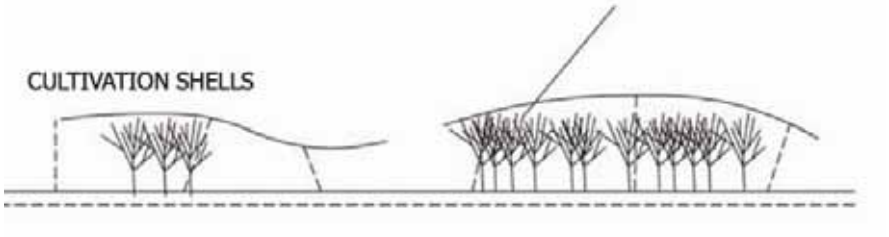


5.5
Eco-tech farming, “Green Pods”

In the entry *Emerald*, Greater Helsinki area consists of two parts: a unified metropolis on the coast, and a regional frame of small towns and villages surrounding it inland. Surrounding the small towns, there are *Eco-tech farming areas* which create an environment of their own. Areas consist of farmland and hi-tech green houses for agriculture. Eco-Tech entities, called “Green Pods”, produce both food and energy crops for their mother town as well as for the metropolitan needs: “Since the network of Green Pods was built, Finnish producers’ competitive advantage arose very quickly. Importing several cultivated plants became unnecessary and polluting air cargo decreased dramatically.” In general, entry *Emerald* proposes that energy production (biomass, waste combustion, wind, solar) will largely be local/regional.

The entry *Thirdlife* proposes: “More ecologically based forms of agriculture … and green energy are accommodated by the land use of valleys and fields in the region.”





5.6
“Powerscape”

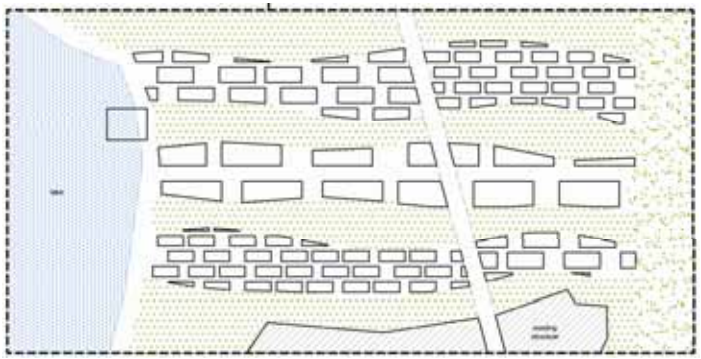
In the entry *Holistic Uniqueness*, a large special zone, called “Powerscape”, will be created in the region, for
(1) research, development and production of ecological food (less dependency on imports), (2) research, development and production of sustainable energy (waste, biomass, geothermal energy, wind power),
(3) waste management (circular economy), and
(4) development of cleaner and resource efficient technologies (decreasing material inputs, reducing energy consumption and emissions, recovering valuable by-products).

In “Powerscape” are also located environmental technology institutions, environmentally orientated education (forest-kinder-garden, omni-sensual education, holistic thinking), academy for environmental law & management of environmental protection, and information centre (sustainable energy, agriculture and farming, waste management). In the landscape, “Powerscape” is a composition of large fields and three urban agglomerations. Landscape (agricultural, energetic, pastures, natural) is used for educational purposes, profitable business and leisure activities.

5.7
Building regulations' main emphasis on demanding high level of sustainability

In the entry *Holistic Uniqueness* is proposed a new perspective on building regulations. There is an urban settlement called "Futurecraft" which is characterized by experimental building methods and proximity to natural landscapes. The settlement's economy is largely based on sustainable construction's internationally growing market and on creative manufacturing (design carpentering, furniture design), with spin-off and start-up manufacturing. Building regulations in "Futurecraft" are rather little as long as interventions are 100% sustainable.

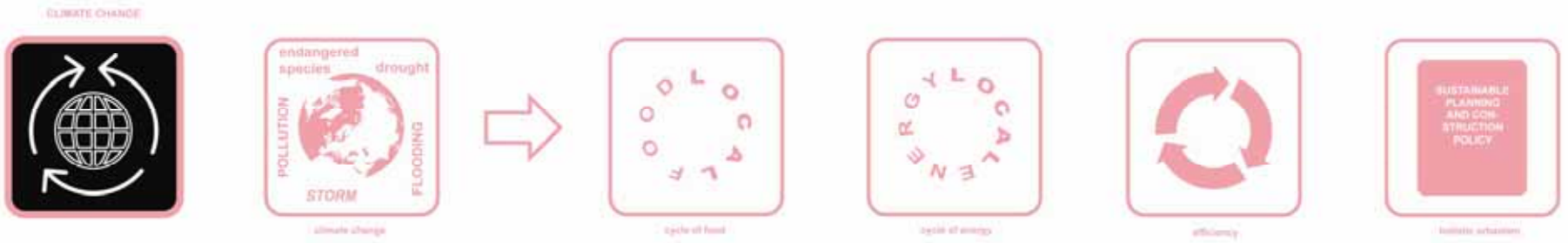
The entry *LINE_TM* proposes a special zone (called "LINE_TM") for dense development. In that zone "[t]here is no building code limiting heights or the like. Instead regulation for high sustainability will be put in place." (On "Line_TM": see e.g. idea cards 1.4, 7.5 & 8.4.)



5.8
Addition to legislation.
Part one: Buildings.

Contributions attempt to achieve sustainable planning practices and a sustainable urban fabric. Approaches distinguish between spatial levels and functions. The Entry Holistic Uniqueness proposes that an addition – a **sustainability policy** as a mission statement – is developed to building law. Concerning buildings, the addition would posit following aims:

• Build flexible buildings that incorporate the opportunity to enlarge, reuse, build on top, hang from, connect to. One prerequisite is high ceilings
• Provide permeable surfaces for slow infiltration of water
• Optimize views to increase life quality
• Use Winter Gardens as heat buffers and as recreational facility in cold season
• Optimize sun orientation to increase solar gain
• Apply intelligent and renewable materials
• Use green roofs to keep surface water in the area, to advance micro-climate and reduce pollution
• Construct buildings with good surface-area-to-volume-ratio to use as little energy as possible.



5.9
Addition to legislation.
Part two: Neighbourhoods & Municipalities

Contributions attempt to achieve sustainable planning practices and a sustainable urban fabric. Approaches distinguish between spatial levels and functions. The entry *Holistic Uniqueness* proposes that an addition, a **sustainability policy** as a mission statement, is developed to building law. Concerning neighbourhoods and municipalities, the addition would posit following aims:

• Build flexible buildings that incorporate the opportunity to enlarge, reuse, build on top, hang from, connect to. One prerequisite is high ceilings
• Provide permeable surfaces for slow infiltration of water
• Optimize views to increase life quality
• Use Winter Gardens as heat buffers and as recreational facility in cold season
• Optimize sun orientation to increase solar gain
• Apply intelligent and renewable materials
• Use green roofs to keep surface water in the area, to advance micro-climate and reduce pollution
• Construct buildings with good surface-area-to-volume-ratio to use as little energy as possible.