

Санкт-Петербургский Государственный Университет
Институт наук о Земле



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**“Устойчивое общественное развитие и
городское планирование”**

**“ Sustainable Community Development
and Urban Planning”**

Учебно-методическое пособие
(на русском / английском языках)

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В учебно-методическом пособии представлены теоретические основы магистерского курса «Устойчивое общественное развитие и городское планирование» (на английском яз.), программа и структура курса по темам и разделам теоретического обучения, даны отдельные методические указания к ним, темы для практической и самостоятельной работы студентов, список основной и дополнительной литературы, перечень ресурсов сети Интернет, вопросы к экзамену и другое.

Учебно-методическое пособие предназначено для студентов, обучающихся на магистерских образовательных программах по общественной и экономической географии, территориальному планированию и управлению, устойчивому развитию регионов и экологическому менеджменту в ВУЗах Российской Федерации, а также для преподавателей, аспирантов, студентов экономических, экологических и географических специальностей.

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1. Введение

В данном учебно-методическом пособии представлены теоретические и практические основы магистерского курса «Устойчивое общественное развитие и городское планирование» (на английском яз.).

Учебно-методическое пособие предназначено для студентов, обучающихся на магистерских образовательных программах по общественной или экономической географии, территориальному планированию и управлению, устойчивому развитию регионов и экологическому менеджменту в СПбГУ и других ВУЗах Российской Федерации, а также для преподавателей, аспирантов, студентов экономических, экологических и географических специальностей.

Цель учебного курса: раскрыть сущность и содержание современного состояния концепции устойчивого развития, применительно к обществу и городским поселениям мира, показать специфику планирования и управления по различным отраслям городского хозяйства, особое внимание уделяется правовым и социально-экономическим вопросам, выявляются основные проблемы, тенденции и перспективы для устойчивого развития городских поселений мира.

Задачи учебного курса:

- показать особенности социально-экономического и социально-экологического развития городских поселений, составляющие понятия «устойчивое развитие» в контексте для городских поселений;
- обозначить основные положения современных методов городского планирования и управления и указать основные проблемы и перспективы их применения на глобальном и региональном уровнях;
- дать характеристику современного состояния основных отраслей городского хозяйства с точки зрения устойчивого развития, проблем и тенденций на современном этапе и в перспективе;
- показать место и роль основных вопросов устойчивого развития в городских поселениях различных уровней (глобальные, средние, малые) на отдельных примерах стран Европы, Азии и Америки;
- раскрыть проблемы функционирования отдельных отраслей городского хозяйства, по правовым и социально-экономическим вопросам;
- научить студентов использовать методологические и методические приёмы в области междисциплинарных исследований.

Для успешного освоения учебного материала необходимо знать содержание курсов лекций по ряду отраслей мирового хозяйства, географии населения и расселения, развитию городского хозяйства, экономическому районированию, географии сферы услуг, геоинформационным системам, статистике.

В ходе учебного процесса используются такие формы, как практические занятия, обсуждение актуальных тем в виде диспутов, стратегические и ролевые обучающие игры по реализации стратегии устойчивого развития городских поселений мира, подготовка картографических материалов по планированию стратегических решений для городских поселений, и т. п.

Перечень результатов обучения:

- обладать способностью исследовать общественно-географические и экономические процессы и определять пути их решения;
- иметь навыки сбора и обработки социально-экономической и эколого-географической информации, владеть соответствующим методическим инструментарием;
- иметь знания о содержании современных методов городского планирования и управления на глобальном, региональном и локальном уровнях;
- знать преимущества и недостатки концепции устойчивого развития и особенности ее применения в различных странах и крупнейших городах мира;
- уметь определять факторы и предпосылки природного, социально-экономического и политического характера, необходимые для эффективного размещения и использования в различных отраслях экономики и других социально-экономических вопросах.
- знать основные факторы социально-экономического развития городских поселений, позволяющих определить их возможности для устойчивого развития по различным отраслям хозяйства;
- знать основные закономерности, условия и причины формирования территориальной структуры городской среды в зависимости от экономики с разным уровнем социально-экономического развития и экологического состояния;
- умение организовывать и проводить исследования в области комплексных междисциплинарных исследований в сфере устойчивого городского управления и планирования;
- иметь навыки выделения и обоснования приоритетных направлений в социально-экономических исследованиях, разработки методики сбора и обработки исходной информации, социально-экономического анализа и оценка.

2. Программа теоретических и практических занятий

I Теоретическая часть. Устойчивое развитие в городских поселениях и инфраструктура.

Theory - Sustainability in Townscapes and Infrastructures.

1. Введение – Основы устойчивого городского планирования и устойчивых управленческих решений в городах, урбанизация, трансформация городской среды.

Introduction - Frameworks for Sustainable Urban Planning and Management in Townscapes and Cities, Urbanisation, Sustainable Urban Transformation.

2. Концепция устойчивого развития в городском планировании, Интерактивная практическая работа «Символ пещеры» (Платон «Государство»)

Sustainable Development Concept in Urban Planning and PEBOSCA model.
Interactive practical work “Symbol of the Cave” (Platon “The State”)

3. Глобальное изменение климата и система Земля, солнечная энергетика.

Global Change and the Earth System, Solar Energy in SCD.

4. Физические ресурсы в городском планировании – Энергоэффективность (отопление, электричество), обращение с твердыми бытовыми отходами, водоснабжение и др.

Physical Resources in SCD – Energy Efficiency (Heating, electricity), Water supply, Solid Wastes Management ,etc

5. Экономические ресурсы в городских поселениях – стоимость проживания, совместное пользование, местное производство, услуги и др.

Economic Resources for SCD – Living costs, sharing of goods, local production and services, etc.

6. Биологические ресурсы и ценность ландшафтов – зеленые структуры, ландшафтный дизайн, баланс между городом и природой и др.

Biological Resources and Landscape values – Green structure, landscape design, balance between city and nature, etc.

7. Организационные ресурсы в городском планировании – регионы, функциональное использование пространства, транспортные системы, организационная структура города, системы связи и инфраструктурные сети в городских поселениях, и др.

Organizational Resources for SCD – Regions, Functional use of urban space, Transport systems, Organizational City Structure, Communication systems and Infrastructure network in communities and cities, etc.

8. Социальные и Культурные ресурсы в городском планировании

Социальные ресурсы - общественные места и частное пространство, соседства, социальное взаимодействие, взаимосвязь между поколениями, этнокультурные отношения и др.

Культурные ресурсы – национальное достояние, и ценности местной культуры, культурные традиции– ярмарки, фестивали, праздники, самодеятельность для пожилых людей, мероприятия для молодежи и др

Social and Cultural Resources in Urban Planning

Social Resources in SCD – Public and private space, neighbouring, social communication, interconnection between generations, Ethno-cultural relations, etc.

Cultural Resources and SCD – National heritage and values of local culture, cultural traditions – fairs, festivals, holidays, special activities for elderly and young people, etc.

9. Эстетические ресурсы и городской дизайн – психологические аспекты в городском планировании, городской дизайн, соотношение центр – периферия, эстетические и сенсорные (чувственные) ценности, освещенность, акустический баланс, цветовая гамма застройки, звуковые пейзажи, запахи и др.

Aesthetic values and urban design – Psychological aspects in city planning, Urban Design, Center – Superbs, Aesthetic and Sensory values, Lighting, Acoustics, Color Design in Building, Soundscapes, Smellscapes, etc.

10. Городское пространственное планирование и взаимосвязь между ресурсами – Модель 7 ресурсов PEBOSCA в теории и практике – наилучшие примеры устойчивых управленческих решений и развития городских поселений в мире.

Urban Planning and Interconnection between resources – Model of 7 Resources PEBOSCA in theory and practice – best examples of Sustainable Urban Management and Cities Development from the world.

11. Экзамен по теории курса

Examination on Theory

II Практическая часть. - Устойчивое городское планирование и моделирование. Practice - Sustainable Community Planning and Modeling.

12. Практическая работа – Экспертная оценка по устойчивому городскому планированию и моделированию устойчивых решений развития в городских муниципальных образованиях (МО) С-Петербурга (в различных районах СПб)

Practical work – Expert Assessment on SCD planning and modeling of sustainable solutions in communities (municipal districts) of St.Petersburg (in different districts of SPb)

13. Представление результатов практической работы / Семинар – презентация результатов

Evaluation of Practical work results / Seminar – Presentation of Results

14. Экскурсия в район МО “Ольгино” – малоэтажная городская застройка – зеленые структуры, социальные отношения, интерсенсорная прогулка. (дополнительно по согласованию)

Excursion to Olgino area – Small house area – green structures, social relations, intersensory walk.

15. Экскурсия в район МО “Звездное” – многоэтажная городская застройка, проекты “Экодом” и “Клумбы на мусоре”, система раздельного сбора мусора. (дополнительно по согласованию)–

Excursion to Zvezdnoe area – Multi-family house area, projects “Ecohouse” and “Garden on the Garbage”, garbage sorting system.

3. Содержание теоретических занятий (на английском языке)

Материалы для теоретических занятий по курсу подготовлены на основе источников:

1. Berg P.G. & Livsey S. (eds) (2014) *Timeless Cityland – An Interdisciplinary Approach to Building the Resilient Human Habitat*. SLU and Baltic University Press at Uppsala University, 380 pp.
2. Berg P.G. (2010) *Timeless Cityland – An Interdisciplinary Approach to Building the Sustainable Human Habitat III. Book II: Sustainable Community Development*. SLU University and Baltic University Press at Uppsala University, 249 pp.

Introduction - Frameworks for Sustainability

Where can we find the tools for understanding sustainability in human habitats? The scientific community notoriously develops criteria, indicators and frameworks for our thinking. Practical professions like planners, builders and managers extract their categories and properties from real examples in cities, villages and landscapes. A diversity of *frameworks* thus emerges from our need to curb the global crisis. Framework refers to meaningful categories or parts of a concept. In this case we will be looking for different frameworks for *sustainability*. How can we use these frameworks for our thinking and acting in a meaningful way? If they are good they will remind us of all relevant aspects of sustainability. If they function well they will be *universally useful* whatever scale, whatever place and whatever situation we will encounter as planners or researchers. A good framework must also be internally consistent.

A diversity of frameworks and the need for dimensional integration

The most well-known framework contains three critical dimensions of *sustainable development*. The ecological, economical and social sustainability were established as the basic components for global, national, urban and rural long-term survival now 13 years ago. Starting from the time when the “Agenda 21” conference in Rio was launched (UNCED, 1992). Although this is affluently cited, there are many such frameworks for organising the understanding, analysis, plans and implementation strategies in future human cultures. The international community has – via the United Nations conferences, the Club of Rome and the World Bank - produced a number of such frameworks during 30 years (see below). Swedens 15 environmental goals (2002) is an example of nationally developed frameworks for sustainable development. Within the Swedish professional planning community *e.g.* the Swedish Society for Town and Country Planning, the framework for sustainable urban development is encompassing a broad framework including *ecological, social, cultural and economic* aspects. There are also scientific-consultants networks producing universal frameworks for working with sustainable development. One of the internationally most successful frameworks has been formulated by the Adkisson consulting group (Adkisson, 2005). They work with what is called *the compass* where the directions (NESW) represent their framework goal for sustainable development: *Nature, Economy, Society, Well-being*. Other frameworks have different starting points: living systems (a biological framework), human beings (a sociological framework) or human settlements (a planners framework). This book is organised within the last category: a *planners framework* for sustainable community development.

But frameworks may also be traps of the mind. In real life different aspects are interwoven or deeply interdependent. Frameworks therefore also need to be supplemented with tools for integration. Energy consumption in households typically depends on several aspects like city structure, lifestyles and technical systems used. Interest among community inhabitants, for culture or green areas is dependent on the social strength and communication in families and between inhabitants in residential areas (Berg, 2010). Such integration of aspects of sustainability can best be studied in real cases. In this book

we will present thinking tools for such integration but also give a number of examples in different scales, where links and relations between dimensions are highlighted.

The indicator dilemma

Frameworks are now developed by different actors and on different levels. Still more affluent is the production of *indicator systems*. The problem is, however, that we would really need to develop a specific set of indicators for each site, for each situation. The reason is that every conceivable place has its unique natural and cultural settings – the variation in human habitats is - when looking at its details or patterns - inconceivably high.

UN conceptions of Global Change and a call for Action

For more than 30 years, the concept of *sustainability* has been defined and discussed and redefined in United Nations international Summits. Since then the concept has been continuously investigated and transformed into action plans, within many of its different organisations. The Stockholm meeting 1972 on the environment (UNEP, 1972) raised the question for the first time: how can we save our waters, soils and the air we breathe? How can a sustainable housekeeping with natural resources be realised? From this moment, the global environmental issues were no longer a concern only for activists in idealistic organisations.

But industries and governments were worried. Was this the beginning of the end of the growing affluent society? Was there a threat to production, consumption and a comfortable life? How could a protected environment be reconciled with a developing economy? A first answer was given in the book *Our Common Future* (WCED, 1987) - 15 years after Stockholm: The combined objective now became to protect our common environment and at the same time promote an economic development. Physical *and* Economical aspects of sustainability were thus emphasised. The world's most cited definition of sustainable development became:

A development that meets the needs of present generations without compromising the needs for future generations.

Five years later in Rio de Janeiro the international community was ready to sign a document with a new level of understanding of the concept. The large UN summit thus adopted *Agenda 21* (UNCED, 1992), which now emphasised three equally important aspects of sustainability: ecological, social and economic. The meeting was a call to all communities – from villages to whole cities – to develop a local plan for implementation of the Agenda. Only four years later - in Istanbul - the understanding of what it takes to protect and manage our world over time, reached a new level.



Logotype of the Habitat Agenda: This is me in my house in my habitat

At the *Habitat II* meeting (UNCHS, 1996) the framework for sustainability was formulated in the *Habitat Agenda* and the *Istanbul declaration*. It stated that sustainability must penetrate and become implemented in schools, workplaces and human settlements. From now on, the *life-style* of the inhabitants of the earth, need to change. From now on, the aspects of sustainability encompassed seven clearly discussed dimensions: the physical resources, the economical values, the biological diversity, the organisation of human habitats, the social interactions between inhabitants and the cultural settings. All related. All equally important for curbing the planetary crisis, still rushing ahead (Steffen *et al.*, 2004).

Several meetings have followed, reassessing earlier action plans and analysis: The Kyoto-protocol was signed by most of the world's nations (1997), with the aim to reduce green-house gas emissions. Habitat + 5 was held in New York 2001, Istanbul + 10 was

held in Johannesburg and Stockholm + 30 was held in Stockholm 2002. All the meetings and reports since the Istanbul meeting says the same thing: We now know why we need to act, we now know who should act – from governments to individuals in human habitats. It just needs to happen. For the coming years we need cases, examples, best practices. Real projects also have to be realised in democratic and clearly visible settings (WRI, 2004; WWI, 2004). The message is clear and can be interpreted thus:

We need good examples, transparently communicated in democratic settings, well-designed role models of sustainable community development, pedagogically displayed in schools, for politicians, for planners, for industry and for the general public.

The Habitat Agenda and PEBOSCA model for Sustainable Community Development

What makes the *Habitat agenda* so particularly important for sustainable community development? One obvious reason may be that it touches the spheres, where we live our everyday life. The house where we decide to live, the car we use when we travel, the food that we choose to eat and the recreational habits we get used to.

All these very close aspects in our lives, potentially encompasses an environmental revolution. We can build or rebuild radically improved energy-, water- and materials-efficient houses, which are at least a factor 2 more efficient than current houses in the Baltic Sea Region (BSR) Factor 2 means that the same product or work requires only half of what is the standard. Factor 10 energy consumption thus means that only 10% is needed of the standard situation. We can choose to travel in cars that – with regard to the use of fossil fuels – are a factor 10 more efficient than the average car in the BSR. We can choose to eat food that has travelled a factor 50 shorter than today. We can decide to utilise smaller distances for our meetings, recreation and shopping. But maybe it cost us too much money? Maybe a more sustainable life-style limits our freedom or opportunities? On the other hand, maybe it will instead open up new songlines in our lives?

The *Habitat agenda* reminds us once more about the link between our complex lives with complex aspects of what is a good life on the one hand – and the global predicament on the other. It is the concerted minute decisions and actions of millions of inhabitants, consumers, schoolchildren, employees that can have a dramatic effect on the planetary function of tomorrow.

The Habitat-agenda sharpens the objectives – we all need to participate

Two major conclusions were presented at the *Habitat II* conference (UNCHS, 1996):

- 1. Sustainable habitation is not only deals with physical resources, but also include social, organizational, economical and cultural dimensions.*
- 2. Sustainable habitation can only be achieved if the inhabitants freely wishes to work for it.*

The first conclusion relates to a holistic approach to habitation. To be able to speak about sustainable habitation, more aspects than usual need to be adressed. The other conclusion means that the citizens must have a role, according to their own preconditions, to play in the planning process.

From political declarations to sustainability resources frameworks for planners

The first conclusion in the *Habitat-agenda* on sustainable habitation – *a sustainable habitation is not only about physical resources – but also includes social, organisational, economical and cultural dimensions*, need to be more concrete and implementable for planner, politicians, researchers and the inhabitants. Maybe especially for the residents, considering the second conclusion from the *Habitat-agenda*: - *a sustainable habitation can only be achieved if the residents themselves accept in*. The mentioned dimensions – physical, social, organisational, economic and cultural – can be further developed and explained in terms of seven *sustainability resources*. The model we suggest has successfully been tested in several research and development projects.

The PEBOSCA model

The framework for place and situation analysis as well as for the construction of sustainability strategies was developed from the *Habitat agenda* (UNCHS, 1996) and was described in detail by Berg (2010) and was used for the analysis of local areas in four Swedish cities (Berg, 2004a). The PEBOSCA framework model is summarised in Table 1 and also constitutes the structure of part A of this book. A basic hypothesis is that *no region, city, city district, town or local community can obtain a sustainable community development without a systems optimised assessment of these seven resources.*

Table 1. Seven resource categories derived from the Habitat agenda (UNCHS, 1996) used in *Timeless city* as the planning framework for inventory of sites and situations and for the formulation of sustainability strategies.

Resource category	Examples
Physical resources	Clean water, air, energy, matter and soil available to the residents of the community
Economic resources	Houses, roads, tools, knowledge and informal economic services of important to residents
Biological resources	Species, biotopes and ecosystems in natural and culturally moulded site landscapes
Organisational resources	Plans, orders, laws, infrastructures, services and informal rules typical for the community
Social resources	Relationships, communication and co-operation between community inhabitants. Health status and level of well-being in community
Cultural resources	Knowledge of older and younger history and cultural patterns. Existence of fine arts, traditions and ceremonies within or of significance to the community
Aesthetic resources	Sensuous (e.g. visual, auditory, tactile or kinesthetical) impressions, influencing individuals' mood and the common spirit and atmosphere of a community

Durable Lifestyles

The house, the car, the food we eat, the shopping and consumption habits of modern city man. Those are today's roots of a global change in atmospheres, oceans and soils. It is not a coincidence that our everyday habits recurrently are discussed in political documents on sustainable development or research conferences addressing its implementations in habitation, travel and food production and consumption (WCED, 1987; Lundgren, 1992). During the first phase of the environmental crisis, Rachel Carson pointed out our alarming new chemical habits and their threat to birds as well as man (Carson, 1962). *Silent Spring* is a remembrance of the time we urgently had to stop direct and local emissions from chimneys and wastewater pipes, chemical additives to food and fodder. *The point source pollution* (BUP, 2003) has been replaced by consumers actions, individually causing no immediate problem. But the concerted effect of millions of consumers every-day habits, slowly sweeps the fertile soil to the sea, sluggishly raises the heavy metal contents of sediments and tardily shifts the gaseous concentrations in the atmospheres to levels alarming for biospherical and geospherical processes.

So lifestyle matters. But how much? A growing amount of studies imply that lifestyles could have the potentially single most important effect on Global Change. Technical innovations, systematic shift to renewable energy and materials, urban structures (Petrol to surface-ref), taxations and trade also are important factors – but human everyday lifestyles appear to possess the greatest power to change the world.

What does it take to adopt a sustainable lifestyle?

If we know about the problem, why don't we change our habits? In polls all over the world, people think our resources and environmental problems should have a great priority. But the step from words to action also seem to be very long. In table 2 a number of possible

“conditions” for changing into more sustainable travel habits, habitational routines and consumer customs are listed.

Table 2. Hypothetical conditions for adopting a sustainable life-style (Berg, 2010; Berg 2002). Knowledge about the Global environmental crisis is only a first precondition to increase the use of public transport, renewable energy, resource efficient habitation and the choice of locally grown food, which may support a sustainable development. To many environmentally committed people, knowledge may be enough, but global statistics combining knowledge about environmental problems and actual consumption and lifestyle actions support that most citizens will not change to a less affluent lifestyle unless it offers more to the individual (WWI, 2003; WRI, 2004; Berg, 2010)

Condition	Hypotheses
Time consumption	New sustainable techniques or habits cannot take more (linear) time
Economy for the household	New techniques, habitation or travel cannot be more expensive in household economy
Freedom to stay and to move	New habits cannot limit personal freedom to move, communicate or choose to stay
Organisation of everyday life	New habits cannot crave more effort in the organisation of every-day life
Security	New habits and technique must contribute to health, security and safety
Aesthetics of new habits	New habits must be visually, auditory, olfactory and kinestetically more attractive
Conveniency of habits	New technique should be easy to understand, handle, maintain and convenient to use

Such a list of *conditions for a sustainable life-style* can be continuously studied in enquiries, interviews and by following citizens real actions in their everyday life. Such a framework can be called a sociologists perspective on sustainable community development.

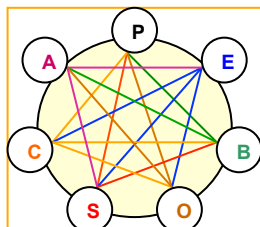


Figure 1. Model for analysing site and situation contextual sustainability properties of communities, cities and regions. This simple model is developed for factor five flow city studies from the final texts in the UN Istanbul conference (HabitatII – UNCHS, 1996) and is now used for comparing the sustainability status of Swedish and Baltic City local areas (Berg, 2004a; Berg 2004b). P= Physical; E= Economic; B= Biological; O= Organisational; S= Social; C= Cultural and A= Aesthetic resources. Irrespective what initial focus any researcher or practitioner will have on SD, it is imperative to be able to relate to all resources.

Strong Town-Country Systems

Still another basis for a framework dealing with sustainable community development draws on the compulsory interdependence between town and country – between cities and their hinterland. Whether we are aware of these obligatory relations or not, whether we study small or large life-support systems coupled to human settlement, whether the relation is organised on far distances or at close ranges – they are always there. The city cannot survive without the services from the living systems surrounding them. One very crucial framework for studying such town-country systems would have to deal with factors in table 3.

Table 3. Framework for studying sustainable town-country relations as a basic precondition for sustainable community development.

Problem to study	Current trends
Recycling or linear relation	Town-country relation from linear to cyclic relations
Scale	From large-scale city district scale to several unique scales of town- country systems
Distance	From mainly Global production-consumption cycles to further globalisation of markets or focus on towns and geographical hinterlands.

Structure of city	From active to passive town-country relationships. From green-built passive interlaces to sprawling compact cover cities or reactivation of relation between town-country systems (Factor five flow city)
Urbanisation/ruralisation	Small towns and peripheral towns are decreasing, large cities are expanding.

Good Built Environment – one of fifteen environmental goals

The Swedish Parliament have adopted a number of objectives for sustainability termed *the fifteen environmental goals* (table 4). One of these goals concerns sustainable community development. It is called *good built environment* and contain 16 part-goals listed in table 5. The latter constitute an important framework and is partly comparable with the *Habitat II* – derived framework.

Table 4. Fifteen environmental goals adopted by the Swedish government

Environmental Goal	Time for implementation
<ol style="list-style-type: none"> 1. Good air quality 2. Ground water of good quality 3. Living lakes and streams 4. Swarming wetlands 5. A balanced sea environment, living coasts and achipelago 6. No eutrophication 7. Only natural acidification 8. Living forests 9. A rich agricultural landscape 10. A magnificent mountain environment 11. A good built environment 12. A non-toxic environment 13. A secure radiation environment 14. A protecting ozone layer 15. A limited climatic impact 	<p>One generation (30 years)</p> <p><i>The goals that are judged to be difficult to reach within one generation are 9 (a rich agricultural landscape), 11 (a good built environment), 12 (a poison free environ-ment), 13 (a safe radiation environment), 14 (a protecting ozone layer) and 15 (a limited climate impact)</i></p>

Table 5. Sixteen goals for a good built environment adopted by the Swedish government

Goal for a Good Built Environment	Time for implementation
<ol style="list-style-type: none"> 1. Experiences of beauty and feeling at home (thriving) 2. Waste and waste products are sorted, treated and reused in ecocycles between the city and its environment 3. Energy, water and other natural resources are efficiently used and adapted to the environment 4. A varied range of homes, workplaces, service and culture for a rich life and less daily transportation 5. The cultural, historical and architectural heritage is protected (buildings, environments, places and landscapes). 6. Nature and green areas are protected for play, recreation, local cultivation and a healthy local climate 7. The biological diversity is protected and developed 8. Transports and transport constructions are designed for minimal impact in the city and natural environment. They must not constitute security- or health risks or otherwise be disturbing in the environment 9. Less waste and less dangerous waste should be produced 10. Gravel ridges, with a great value for the supply of fresh water and the landscape, shall be protected 11. Natural gravel should only be used if there is no appropriate alternative materials 12. Renewable Energy sources should foremost be used 13. The ground and the water are free from toxic materials, harmful compounds and other pollutants 14. No harmful air pollutants, noise, radon concentrations or other 	<p>One generation (30 years)</p> <p><i>The goals that constitute particular challenges in Swedish municipalities are number 8 (Transport impact) and number 12 (Renewable resources). Also the goal number 6 (Protection of nature and green areas) is currently under debate.</i></p> <p><i>In a Baltic Sea City perspective and except for 8 and 12, number 6 and 7 (protection of green areas and diversity respectively), as well as number 15 (A secure pedestrian and bicycle traffic) are particular challenges.</i></p>

unacceptable risks	
15. Good preconditions for a secure pedestrian and bicycle traffic	
16. An environmentally adapted public transport system	

A Pattern Language of Sustainable Urban Development

To be able to handle the complexity of human settlements, planning always need to handle a manifold of variables, i.e. different land uses, traffic systems, work places, human culture. This complexity increases further when sustainability aspects are included like for example new types of renewable techniques, economic life expectancy of buildings and equipment, biological diversity and lasting social networks. Another complicating matter is the large number of stake-holders, having interest in the sustainability puzzle of a city. To deal with this complexity we will need tools and methods that can deal with components and at the same time handle the whole complex. One such method is commonly called *pattern language*, where a large number of specific planning problems can be analysed separately and then be added to other specific problems to form a network or pattern of part solutions that altogether will add up to a contextual solution. The most well-known *pattern language* was published 1977 by a group of architects, landscape architects, geographers and sociologists at Berkeley, California (Alexander *et al.* 1977).

When it was published, the researchers never used the term “sustainability” although all 253 patterns were all relevant to sustainable community development. What was missing was a great number of physical aspects on e.g. energy, water or material management.

One example of a pattern

Every pattern is made up by one starting problem, a discussion on what we have learned in international planning and design about how to solve this problem and finally a proposal for a solution. One example is how *minibuses* can be used for public transport in a city. The problem – which is inspired by Alexanders pattern language can be formulated like this:

Minibuses

Travel within and between city districts may be too expensive if it is carried out everywhere with ordinary large city buses. If only private cars are used it will cost a lot for the environment and walking and biking may in some instances take too much time and rules out some groups – like children and some elderly.

Then follows a problematisation: How often do we need to move in the district? What do we prefer: flexibility or low price for traveling? Can we use technology in new and innovative ways?

The pattern ends with a proposal, preferably by specifying some number:

Introduce a system of comfortable but fairly cheap and clean minibuses, which is co-ordinated with an intelligent booking system, which can be reached by internet or by mobile phones. A logistics programme will calculate how to optimise the route to minimise waiting times and route length for all the interested passengers. Minibus systems should be introduced within each city district not larger across than 2 km.

Each pattern is condensed into 2-4 pages and should be seen as more or less provisional. *The reason is that every site and situation is unique and the pattern thus need to be adapted by its context.* The point is that by formulating a number of relevant planning problems, adapting them to the specific site and finally linking them together into a *language*, we will have a taylor-made blueprint for action – specific to a unique situation and site. The starting point – however – was to adress a universal need for local urban mobility – supportive of its residents and for the environment.

In this book we will use a pattern language for describing a number of universal problems that need context-specific solutions – related to the Habitat framework for sustainable community development.

I Physical Resources

Introduction

Every site occupied by humans must be able to *nourish* its population. Water, food and materials must be continuously supplied. This is equally true for cities, smaller communities and rural farms. Until now linear flows have dominated – which means that in one end we empty the resources of oil, metals, soil, species and clean water and in the other end we save and spread our polluted waste products. We urgently need another way for sustainable physical resources management.

Materials, water and energy sources must, eventually, become renewable. Neither raw materials nor waste products can be allowed to affect the health of humans, or – in principle – other organisms. The densely built city has very limited areas for the management of sewage and refuse. This makes it reasonable to rely on *central recycling systems*. On the outskirts of the city and in rural areas, however, it may be easier and more efficient to process both surface water and organic refuse in *local recycling systems*. As we shall see later – the scale plays a role for the efficiency in recycling.

The Problem: How to teach about Global Change and good examples

During the past 30 years, much knowledge has been gathered about environmental problems, energy, water and material systems. Still we obviously have a great difficulty with the distribution of necessary knowledge, especially in two ways. We need continuous updated knowledge about the state of the world and Global Change. We also need to distribute the experiences gained in successful projects and cases.

The Earth's hymens are still trembling. The thin macroscopic atmospheric layer of gases is deranged. Its concentrations of Nitrogen, Oxygen, Ozone, Nitrous oxide and Carbon Dioxide is out of balance (IGBP, 1979-2004). The thin microscopic water layer on soil crumbs contain too much nitrite and other soluble nitrogen oxides and ions. As in a complex fabric - our oceans' salinity, temperature and currents, our atmospheres' gaseous mixtures and our soils' fertility and healthiness are coupled to disturbances in the planet's biogeochemical cycles (IGBP, 2004). We can clearly see that these recent changes in the world's large cycling systems have a strong correlation to human development and processes. In the perspective of the world's own natural history we are now living in the *Anthropocene Era*.

Recent international meetings on Education for Sustainable development thus calls for urgent education on the matters of our survival – for school children, for university students and for professionals in many positions. Recent global surveys (WRI, 2004; WWI, 2003) also calls for immediate and transparent spreading of best practices, renewable technology, instructive cases in different scales of the city. Recent works on the role of planning for sustainable development (Nilsson, 2003) also demonstrate that planners and planner researchers need further education on the state of the world and good cases.

What will we need to educate about? What is the current burning problems with regard to physical sustainability? What are the current understanding of physical resources? What techniques can be expected to evolve, with which we can diagnose, treat and plan our biologically sound and culturally vibrant human settlements for tomorrow? This chapter will focus on these problems and end with some key patterns for physical resources.

Care for The Planet

Cities, towns and rural areas must gradually *reduce* the need for heat, electricity, water and materials. In Sweden, the levels need to be typically halved compared to what was used at the end of the 1980's. A transition to renewable energy will gradually further ease the pressure of human settlements on the life support systems (Odum, 1989). Through rebuilding existing houses, *heat and electricity consumption* can be reduced by a third. All

newly built houses are particularly energy efficient. Solar heating and renewable district heating can be built within a decade in most urban areas.

Experiences from the Baltic sea region shows that *water usage* can be decreased by employing flow limiters and taps, low-flush toilets, dishwashers and washing machines that are designed to use water sparingly. Experiments have demonstrated the potential for new local sewage plants which, in conjunction with separating toilets, can produce clean urine for fertilisation of arable land, and clean sludge. Wide-spread experiences from many European cities show that the solid *waste* can be source separated and the organic refuse can be composted through partly different techniques in either individual or communal composts. Farming and garden refuse can be composted in private gardens or on green commons in large areas of the cities and towns. Local cultivation and farming can occur as a supplement to the industrial systems producing for the big and distant markets.

Especially in the former Eastern countries around the Baltic Sea, production of vegetables, milk and meat is still produced fairly close to the consumers in cities, towns and countryside hamlets – which require less transportation work than in the west. Developing countries demonstrate the extreme potential of recycling of still usable goods and material. Furniture, childrens' clothes, toys, magazines and books, etc may not be discarded as refuse, but may - even in future western cities - be repaired, re-used or donated for collection.

A new focus on hygiene and clean materials in the recycling society

Great care must be taken when choosing the materials and construction solutions for the sustainable cities and towns of tomorrow. The goal must be to eliminate harmful micro-organisms, dangerous organic gasses and stable substances, foreign to the natural environment. This also applies to heavy metals and other harmful substances. The composition of building materials is of great importance. This applies to the framework of the house (loadbearing, insulating and potentially subject to weak electrical fields). It also applies to surface layers (paints, glues, varnishes, floor finishings, joints and substances used for impregnation) and to various types of equipment (refrigerants, metals and heat insulation materials).

To ensure healthy levels of moisture in the air and effective air circulation in settlements, schools and work-places, ventilation systems must be carefully designed. The Baltic Sea region is situated at latitudes which make the amount of daylight that reaches indoors an important health issue. Therefore, the number, shape and positioning of windows has been a major concern when building the new houses.

Physical Resource Theory

Physical resource theory teaches us about physical resource flows and amounts and their biogeochemical origins. It is founded on technical physics, geology, biology and economics. It investigates how physical resources are valued in our current economy and what dilemmas will occur if and when these resources run out. It also provides a taxonomy and theory about different types of physical resources and their qualities.

II Economical Resources

The prudent management of economical resources is an important part of sustainable community development. Environmentally concerned people, however, sometimes have difficulty in appreciating the importance of economical factors in environmental work. Many economists, on the other hand, have difficulty in understanding how important natural resources and social relations are for achieving sustainability.

Our already processed natural resources in the form of buildings, roads, equipment and machinery play a central role in the careful management of our physical natural resources. A predictable economy and reasonable living costs are a prerequisite for

wanting to live in a specific place, for accepting market costs and for supporting governmental expenditure.

The Problem: How to reconcile Markets, Politics and The local Commons

Current economics most often deal with two mainstream aspects. The first is connected to the public interest economy often related to defense, infra-structure, schools and other social services. This is often termed *macroeconomics*. The other aspect is dealing with transactions by companies and organisations on different markets – often termed *microeconomics*. A third aspect is the common properties in a society of which a special case in economic science exist called *open access property*. The economy of *households* to some extent resembles the economic system of a company but in today's modern life there are some very large differences. How can these different aspects of economy be reconciled? It is a legitimize question since sustainability affects and is affected by all these aspects of economy.

Macro- and Microeconomic theory

The dominating economic theories address the need to exchange services and goods on a free market. Micro or Company-economics study this aspect. An ideal market system display a perfect competition situation, where the producer of the best and cheapest product among a number of similar producers will have the greatest chance to find buyers for his product. Information on all possible products will, in the ideal market be available for everyone, making it possible to choose freely from all the range on the market.

Another part of the economy is the society's economy or the macro-economy. In this case the elected representatives of the people control common investments and activities that is done for the common good of the people in a nation, a municipality or sometimes in supranational bodies like the European Union. Traditionally the state or the municipality runs the economy for hospitals, defense, infrastructure and education as well as for upholding the legal system of the state.

The environmental issues have started to be integrated in both micro- and macro economic theory. Two branches of this new adapted economic theory is called environmental economics and ecological economics respectively. In both cases the values of a clean environment and natural resources are discussed at the same time as traditional economy's raw material, capital, know-how, profits, range and demand.

A New Economic Paradigm

In a new economic paradigm, there are also other factors, playing important roles for creating a sustainable economic situation. This economy supports strong social organisations in companies, cities and small communities. This economy support the public environmental interest in public transport and reasonably sustainable consumer patterns. This economy has the ability to evaluate non-monetary values like culture, beauty and enjoyable environments. This economy can provide theoretical and practical tools for an effective and transparent remedy to Global change, addressing the difficult issue of the life-style of individuals.

Common Property Theory and Homo Economicus

The new paradigm has one of its basis in Common Property Theory and also in family economics. The basis of managing open access values must involve methods for managing the common good, controlled with instruments from common property theory and this should probably be integrated mainly in macroeconomic theory. It is reasonable that the long-term household good should be the fundamental reason for the economic organisation of the civil societys part in a three part economic system. That system should balance the power of economic control between the state, the markets and the self-organising powers of the gemeinschafts of the civil society.

III Biological Resources

The ability of plants to oxygenate the air through photosynthesis is a prerequisite for all life on Earth. As a species, we are adapted to life in the forests, fields and on the shorelines. Our skeleton, blood, our joints and lungs have been shaped and formed through interaction with other species and different ecosystems over millions of years. Close contact with nature and the opportunities for recreation that it offers are important to all people.

The Problem: The Edge City Green Paradox

Green is nice. Playing in the fields, walking in the forest, smelling the garden flowers – all common scenes of childhood, exercise, recreation and social, relaxed meetings. Green areas also signify monetary values. Otherwise comparable houses with grown-up gardens have a higher price than newly built allotments without. Offices facing parks or waterfronts are much more expensive than those facing streets.

On the other hand, the green structure sometimes in planning doesn't count at all. All this is nicely illustrated by the *Edge City Green Paradox*. After the second world war American cities still had a lot of green structure intermixed with built areas. As they developed the green wedges and strokes were gradually exploited for new settlements. The new housing areas were freely spreading out – in accordance with market rules and a free mobility – over the “inner green frontier”. Today when new “edge cities” are developed they are situated on the “outer green frontier” – *i.e.* the boundary zone of the sprawling city and the wilderness. This development pattern is now slowly transferred to – among other places – northern Europe. How come that we don't see the values of the green inner boundary zone? How come that we don't recognise the green structures in different scales as absolute *town construction elements*, just like roads, houses, pipes, communication lines and squares? There seem to be a blind green spot in our thinking of what is the meaning of the city.

Biology, Settlement and our invisible Allies

The organisms of the soil have for more than three billion years of development refined its ability to fragment, sort and pack organic matter in consumable units other living organisms. The different soil-processing species have, as members of a cooperating network, become adapted to handle most of the known organic and inorganic components of the earth's crust.

The soil microflora of bacteria and fungi constitute - together with the soil fauna and plant root systems a virtually complete biochemical laboratory. Anyone who learns to know these organisms, disposes powerful tools to extract pure drinking water, combustible methane-gas and alcoholic energy, oils, metals in solution and saturated metals. Any person who understands the properties of bacteria can also develop methods - in artificial and natural ecosystems - to enrich metals, purify chemicals, neutralize acid, harvest the energy of sunlight and fix nitrogen, transform nitrate, ammonium and nitrous oxide to nitrogen gas and even to improve fertility in soils.

With relatively simple means it is thus possible to release our natural resources and to protect our cultural landscapes with the aid of blue-green bacteria, bacteria, algae, fungi and actinomycetes with a high degree of efficiency and without troublesome waste products. The microorganisms are most easily controlled in the soil-rich outskirts of cities and towns. There - in the periphery of urban structures - there are room enough to establish the local and regional lungs and kidneys of the communities. These solutions will be working differently in densely and thinly populated areas - but with the same indispensable cleaning function in a sustainable community.

Sustainable Urban Plant-Soil Systems

The parks and gardens of urban areas play an important role in Baltic Sea City areas. During the a few hundred years, the urban plantations were supplied with plant material from local nurseries that were strongly aware of its appropriateness with regard to frost hardiness and soil conditions. Up to the 1960-ies they even kept seeds and mother stock for vegetative propagation of key species. The result was resilient park plantations that could withstand climatic fluctuations, indigenous pests and other stress they were submitted to. Starting from the mid-sixties in the Scandinavian countries and Finland an intense building of new residential areas started. This was accompanied by a shortage of trained people and appropriate plant material. This lead to a fast increase in the import of plants from countries with a warmer climate – plants that furthermore were not adapted to soils and micro organisms from the region. In the eastern part of the Baltic sea the same expansion of new settlements was happening but the green structure was not prioritised.

The knowledge about a sustainable management of plantations in urban areas is poorly spread and thus need to be better distributed to nurseries, construction companies and managers of parks and other planted areas. In the Nordic countries a new awareness is slowly emerging and in the eastern countries it is not until now that the interest for renewing the small scale green infrastructure in courtyards and along streets is waking.

The Fractal importance of Green Structures

The green structure of cities and towns has a diverse set of meanings in a sustainability context. Access to green areas is important for all urban residents. If it cannot be experienced where they live, they will instead – if the can - commute to find the green spots or sometimes the wilderness. And the importance of green areas can be described on four levels.

The first is the greenery at the entrances of houses. These bushes, grass space and flower beds are often taken for granted for daily encounters on passage out of or into apartments or private houses and for watching from your window. The next scale is the likewise compulsory common green, the courtyard or the street connected to private houses. This is a half-private space which constitute your close scaled mobile space on your way to shops, schools or commuting nodes. The third level of green structure is the mid-scaled wedges, forest islands or large common greens embedding the typical Nordic mid-city – the first suburban small-scale wilderness. The fourth level is what is conceived as wilderness, where the city signs off and where nature takes over. This is the large patches, strokes or continuous areas of forests, valleys and fields being a part of ecosystems or agroecosystems. This is where humans meet their roots, where we will encounter the great creation of which we are an existentially fundamental part.

To all these scales of green structure we need reasonable access in the sustainable city. They may all be connected. They are all needed for different equally important purposes.

IV Organisational Resources

Environmentally friendly solutions and respect for nature are not sufficient for the creation of sustainable cities, towns and villages. Everyday life in houses, schools and at workplaces and their surrounding areas must be made practical and simple. A never ending improvement in transport, telecommunications and local services need to occur that is subordinate to the function of everyday life of work, school and recreation, which is at the same time environmentally friendly and comfortable.

Transport of people and products, is today the cause of the most serious environmental problems in modern cities and regions. Efforts to curb the use of cars, frequent public transport and small scale urban networks suitable for comfortable cycling, walking and other light means of transport, are key measures for a sustainable city. It must be easy to

reach local centres with a diversity of environmentally adapted transport modes: *e.g.* bicycles, electric cars, trams or mopeds, bio-fueled buses, minivans or trains.

On the local level access to locally organised work places, part time distance work, and services is a way to take a load of the city's service support obligations. An informal economy and the possibility of play and find recreational activities near the home will further reduce the transport of both people and goods. *Local telephone systems and intranet* in the city's housing areas, within companies or schools providing low or no charges may compete with long-distance service and social travel (Berg, 1996). It will definitely make it easier also to organise shopping, shared transport and barter. Gardening and cultivation tips and information concerning sports and cultural events can easily be exchanged with local communications systems.

The Problem: Dense or Sprawled Cities?

One recurring issue in the debate of sustainable cities concerns the form of the city. What organisation of urban space will contribute mostly to resourcefulness, clean ecosystems and to human health? One strategy is to decrease the mobility by forming local production-recycling-consumption units for most of the cityscape. This has been clearly described for small communities in the countryside in a Baltic Sea perspective but also in more futuristic scenarios for urban development. For non-dense areas this is an appropriate form, but for the urban landscape it may be difficult to convince academia that this model doesn't lead to the opposite of what it is supposed to, namely to save energy and nutrients.

The other strategy for saving resources is to densify the cities. The idea is to reduce the need for transportation between home and work-places and to increase the foundation for services in the urban environment. Here the problem instead is to convince other researchers and planners that it is possible to reduce green structure of different scales to the extent the authors wish.

A hypothesis in the *factor five flow city* project is instead to keep a dense modestly defined center, densely built fingers of townscape structure, intertwined between and within them with green and blue wedges of large and medium scale respectively. The form of different townscape types will also vary according to any framework of sustainability that we choose.

Networks and Cybernetics of Cities and Towns

Infrastructures and in particularly roads, railroads and communication lines constitute the basics of a living cultural cybernetic system. Up to a certain level free access to roads, streets and paths is stimulating for cultural exchange, which is the basis for human development and a good life. A free mobility can even be combined with a sustainable development if it is based on renewable energy, if it's primary production requires little new non-renewable materials and if it's operation and indirect impact on ecosystems and demand of limited physical resources are low. Current development in the countries east and south-east of the Baltic Sea, however, suggest that unlimited growth of private mobility in cars, a fast growing affluence of consumption goods, may rapidly influence a number of urban sustainability factors negatively. With city centres full with cars and with a rapidly growing consumption, a fast deterioration threatens the cultural heritage of the centers, the air quality for the citizens, the safety and community function of cities and towns.

A sustainable mobility – especially for urban development, therefore must be based on networks of railbound core-traffic, a flexible multisized bus-traffic system, restrictions for car-traffic and an advanced network for light- or soft-traffic. Modern travelnodes not only for city centres but also in the subcentres of the city also makes it easier to uphold a public transport system.

The communications promote transportation paradox

One of the many ideas to curb unnecessary travel that has been flourishing in the planning debate is to increase communication on the expense of travel. Telephoning,

faxing, mailing and IT-conferencing is supposedly saving a lot of fuel and travel work. But the apparent paradoxes in our modern culture is that travel and communication seem to constitute each other. Travel leads to more communication – both internationally and on a national and city scale - but the other relation seems also to hold (Berg, 1996; Andersson & Sylwan, 1997). The more we introduce communication possibilities – the more we move (SCB, 2004). If this holds for all scales of communication – we should maybe encourage a vigorous communication on the *local level*? Would cheap or free telecommunication via modern telephones or intranets in residential areas, offices or schools thus increase the local mobility *on the expense of distant travel*?

From Legal systems to Informal Rules

Another non-physical basic organising power, emanates from the systems of national laws and municipal rules that characterises the countries around the Baltic Sea. For historical reasons there are some distinct differences how these steering or control systems and signals are working in real life in the region. In principle the legal systems provides the markets with frameworks for their function, and on a basic level regulates how people, move, work, inhabit and play. The legal system is therefore of greatest importance for managing a sustainable community development. It controls the rules for land and water exploitation, environmental protection, health care and monitoring and it affects – on a common level - the conditions for different life-styles.

The *markets* have their supplementary rules – coupled in general to national or international laws or codes. But they also have a more informal code of conduct, including for instance the power of an oral agreement, the principle of reasonable prices and profits. There are also *common property rules* (e.g. rules for maintenance of laundry houses, in Sweden the right to common access to land or – in our time – an informal rule not to contribute to environmental damage).

In addition to the mentioned control systems there is also a system of rules that are imbedded in our cultural system. This is the contribution of the *civil society* including families, households, neighbourhoods, congregations, organisations, work communities and other groups of common interest to meet and exchange information or act together. In these groups there are certain unwritten informal rules including moral codes (e.g. to speak the truth, to keep an agreement, to limit criticism and to help your neighbour), rules for clubs and organisations. In a social context there are also invisible codes of conduct, which will reward those who obey them and bring discontent and isolation if they are broken.

Microstructures for Communities

In local areas there are important micro infrastructures of great organisational and social value. It is fair to say that the infrastructure within communities have a great impact both on social life and the comfort and practicality for its inhabitants. The layout of the entrance and main roads for buses and cars, for trams and trucks must be both appropriately dimensioned for the flows of traffic but at the same time limited for minimal impact of the community. The internal community main street need to be accessible for all types of traffic which will put strong restrictions to speed of motor vehicles. The network of paved bicycle roads and an extensive walking path network within the community and coupled to green spaces, parks and if possible wilderness are important ingredients in a sustainable local community. These micro-networks also need to be supplemented with bus-stop shelters for people and weather protected bicycles racks for the physically mobile inhabitants.

V Social Resources

In a sustainable city people are content, healthy and have a feeling of well-being. They also feel they are a part of their local community as well as the city, of what happens there and have a good relation to their neighbours.

To stimulate this, the local community plays an important role. Every local area or townscape neighbourhood need to be organised in a gradient from private and half-private spaces to half-public to public spaces. At the centre of communities is the most public place, where the market meets with the community. In socially sustainable communities, there is a conglomeration of shops, several small businesses, cultural houses, schools, nursery schools and a sports centre as well as for instance communal laundry, coffee-shop or library rooms and storehouses. These are natural meeting places which offer the chance of a chat and informal social contact. Simple problems in the housing areas can often be solved by informal, spontaneous meetings also in common indoor premises, in illuminated park-patches, playgrounds or in minisquares where mail-boxes and common property rooms or meeting spaces are placed.

The local community is a crucial training ground for exploring and learning common values, contribute to culture, participate in sports events or just talking about common matters. But the modern neighbourhood has a partly different role than earlier times. Today's mobile society has contributed to spreading out relatives and good friends. In the neighbourhood of today is the average anyone of our society, of course with some typical bias or segregation of our time. The reason for communicating with your neighbour is more on a practical level and for common protection, security and mutual economic benefit. Still, a high number of such *weak* relations contribute to comfort and a feeling of security. People seem to thrive in communities with many good but weak neighbourhood relations.

Is there another extended but possibly new role for the social sustainability in modern cities and towns? Is there a new way of drawing on the strength of a neighbourhood, with local cinema, clubs, music and other cultural ingredients – supplementary to the city's larger but more distant common range of attractions?

Introduction: How to Plan for a Social Lone Wolff

One characteristic property of human beings is maybe the great paradoxes in our disposition. Many researchers argues about the social being *Homo sapiens*. Others advocate the modern man as an *individual* being? Who is right? Can we maybe be both? Contextually separated and separated in time, but sometimes we are really at our best as individuals – alone with ourselves and our destiny. But very soon again we interrelate with family members, friends, school-mates or colleagues at work. This will have great implications for planning. We need to find rooms for seclusion and privacy – for individuals, for families, for a small group of neighbours, for a school class or for a company. But at the same time we need spaces for interaction and communication – all in a gradient from rooms and outdoor spaces for a few people up to a whole city - depending on the occasion and invited participants.

Revival of the Community

So what happened the Community? Many recent authors have discussed the decline and fall of the neighbourhood feeling, the spirit of the community (Nelischer & Burcher, 1997; Etzioni, 1997; Putnam, 1997; Franzén & Sandstedt, 1997). The reason may be that the neighbourhood was always and will always be – mainly a practical economic arrangement. When the apartments were small, the mobility limited and the TV-entertainer wasn't invented the common space, the common properties and the amusement had to occur in the neighbourhood. Today we don't need it anymore in the same way.

The Global Role of the small neighbourhood

The neighbourhood has also been used to express a feeling of togetherness on a Global Scale. It is one consequence of globalisation, where we – more than ever in view of the global crises – need to co-operate and feel a mutual goal in saving the planet, fight poverty, wars and injustice. We are the *global neighbourhood* – thinking globally and also feeling globally (Commission on Global Governance, 1995). The problem of this spaceless neighbourhood is problematic&

Conditions for a Sustainable Lifestyle

Changing one's lifestyle can be difficult . If sorting refuse or buying environmentally friendly products becomes too time consuming, many will simply not do it. If travelling by train or bus is complicated, expensive and uncomfortable, people will choose to use their cars. If, in addition, it becomes more expensive to lead environmentally friendly lives, many households will not be able to bear the costs.

Sociological studies at Swedish University of Agricultural Sciences (SLU) show, for example, that ordinary households will not accept even small problems related to new energy and sewage technologies, despite being motivated towards environmental work. To design a sustainable housing area requires a careful choice of technology and organisation so that one can continue to live practically, economically and safely without too large an increase in effort. The housing environment should also be aesthetically pleasing. Many people in the western world today also say they want greater freedom through simpler, more environmentally friendly living and accumulating fewer possessions. (Berg, 2010)

VI Cultural Resources

What makes us content and feel at home in the place where we live? Learning more about our surroundings and its history gives an increased feeling of continuity and participation. Culture is often defined as *systems of shared meaning*. Culture is thus a broad concept including a number of historical epochs, as well as present day habits, traditions, attitudes, values and every day typical actions.

The history could speak about human settlement founded for the first time several thousands of years ago. It could tell the story of what cultural forces shaped the landscape during the last several hundred years ago – cultivation, grazing, forestry or town planning. Recent historical imprints may have been done through rails and roads, houses and squares. Even the stories, ceremonies and traditions formed during a few decades contributes to the sense of place: it's atmosphere, it's well-known habits and social context. The place where you live, thus becomes more than just a place to spend the night or store your possessions. It becomes your home, a place where you feel rooted, a place you might even care deeply about and take an interest in its future.

The problem: Vanishing small towns and city souls

Where are new ideas born? Is it by modern IT-man in the melting pots of large cities – at their universities or at the development sections or marketing departments of the big companies? Or is it by the same person, under a large oak tree within the stillness of a lake? Is it in small hamlets in the old countryside or in the new suburban townscape not so far from there? The late cultural geographer Torsten Hägerstrand maintained that human excellence flourished in the dynamic and intensive environments in the city whereas creativity and ability to conclude totally new inventions needed a state of relaxation – frequently offered in natural settings in the countryside. His conclusion was that city life and countryside life constituted each other. Landscape architect Gunnar Sörte often maintain that we have a never ending changing magnet that pulls us to the city when ever we spend time in nature and nature when city life has filled us with it's toll. This dual need for the city and nature and the idea of complementary town-country residency will – if it is true – lead to an important consequence. The settlement structure

is important and basic for long-term survival in human cultures. If we assume that cities are just as important as towns, villages and spread out hamlets in the country side – i.e. if we assume that human population need to be spread out in the landscapes of tomorrow, then a decline of city centres and small towns may be the beginning of a great cultural catastrophe. All over the globe large city centres are dying as the main attraction points, are developing slums and are losing the battle against the free private mobility. At the same time urban structures are growing faster than ever, draining towns and villages in the countryside of it's young people (Ref)? Is this a sound development? Is there a future megalopolis society that find better ways of life than today – with better individual and social lives, with less impact on the environment, with less violence and insecurity?

Local memories of human dawnings

Every inhabitable place in cities and landscapes, carry its special traces of the past: signs of old settlements, landscape maps and oral traditional histories of the place's dramatic or every day life stories. When the archaeologists elucidate fragments of a prehistoric society they contribute to our feeling of context in time – we are a link in a long chain of human relatives who survived on this place – who will come after us? It also tells us that this place has been worth living on for a long time – it has the potential to remain a sustainable historic place.

A way to almost observe what happened earlier is to take part of the stories now living persons can tell of what happened 30, 50 or sometimes even 80 years ago. What grandparents or elderly remember about people, sites and events, can give us unique insights in the properties of a specific place.

Formation of Urban and Rural Landscapes

Landscapes are formed by natural forces and the activities of man. More than anything, the rural landscapes has formed by agricultural or grazing practices, whereas the city landscape was organised around waterways or other transport main roads. But the old cities were also always formed according to biogeophysical conditions for survival. Life support and societal co-operation was once the basis for all cities.

Architectural and Landscape Heritage

Cultural heritage in the form of ancient, grand or just archetypical architecture, medieval town centres, market squares and road patterns, thus contributes to our sense of the place in a time context.

VII Aesthetic Resources

Humans are sensuous beings.

We enjoy, detest, communicate and navigate in nature as well as in urban and rural landscapes, continuously with the aid of our senses. Without sensuous impressions life is unthinkable. With deteriorating senses life diminish in value. With decreasing sensuous input in stressful situations, we get worried, unsatisfied and eventually mentally and physically ill. With malfunctioning senses from birth or during life we suffer – often unnecessarily. With sensuous training and by planning environments where humans dwell for all our senses, we can change that.

Our world's townscapes and communities, our buildings, squares, parks and transportation systems are built and designed for normal beings with predominant visual aesthetics. But human beings - like other mammals - are intersensory beings conceiving any type of landscape simultaneously with all our senses, moreover integrated with our memories and self-awareness.

Human Development has furthermore been moulded in close contact with supportive environments by lake beaches, sea shores and forest glades. We have been imprinted with

natural settings for millions of years. Our sensorial input came from boundary zones between open and closed ecosystems, predominantly from species-rich edge ecosystems, between stable forests and fields with less species but with strong functional links between them. It is reasonable to believe that *modern stone age man* still have this imprint in environments with high Biodiversity between areas with low but functional Biodiversity.

What does that correspond to in modern urban and rural contexts? What intersensory properties must permeate life and physical form in everyday cities, towns and countryside of tomorrow? How can we investigate the value of outdoor environments designed for human synaesthetic experience - in controlled test environments as well as in the city itself?

The problem: The One-Sense-at-a-time-City

Cities and towns in the Baltic Sea region have developed strongly during the last hundred years. At the beginning of last century the majority of its inhabitants had long working days in dangerous factories, lived in small and crowded apartments in unsanitary dark and dense townscapes. During this first industrialisation period the city life was imprinted with all senses as a noisy, stenching, freezing and ugly revelation. After World War II, urban life got slowly better, first in a few countries like Sweden, Ireland and Switzerland and later - in the 1970-ies - a more stable city life was established in a large part of Europe also in the Baltic Sea region. The large suburban areas were built to improve sanitation and for letting light, fresh air and clean water into more spacious apartments and houses. But the design power was predominantly directed to the core of the cities and even there - the visual sense was dominating. Noise, foul smells and uncomfortable and often cold travel paths, workplaces and schools were still common. Even the churches and monument remained cold places during most time of the year. Today's cities have continued to focus on predominantly visual aesthetics. Exceptions are city parks and the emerging gallerias that, for the commercial sake of attracting customers, have created pleasant indoor spaces, deliberately designed for several senses. Other exceptions are special exhibition halls, restaurants and theatres. For the commuter, the travel routes, the way to the supermarket and the path to school and the public buildings themselves are still very much left over sites when it comes to sensuous impressions. In the city and its suburbs the links between different activity nodes demands much of our personal energy for disregarding noises, unpleasant scenes, bad smells, unpleasant street winds and other impressions.

***Homo Synaestheticus* - Intersensory Man**

Unlike many of our technological inventions, human beings rely on several senses for orientation, mobility, eating, playing and resting. Our nervous system is organised to continuously scan the surrounding world, other persons and our inner self with a high and diverse number of specialised sensory cells (Nerve Physiology). The nervous system and the brain both have the ability to focus on important sensuous signals and also to integrate various sensuous signals and interpret the whole situation. In spite of our intersensory preparedness our modern living environment rarely correspond to this ability. Our cityscapes are predominantly designed for visual impressions but with limited efforts on sonic design (Hedfors, 2003). Other senses are less important - other than a general ambition in planning to avoid strong negative sensory impacts (*e.g.* noise, stench, wind exposure and uncomfortable paving of streets).

Conflicting Visual Landscapes in Human Settlements

One basic source of conflicts in detail planning is the reoccurring quarrel on who is blocking who's view. Everyone wish to have a free view, over a vast and wild landscape - preferably a river bank or a beach. This craving for view is paralleled only by the wish to be close to the cultural furnace of modern cityscapes. How can we optimise for this ancient and new preference among our tribe?

Feelscape City

In a city designed for all senses, our houses and apartments are designed for positive intersensory experiences. On our way to work, shops and school our paths, roads and journeys will amplify the attractive visual, auditive and olfactory impressions. When we relax from work, family or other projects we can find intersensory gardens, green courtyards, and flowering entrances nearby and not too far away we can enjoy wilderness, forests, streams, lakes, valleys and fields. The feelscape city have dampened disturbing levels of traffic and machine noise, decreased strong smells from dry and dirty streets, exhaust fumes and smoke and have created wind, rain, heat and cold protecting places and strokes – not only indoors but also microclimatically protected squares, shopping streets, meeting spots, traffic nodes and playing grounds. By doing this the voices, brush, splash and murmurs of humans, trees, waters and streams may be heard. By improving feelscape city, the smells of rain, leaves, flowers, winds, perfumes, food, bakery, coffee and waters may stand out and signify the cultural place that we wish the city to be.

VIII Urban Planning and Interconnection between resources

Every site in a city or a village is unique.

The specific climate, bedrock, soil composition, vegetation, topography and landscape create their own physical conditions. The demographics, household economy and social background of the resident population give specific social and economic conditions for every specific site. Bearing this in mind it is easy to understand that every site must *find its own way to contribute to the sustainability of the city and the world.*

The Problem – How can we optimise the whole system?

One common way of dealing with planning is to analyse partial problems – one at a time. How can we *i.a.* build a new housing area as economically as possible? How can we organise new roads, waste water pipes and telecommunication cables in an efficient way in a city district? How should green areas and cultural aspect be highlighted in regional planning? Every section's civil servant often does a great job analysing each aspect. Every expert gives advice to the best solution in his or her field. But how do the different resources of a local community a village or a city interact? Would it be possible to save energy by combinations of a little less insulation but better heat exchangers in a city quarter? Can the garden sizes be a little smaller but common green larger in the new villa area? Could there be a combination of a co-travelling and car-sharing systems and city-bus-traffic, that in total would make travel more efficient, the need for parking lots a little less and on the same time stimulate local organisation skills and social contacts in a rural village? Can the shop-owners in the local centre near a transport node co-operate with neighbourhood cultivation and distribution of food? Such optimizing of human urban systems requires knowledge about relations between different resources.

The basic problem is that part-optima will not always co-incide with the optimum for the whole system. This section is giving examples of such relations between resources and also outlines a way – by which tailor-made sustainability plans can be produced for the development of townscapes. Then universal frameworks are used in combination with site and situation – in context – analysis methods.

Simple relations to Physical Resources

There is a number of fairly obvious, but still not always considered relations between different non-physical and physical resources in a community. The consumption of and technique using energy, water and materials can be increased or decreased – depending on the technology used, on the relations between inhabitants, on knowledge about leisure

trails and local art, on the road and pathway organisation of a site, on the costs for local food service. In table 6 some simple relations are listed together with examples.

Cascading Resources

There are also more complicated connections between different sustainability resources – difficult to follow, analyse and quantify – but still very real. A re-organisation of a city centre with a new travel centre may lead to a whole series of changes, affecting various resources in a *cascade*. The physical energy consumption may be affected by the new accessible public transport, the social cohesion of the city’s inhabitants may be affected, visits to nearby pedestrian-shopping networks and city parks may increase, the basis for cultural events may increase and the economic value of city markets may increase significantly. Such total effects need to be tested in real cases.

Table 6. Connections between a number of non-physical and physical resources. It is not always sure there is a positive effect on the use of physical resources.

Resource affecting physical resources	Example	Possible effect on physical resources
Economic	- Lower national prices on bio-fuels - More people bake bread at home	*Reduction in the use of fossil fuels and a simultaneous lower forest biodiversity *Reduction in chemical fertiliser use and an increase in household electricity use
Biological	- Updated maps on greenstructure assets in different city scales - New gardens in apartment areas - Introduction of near-the-city-agriculture	*Reduced city leisure travel – less fossil fuel consumed *More local pesticides and water used in local areas * A chance of higher biodiversity and possibly more chemical pesticides used
Organisational	- Local area new tele-network and intranet - New corner stores in residential areas	*Reduction in household distant travel *Less material used in households – and possibly more local garbage
Social	- Improved health in Baltic Sea Region - Children playing in local city areas	*Less need for medicine production *Less car travel – less fuel
Cultural	- Increased local cultural/sport events - Introduction of small town cinemas in sparsely populated areas	*Less material needs *Less regional travel – less energy used for car travel – a larger population dependent on car travel
Aesthetic	- City centre aesthetically improved with pedestrian shopping street, fountains and travel centre park. - Sculpture art in multi-family areas	*Less need for distant tourism - less air fuel needed. More tourists attracted to the city *Less turnover of inhabitants – less materials consumption

The Power of Cases

For understanding the complex effects of single changes, investments or great improvements in the cityscape, we need to study what happens in many towns and cities when they – for instance – get efficient and inviting new travel nodes. The cases will reveal the outcome of predicted effects like commuter frequency, apartments prices, number of parked bicycles. But cases will also reveal *unexpected emergent effects*, that could never be anticipated on the planning stage. Furthermore – if we study a number of cases, where the same change has been done, we will also in some cases discover solutions to new problems connected to the development.

4. Содержание практических занятий

Практическая работа №1.

Управленческие «зеленые» городские инициативы. Модуль 1 (Практический пример Case-study) и Модуль 2 (Рецензия на работу)

Практическая работа 1. Модуль 1. Управленческие «зеленые» городские инициативы.

В данной работе мы хотим сосредоточиться на управленческих «зеленых» городских инициативах (реализованных, текущих, планируемых или предлагаемых) в Вашем городе или близлежащих городах. Управленческая городская инициатива должна иметь цель - улучшить свой город в ответ на социально-экономические вызовы, изменения климата и/или воздействия на окружающую среду. Используйте Ваш собственный опыт и то, чему вы научились в ходе занятий, что касается видения, инноваций и экспериментов.

Для вдохновения посмотрите на сайтах C40&Sustainia Cities 100 и C40 «Города и климат» лидерская группа, "ICLEI – «Местные органы власти за устойчивость», где вы сможете найти примеры управленческих «зеленых» городских инициатив в разных городах по всему миру.

<http://www.sustainia.me/cities/> C40&Sustainia Cities 100

<http://www.c40.org/cities> C40 «Города и климат» лидерская группа

<http://www.iclei.org/activities/projects-initiatives.html> "ICLEI – «Местные органы власти за устойчивость»

Модуль 1. Написание работы. Задание состоит из трех частей:

Часть 1. Охарактеризуйте социально-экономическую, экологическую/ климатическую проблему, которая беспокоит жителей в Вашем городе или соседнем городе по вашему выбору (это может быть проблемой, генерируемой городом или влияющей на Ваш город).

Например, загрязнение воздуха от автомобильных пробок и заторов в городе. Почему вы находите, что эта проблема является актуальной в выбранном городе? Каково воздействие данной проблемы на Ваш город и его жителей?

!!! Чтобы начать выполнять задание вы можете посмотреть информацию на сайте городского правительства/ администрации в выбранном городе.

Часть 2. Представить и проанализировать управленческую «зеленую» инициативу городской власти (или сотрудничество с заинтересованными сторонами) для реагирования на данную социально-экономическую, экологическую/климатическую проблему.

Например, инвестиции для разработки интегрированного общественного транспорта. Вы можете описать городскую инициативу и ее влияние на Ваш город? Как городская «зеленая» инициатива работает, чтобы улучшить транспортную систему Вашего города? Если в вашем городе не хватает «зеленых» городских инициатив реагирования на социально-экономические, экологические/климатические проблемы, которые Вы определили, постарайтесь представить себе возможные решения данной проблемы и проанализировать свой ответ.

Часть 3. Предложить Ваши предложения по улучшению, чтобы вдохновить нас на дальнейшие действия по решению данной социально-экономической, эколого-климатической проблемы.

Например, разработка андроид приложения для города, которое собирает данные в реальном времени на самых быстрых и простых трассах, чтобы увеличить использование общественного транспорта. Какие Вы можете предложить улучшения к городским инициативам, которые Вы определили в вашем городе? Какие новые мероприятия могут быть необходимы для содействия преобразованиям в Вашем городе?

!!! Для вдохновения, ознакомьтесь C40&Sustainia Cities 100 и фильмами о проводимых мероприятиях Transformation Actions Programme «ICLEI – Местные органы власти за устойчивость» <https://www.youtube.com/playlist?list=PLsgoH3BX-BpTnyRUxa1tweLDp9wPEQaOs>

Формат выполнения работы:

Выполняя Ваше задание, используйте следующий Формат (максимальное количество кредитов для каждой части указывается в скобках):

- Резюме – написать резюме (1-2 предложения), что отражает ваше назначение «зеленой» городской инициативы. Постарайтесь захватить внимание и обозначить смысл настоящего сообщения. (4)
- Части 1, 2 и 3. - Как это представлено выше. Каждая часть должна быть не менее 50 слов и не превышать 150 слов. (10 + 10 + 10)
- Иллюстрации – Добавить картосхему города по вашему выбору, чтобы охарактеризовать местоположение «зеленой» городской инициативы и представить одно или несколько изображений (или другой формы иллюстрации), чтобы был сделан акцент на визуальном способе. (4)
- Ресурсы – Список источников и ссылок (например гиперссылок), которые Вы использовали, чтобы представить выбранный город, его проблемы, «зеленые» городские инициативы и предложенные улучшения. (2)

!!! Важно, чтобы Вы выбрали проблему и материал, которые Вам позволят найти подходящую информацию для выполнения Вашего задания, чтобы Вы смогли обосновать, почему вы выбрали их и найти им соответствующие пути решения, и чтобы все части задания были представлены в четкой, логичной форме.

Отправить задание необходимо до указанного срока, чтобы обеспечить достаточное время для ваших коллег рассмотреть работы и дать им оценку (написание рецензий, Module 2).

Пример 1

Название: Стратегия городских лесов в Мельбурне

Резюме: Здоровье городских лесов будет играть важнейшую роль в поддержании жизнедеятельности Мельбурна в условиях меняющегося климата.

Часть 1: Город Мельбурн стоит перед значительными проблемами изменения климата, рост населения и городских отопление, оказывая давление на построенные объекты, услуги и людей, проживающих в городе. Увеличение тепла в городе, связанное с изменением климата является серьезной проблемой для городской власти, так как представляет опасность для здоровья людей в городе. В то же время,

парки и сады, поскольку они были разработаны в прошлом недостаточно, чтобы помочь "охлаждению" города. И в самом деле, многие деревья и растения в городе находятся в состоянии стресса от жары и ограниченного водоснабжения. Поэтому вся стратегия направлена на создание зеленого и удобного для проживания города и он должен преобразиться.

Часть 2: Городские власти Мельбурна разработали стратегию городских лесов, которая направлена на защиту уязвимости городских зеленых насаждений, обеспечивая прочную стратегическую основу для эволюции и долговечности городских лесов в Мельбурне. Стратегия направлена на адаптацию города к изменению климата, смягчению эффекта "городского острова тепла" по приведению в норму городских температур, создания здоровой экосистемы, чувствительной к воде, и привлекать большее участие общественности.

Часть 3. Стратегия городских лесов в Мельбурне впечатляет. Улучшением может быть выращивание деревьев и растений в городе, чтобы также увеличить биоразнообразие. Повышение биоразнообразия является способом повышения устойчивости городских лесов как климат меняется. Дальнейшим шагом вперед могло бы стать ориентиром в стратегии стать лучшими в мире, и стремимся быть мировым лидером по разработке городских лесов в городе Мельбурн. Бизнес в городе может также привлекаться для инвестирования в посадки деревьев.

Иллюстрации: зеленый пин с картинкой и краткое описание была добавлено.

Ресурсы: основные ресурсы, используемые из курса, включали фильмов по устойчивому городскому преобразованию и на концепции устойчивого развития городов. Другие дополнительные источники, который были использованы - доклад о Городском зеленом хозяйстве в Мельбурне.

Стратегия Городских лесов - <http://www.melbourne.vic.gov.au/community/parks-open-spaces/urban-forest/Pages/urban-forest-strategy.aspx>

«Городской лес» фильм - <https://www.youtube.com/watch?v=BplUmxFCE8A>

Пример 2

Название: Биогаз автобусы в Мальме.

Резюме: От вилки до колеса - заправка для авто на отходах с вашей кухни.

Часть 1: Объемы транспортного трафика высоки в Мальме и ряд крупных транзитных дорог пересекает внутренний центр города. Трафик отвечает за большую часть загрязнения воздуха в Мальме. Хотя качество воздуха улучшилось за эти годы и теперь оценено как "хорошее", и диоксид серы и диоксид азота относительно на низком уровне, загрязнения воздуха по-прежнему представляет серьезную опасность для здоровья жителей Мальме. На самом деле, число смертей, связанных с загрязнением воздуха считается выше, чем от автомобильных аварий. Транспорт также приводит к изменению климата и увеличению шума в городе.

Часть 2. Компания по сбору ТБО, находящаяся в муниципальной собственности, вместе с городом Мальме, инвестировали в производство автобусов, работающих на биогазе в последние десятилетия. Сейчас, все 200 автобусов в Мальме, работают на смеси сжатого природного газа и биогаза. По сравнению с обычными автобусами, которые часто работают на дизельном топливе, это позволяет сокращения выбросов ПГ, выбросы NOx и частиц. Кроме того, Мальме сейчас активно инвестирует в новые автобусы с использованием гибридной технологии: двигатель работает на биогазе, вырабатывает электроэнергию, приводя в действие целый ряд электродвигателей, чтобы водить автобус. Батареи используются в качестве промежуточных накопителей энергии. С помощью этой технологии автобусы генерируют еще более низкий уровень выбросов в атмосферу.

Часть 3: Как биогаз-автобусы используют аккумуляторы, которые заряжаются биогазом, аккумуляторы могут быть заряжены электричеством из сети. Дальнейшее развитие технологии будет использовать так называемые Plug-in в гибридных автобусах, где часть энергии может исходить от зарядки батареи электроэнергией в течение того времени, когда они стоят в автобусном парке, часто ночью.

В зависимости от потенциально ограниченного запаса биогаза, в городе Мальме также может внедряться управляемые зарядные станции на биогазе для частных электрических машин с помощью специальных "заправочных" станций для обеспечения более активного стимулирования и использования биогаза как топлива на электрических машинах. Было бы также хорошо дать людям выбор, чтобы иметь «зеленые» версии электрических автомобилей.

Иллюстрации: фото и описание размещен в Мальме, Швеция на карте курса.

Ресурсы: основные ресурсы, используемые из курса, включены фильм по устойчивому развитию в городах. Материалы о городах и изменении климата: были полезны.

Биогаз автобусы в Мальме: <http://www.adjacentgovernment.co.uk/rail-road-air-transport-news/waste-malmo-fuels-sustainable-transport/22185/>

Загрязнение воздуха в Мальме – <http://aqicn.org/city/sweden/malmo-radhuset/>

Переработка в Мальме – <http://malmo.se/English/Sustainable-City-Development/Recycling.html>

Практическая работа 1. Модуль 2. Управленческие «зеленые» городские инициативы.

Модуль 2 - Написание Рецензии представленных работ

В этой практической работе Вы не только представите свои собственные результаты работы, Вы также берете на себя роль рецензента, выполняющего оценку работы 2 других участников курса. Пожалуйста, уделите достаточно времени на эти отзывы, так чтобы Вы смогли дать своим коллегам хорошую рецензию, справедливую и обоснованную оценку их работы.

При оценке выполнения заданий других студентов, вам будет предложено посмотреть на актуальность и ясность представления различных частей работы. Постарайтесь быть как объективным, так и свободно мыслящим в вашей оценке и классификации. Когда Вас попросят дать комментарии и отзывы (приветствуются, но не оцениваются) постарайтесь быть вежливым, корректным по отношению к коллегам, и давать краткую и конструктивную критику, если таковая имеется.

ФОРМА РЕЦЕНЗИИ

Название работы

1. Имеется ли четкое название и резюме?

2 балла - да, 0 баллов - нет

2. Описывает ли резюме и/или привлекает внимание к инициативе, описанной в задании?

2 балла – да, 0 баллов – нет

Добавить любой отзыв на этот вопрос здесь:

3. Имеется ли хорошее и четкое описание соответствующих социально-экономических и/или экологических/климатических проблем в городе?

10 баллов - да, хорошее и четкое описание соответствующих социально-экономических и/или экологических/ климатических проблем в городе.

8 баллов - да, описание соответствующих социально-экономических и/или экологических/ климатических проблем в городе было предоставлено, но не очень хорошо описано.

6 баллов - да, хорошее и понятное описание социально-экономических и/или экологических/ климатических проблем в городе было предоставлено, но она, кажется, не очень актуальна.

2 балла - да, описание экологических/климатических проблем в городе, но его это, кажется, не очень актуальные и не очень хорошо описан.

0 баллов – нет

Добавить любой отзыв на этот вопрос здесь:

4. Была ли реакция городской власти на социально-экономические и/или экологические/ климатические проблемы четко представлена и проанализирована?

10 баллов - да, реакция городской власти на социально-экономические и/или экологические/ климатические проблемы была четко представлена и проанализирована.

8 баллов - да, реакция городской власти на социально-экономические и/или экологические/ климатические проблемы была представлена и проанализирована, но не очень хорошо описана.

6 баллов - да, реакция городской власти на социально-экономические и/или экологические/ климатические проблемы была четко представлена, но не анализируются.

2 балла - да, реакция городской власти на социально-экономические и/или

экологические/ климатические проблемы была, но не анализируются. Ответ не очень хорошо описан.

0 баллов – нет

Добавить любой отзыв на этот вопрос здесь:

5. Были ли предложены и четко описаны соответствующие улучшения (одно или несколько), чтобы вдохновить преобразующее действие на решение данной проблемы?

10 баллов - да, один или несколько соответствующих улучшений, чтобы вдохновить преобразующее действие на решение проблемы было предложено,

8 баллов - да, один или несколько соответствующих улучшений, чтобы вдохновить преобразующее действие на решение проблемы было предложено, но это не очень хорошо описано.

6 баллов - да, один или несколько улучшений, чтобы вдохновить преобразующее действие на решение проблемы было предложено, но предложения не показались актуальными для решения представленной проблемы.

3 баллов - да, один или несколько улучшений, чтобы вдохновить преобразующее действие на решение проблемы было предложено, но это не очень хорошо описано и предложения не показались актуальными для решения представленной проблемы.

0 очков – нет

Добавить любой отзыв на этот вопрос здесь:

6. Предоставлены ли изображения или другие формы иллюстраций?

2 балла – да, 0 очков – нет

Делает ли изображение или иллюстрации вопроса фокусировку внимания на теме визуальным способом?

2 балла – да, 0 очков – нет

Добавить любой отзыв на этот вопрос здесь:

7. Имеется ли в наличии раздел с использованными ресурсами - дополнительные ссылки и/или веб-сайты (кроме материалов курса или ссылок в задании) для исследования городской инициативы?

4 балла - да, дополнительные ссылки и/или веб-сайты, поддерживающие представленную городскую инициативу предоставляются.

2 балла - да, дополнительные ссылки и/или веб-сайты предоставляются, но непонятно, как они относятся к работе.

0 баллов – нет

Добавить любой отзыв на этот вопрос здесь:

Практическая работа №2.

Экспертная оценка по устойчивому городскому планированию и моделированию устойчивых решений развития в городских поселениях / муниципальных образованиях (МО) С-Петербурга

Групповая работа по МО в районах СПб. Состав группы 3 - 4 чел.

Цель работы - Провести процедуру экспертной оценки городского поселения, в границах муниципального образования (МО) по устойчивому городскому планированию и моделированию устойчивых решений развития в выбранном районе Санкт-Петербурга.

Задачи групповой работы

- Провести анализ современной ситуации, дать экспертную оценку состояния и перспектив развития городского поселения, в границах муниципального образования (МО на выбор) по всем 7 ресурсам модели REBOSCA.
- Определить существующие устойчивые управленческие решения по городскому планированию, текущие проекты и перспективы по реализации.
- Представить и смоделировать свои конкретные предложения (на основе существующих Планов и стратегий развития МО) по устойчивым управленческим решениям развития для выбранного городского поселения, в границах МО на ближайшие 5 лет.

Содержание работы

1. Экспертная оценка современной ситуации по всем 7 ресурсам модели REBOSCA городского поселения, в границах МО – их состояние и перспективы развития.
 - Физические ресурсы – Отопление, электричество, обращение с отходами, водоснабжение, др.
 - Экономические ресурсы – стоимость проживания, совместное пользование, местное производство и услуги и др.
 - Биологические ресурсы - ценность ландшафтов, зеленые структуры, ландшафтный дизайн, баланс между городом и природой и др.
 - Организационные ресурсы – функциональное использование пространства, структура сообщества, транспортная система, связь и инфраструктурные сети
 - Социальные ресурсы – общественные места и частное пространство, соседства, социальное взаимодействие, взаимосвязь между поколениями, этнокультурные отношения и др.

- Культурные ресурсы – национальное достояние, культурные традиции, ценности местной культуры – ярмарки, фестивали, праздники, самодеятельность для пожилых людей, мероприятия для молодежи.
- Эстетические ресурсы - городской дизайн района, эстетические и сенсорные (чувственные) ценности, красивые места, освещенность района, акустический баланс, цветовая гамма застройки, звуковые пейзажи, запахи и др.

2. Моделирование конкретных предложений (на основе существующих Планов и Стратегий развития МО) по устойчивым управленческим решениям развития для выбранного городского поселения в границах МО на ближайшие 5 лет.

Основывается на SWOT анализе (Strengths – сильные стороны, Weaknesses – слабые стороны, Opportunities - возможности, Threats - угрозы) всех 7 ресурсов (точные характеристики для выбранного района = что хорошо функционирует / развито и что плохо? Преимущества и недостатки района, проблемные направления и успешные пилотные проекты)

Составить список приоритетных и наиболее важных ресурсов для дальнейшего развития этого конкретного городского поселения и предложить свои собственные устойчивые управленческие решения развития (мероприятия) для перспективной стратегии развития (на основе существующих Планов и Стратегий развития) на ближайшие 5 лет по выбранным ресурсам.

Требования к оформлению работы.

Практическая работа должна быть написана на русском/ английском языке (около 15 страниц текста + фотографии, картосхемы, рисунки).

Представление работы должно быть подготовлено в виде PPT презентации (15-20 слайдов) на заключительном семинаре.

Красивые иллюстрации, фотографии, картографические материалы (карты, схемы) расцениваются как дополнительный бонус работы!

5. Применение интерактивных методов обучения

Лекция 1. Введение – Основы устойчивого городского планирования и устойчивых управленческих решений в городах, урбанизация, трансформация городской среды.

Методика «Informal Writing» / Свободное Письмо

Тема для работы: Каким бы Вы хотели видеть Наш город - город Вашей мечты? Выделить 5 характерных черт, важных для устойчивого городского планирования. Какие наиболее важные направления социально-эколого-экономической деятельности необходимо учитывать?

Сфокусированное свободное письмо. Индивидуальная работа. Время выполнения: 10 мин.

После этого каждый студент пишет на доске 3 основных написанных тезиса.

Из полученных тезисов выбрать те, которые повторяются, и те которые имеют общую тему или смысл, совместно со студентами сформировать список из 5 характерных черт, важных для устойчивого городского планирования. Как можно их разделить на 3 сферы деятельности – экономическую, социальную и экологическую? Какие еще аспекты необходимо учитывать для устойчивого городского планирования?

Лекция 2. Концепция устойчивого развития в городском планировании, Интерактивная практическая работа «Символ пещеры» (Платон «Государство»)

Методика «Facilitating Class Discussion» / Учебная дискуссия

Текст: Платон «Государство» Книга 7. Отрывок «Символ пещеры»

Этапы работы:

1. Декламация отрывка из текста (свободное прочтение всеми участниками группы - 2 раза).
2. Свободная дискуссия. Работа в группах 4-6 человек. Каждая группа получает задание – визуально изобразить «символ пещеры» на листе А3. Время на дискуссию – 30 минут.
3. После окончания обсуждения группы меняются рисунками и формулируют свои критические вопросы, замечания и комментарии по результатам работы другой группы (по 2 вопроса от каждого участника).

4. Повторный обмен рисунками (группы получают свои рисунки с вопросами от участников другой группы) и формулируют свои ответы и комментарии на полученные вопросы.
5. После окончания обсуждения представители каждой группы кратко представляют результаты дискуссии, изображение «символа пещеры» и ответы на обсуждавшиеся вопросы.
6. Письмо. Написать о процессе обсуждения и работе в группах. Что «потерялось» в обсуждении? Оцените свое участие в этой дискуссии? Что бы хотелось отдельно отметить?
7. Сфокусированное свободное письмо (5 мин.) на тему: «Сравните Ваш опыт изображения «символа пещеры» с работой по городскому планированию, формированием пространства городской территории» Что оно означает в контексте деятельности планировщиков городской территории? Какие ошибки нужно постараться избегать? Какие полезные выводы Вы сделали для себя?

Лекция 10. Городское пространственное планирование и взаимосвязь между ресурсами – Модель 7 ресурсов REBOSCA в теории и практике – наилучшие примеры устойчивых управленческих решений и развития городских поселений в мире.

Методика «Writing to Read in the Zones / Письмо для чтения в секторах

Тема: Устойчивое городское поселение - Идеальный полис в понимании Аристотеля/ Идеальный полис в понимании Витрувия.

Тексты: 1. Аристотель «Политика» Книга 2.

2. Витрувий "10 книг об архитектуре". Глава IV. Местоположение города

Этапы работы:

1. Группа студентов разбивается на 2 равные подгруппы, которые получают различные тексты. Групповая работа длится 30 мин.
2. В центре большого листа студенты рисуют круг или овал, достаточный для внесения названия изучаемого текста/текстов, имени автора/авторов и обозначения центральных концепций, которые предстоит исследовать в тексте. В центре нижнего поля листа размещаем прямоугольник, в котором впоследствии будут выводы. Оставшееся пространство делим на восемь приблизительно равных секторов и последовательно нумеруем их. Существует множество вариантов организации пространства листа, однако важно чтобы все участники занятия придерживались единого принципа.

Сектор 1 – Первые впечатления: В этот сектор записываются первые впечатления и мысли. Сюда же можно повторно разместить центральные концепции, которые предстоит изучить. Здесь же также можно прокомментировать название, изучаемого текста.

Сектор 2 – Важные детали: Выберите в тексте поразившее вас предложение, фразу, слово или образ. Сектор заполняется цитатой(ами) и/или комментариями.

Сектор 3 - Аналитическое чтение: здесь размещается интерпретация эпизода важного или показательно для понимания текста. Какие слова или фразы особенно важны для содержания и/или очарования эпизода? Почему этот эпизод важен для текста в целом?

Сектор 4 – Верю / не верю: существует два варианта выполнения этой части задания. Первый: в тексте необходимо найти центральное утверждение или гипотезу и переписать в сектор. Затем написать две группы аргументов: первая должна подтверждать положение выдвинутое автором, а вторая – опровергать или подвергать сомнению.

Второй вариант: в тексте необходимо выбрать трудный для понимания отрывок и предложить свои вариант его интерпретации.

Сектор 5 - На какой вопрос отвечает этот текст? Чем подтверждается это предположение?

Сектор 6 - Синописис: кратко изложите основное содержание текста.

Сектор 7 – Доказательства: сюда записывают примеры, факты, иллюстрации, статистические данные, исторические примеры, определения, цитаты, причины, образы, метафоры, сравнения, символы и другие фигуры, и ваши комментарии к ним, которые бы могли доказывать, что автор использовал выбранные средства для обоснования центрального утверждения текста.

Сектор 8 – Ассоциации: Какие идеи, воспоминания посещали вас в процессе работы над текстом? Какое они оказывали влияние на его восприятие?

Выводы. Определите, что из этого можно назвать самым важным и выразите это одним предложением и запишите в оставшийся прямоугольник. Это предложение должно быть результатом сложной работы и помочь вывести понимание текста на новый уровень.

3. Групповая дискуссия по результатам работы – презентации от групп и вопросы-ответы.

6. Методика проведения текущего контроля успеваемости и промежуточной аттестации по дисциплине и критерии оценивания

Усвоение изучаемого материала проверяется в результате текущего контроля во время проведения лекционных и практических занятий. За все виды текущего контроля выставляются баллы/оценки. Промежуточная аттестация проводится в письменной форме экзамена (теста), включающей ответы на ряд теоретических и практических вопросов по программе курса.

Итоговая оценка за период обучения (семестр) выставляется после прохождения промежуточной аттестации с использованием системы накопления баллов и учитывает результаты экзамена, текущей работы, текущего контроля и посещаемости занятий. Критерии оценивания результатов работы студентов определяются в соответствии с Порядком использования балльной системы оценивания при проведении текущего контроля и промежуточной аттестации в СПбГУ.

Критерием работы на лекционных и практических занятиях является качество представленного доклада, практической работы, качество презентации и ответы на вопросы. В результате отличного доклада, презентации и правильных ответов на все вопросы, студент получает максимально возможное число баллов - 20. Активное обсуждение докладов других студентов (вопросы и комментарии) могут быть оценены максимум в 10 баллов.

Критерием оценивания результатов практических работ является удельный вес правильных и исчерпывающих ответов на вопросы, правильное выполнение заданий. В случае правильного ответа на более чем 90 % вопросов (выполненных заданий) студент получает максимальное количество баллов - 20.

Максимальное количество баллов за посещение любых видов занятий (лекций, семинаров, практических занятий, консультаций, самостоятельных занятий в присутствии или под руководством преподавателя и пр.) – 10. За каждое занятие, пропущенное без уважительной причины, из этой суммы вычитаются баллы из расчета: (10 баллов / число занятий) x число пропусков.

В итоговой оценке при проведении промежуточной аттестации учитываются:

- результаты письменного экзамена (от 0 до 50 баллов)
- результаты практической работы и участие в презентации (от 0 до 20 баллов)
- результаты работы на занятиях, семинарах, лекциях (от 0 до 20 баллов);
- посещаемость занятий (не более 10 баллов).

Максимальное количество баллов, которое может получить обучающийся за изученный курс, составляет 100 баллов, из них:

- от 0 до 50 баллов – за все виды работ в семестре и посещаемость,
- от 0 до 50 баллов – за промежуточную аттестацию (экзамен).

Для получения итоговой положительной оценки необходимо набрать не менее 40 баллов.

Для получения итоговой оценки необходимо набрать:

- «отлично» – 81–100 баллов,
- «хорошо» – 61–80 баллов,
- «удовлетворительно» – 40–60 баллов.

7. Рекомендуемая литература по курсу

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Учебно- методическое пособие

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