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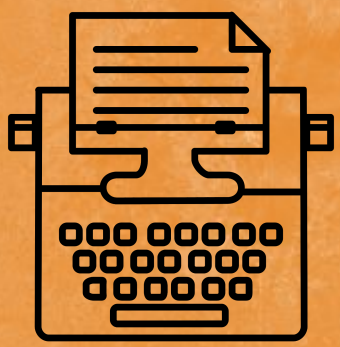

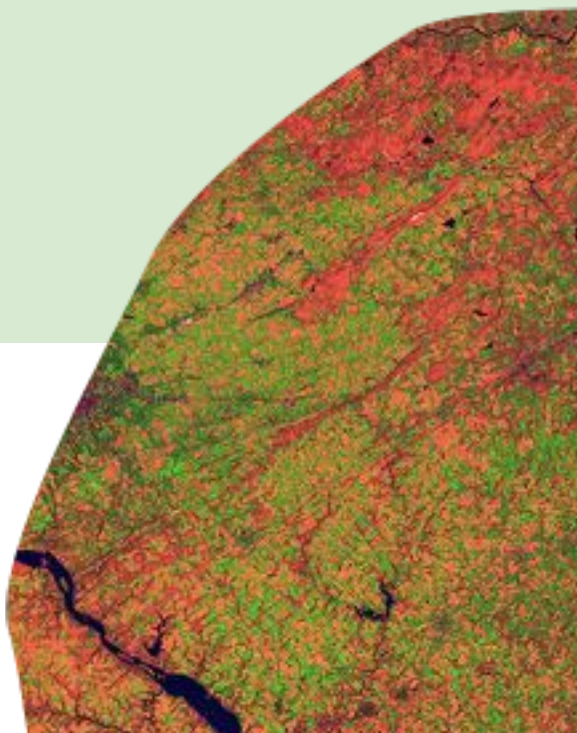

Stockholm in the year of 2200

- A visioning of a sustainable and preferable future

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The year is 2200 in Stockholm. The city has become a megacity with 10 million inhabitants. When looking back 80 years in time you can see that the city has gone through a major transformation in terms of policy-making, the matter-energy flow of the city, the infrastructure and the view and practices between human and "more-than-human" objects. In the year 2200, the city of Stockholm bears the stamp of sustainability, inclusion, justice, diversity, novel complementary policy-making, interconnection between human and none-human and frugality with natural materials.

Diversity and equality

The spatial structure of Stockholm has transformed over a long period of time. The previous issue the city had with providing affordable housing is long gone. The term homeless is seen as something alien and every human have the right to a roof over their head. The urban centre and the suburban areas are interlinked. The centre of Stockholm consists of skyscraper while the suburbs is mixed with high apartment buildings and detached houses, but beside this the areas are fairly similar. People who want a calmer area to live in have search themselves to areas further from the city while people who want to feel the city pulse live more central. The socioeconomic factor does not determine the spatial life of people. The urban city is a mix of different kind of owning - both rented apartments and private housings. The suburb as well, with the opportunity to rent detached housing also. People with different socioeconomic background have the same opportunities to live in the urban centre and the suburbs. This changing has resolved in a more divers city and the previous segregation with division of areas of urban poor and rich have diminished. The housing market in Stockholm is built upon the public good and is decoupled from the market of neoclassical economic. The government in Sweden invest a lot of subventions to make this possible.

The structure of the city has subsequently resulted in decreasing division between different areas in Stockholm. The city is more integrated, and the type of services provided, the infrastructure and activities of both small and bigger scales are mixed and not specific to one type of area. These urban mixes let people from different background meet, communicate and live together. A vibrant community and a diverse opportunity for different uses and activities define all places in Stockholm.

Infrastructure and urban planning

The design and decision-making processes of planning in Stockholm have a core in involving the local people and integrating the social and ecological aspects in the planning process.

Moreover, the spatial allocation of public resources is done after the premises of equality and justice. The spatial distribution of resources is decoupled from wealth and every citizen has the same accessibility to public space and services. Stockholm has a wide spread of urban forests and green areas that people can use in all areas around and within the city. Furthermore, the planning is made so that people feel inclusive and can put their own character in the public space. In Stockholm, there are "free squares" where people have the right to do this and express themselves.

The urban planning and policy-making process of Stockholm has transformed and adapted to climate change and the subsequently cosmopolitical actions. The city has built a framework that connects the complex system that intertwines the different knowledge, values and practices of the urban life connected to climate change and sustainability. Moreover, it uses a bottom-up perspective to reach out to different voices and understandings. Among other things, this is done with an app where different people and groups can share their values and experiences concerning the human and none-human knowledge and practices. These stories are then connected in a wide network to be used in the policy-making of Stockholm. The policy makers emphasize on the practices and developments that are aiming for the greater good and sees the "more-than-human" perspectives. Moreover, they see that the transformation of the urban space not only lies in the understanding and development of the economic and technology but also the socio-political aspect.

Moreover, the city of Stockholm has incorporated the post-normal science approach when dealing with issues related to complex systems of nature when the stakes are high and there are existing system uncertainties. In practical sense, this means that when there are lack of certain facts and knowledge the environmental policy aims at including and focusing on human values and the quality of the urban space. Different fields of actors have mutual contact, present their inputs and an agreement is done after premises of the locals' values concerning the issue.

Furthermore, Stockholm has a wide range of common pool resources in the year 2200. There are urban forests and farming around the city and lakes where people can fish. These properties are managed as collective or common property by the locals constructed in different types of local managements.

The metabolism of the city

The city of Stockholm is seen as a system that includes an awareness of the inputs and outputs of the system. Furthermore, Stockholm has an environmental policy to decrease the flow in the system (the use of matter-energy) and also to phase out the output of the system. This policy has helped the city to turn the linear flow of matter-energy into a more circular and careful use of resources. The waste of the city is reused in different ways. Among other things, waste from water plants is used to fertilize the urban and rural agriculture areas within and around Stockholm and all organic waste is used to obtain biogas to provide the city with energy. Besides the aspect of circular flow, there are more of local activities and production within the

system of the city. The local market is flourishing and the matter-energy from outside of Stockholm, and especially outside of Sweden has diminished. This was a consequence after the market value of goods and services started to include the externalities, which raises the prices and more local production was thought as a better option. Furthermore, this has resulted in decreased degradation in the countries where Sweden, and Stockholm, previously has imported goods and services.

To obtain a circular flow of metabolism the government of Stockholm has implemented urban mining in the city. The city has taken initiatives, for example by collect electronics and the metal-storage that exist in the city and reuse or recycling these. The urban waste is contextualised, and the old cables and pipes are reused.

The nature and the city are interlinked. The natural processes and natural material are a part of the city structure. Many houses are made of tree-material and have green roofs for example. In this sense, the planning of the city uses the “goods” from the nature to obtain a sustainable city where people want to live in. The “goods” and the “bads” are distributed equity among the citizens and the spatial places of Stockholm. This means that environmental “bads”, such as waste and pollution, is not centred on a specific area. This resolves in that people have the same opportunities to access environmental “goods” and no group of people are more exposes to environmental “bads” than other.

Reflection

The visioning is made from a utopian and sustainable viewpoint of Stockholm in 2200 since this seems to be lacking today. Many stories concerning the future is generally rather dismal and visioning a preferable future could help to obtain prosperity and strength to make a different. So, the visioning is not based on a realistic standpoint for the future. The theoretical part of the visioning is obtained from several theories and concepts within the field of political ecology and the selection is made after those who seemed relevant and supporting in the transition to a sustainable urban environment in Stockholm.

The subject of diversity and equality is derived from the concept of environmental justice (Robbins 2012, p.74). Diversity and equality are a fundamental part of a sustainable city and need to be taking into consideration. Moreover, I think this is especially relevant for Stockholm where the segregation in terms of an economic and ethnical aspect is evident. The field of environmental justice contribute with the aspect of distribution of environmental "goods" and "bads" in the city and underpin a spatial urban environment where there is no difference between areas in this sense. The housing policies in Stockholm are a base to counteract the segregation and homogenised form of different zones in the urban space. By focusing on the "common good" instead of handling the housing situation as a part of the capitalistic market, changes can be made. The mixer of different owning types resolves in possibilities for everyone to find their suitable housing without being considerable limited by your socioeconomic situation. This topic also links to the concept of urban environmental justice and the distribution of "goods" and "bads" (Robbins 2012, p.74).

The infrastructure and urban planning section is based and inspired by the concepts of urban imaginary (Dikeç & Swyngedouw 2017), cosmopolitics (Houston et al. 2016) and post-normal science (mentioned in a seminar). The vision in this part is built upon inclusion of perspectives outside the established institutions and policy processes. The concept of urban imaginary brings with it an aspect of focusing on how citizens see the urban space and re-thinking what the urban reality is. By creating "free squares" around Stockholm its gives opportunities for people to do this. Furthermore, the insights from cosmopolitics were the base for the idea of mapping different values, knowledge, and practices around Stockholm. It is important to include these ideas to see how people think and act concerning the climate change and the sustainable transformation of the city. Stockholm can better adapt to people's behaviours with this information. Lastly, the concept of post-normal science was applied to the policies surrounding decision-making in Stockholm. I think this concept is relevant when it comes to environmental policies, where the decisions often include uncertainties and high risks, and you need to take in other perspectives and information. This is also a way to include values and beliefs of the urban citizens who are going to be affected by the result of the decision.

The last part of the visioning is focused on the flow of matter-energy and a transformed view of the human-nature relationship. This view does not separate the human space with the nature, it interlinks them and people have an overall understanding of that the urban space is interconnected with the nature. The circular flow is a way to counteract the overexploitation of

natural material and to sustain a society less focused on consumption. The concept of urban metabolism (Robbins 2012, p.73) was the fundament of these ideas. This concept inspired me to see the urban environment as a creation of natural material that is processed and transformed to build the city. The material is used in different ways and the use in this visioning was aimed at acknowledging this and connect this material to the urban planning in a sustainable way. For a sustainable transformation of Stockholm, I think it is important to have the kind of mind-set of urban metabolism – to see the flow of natural material in an urban system and understand that the urban space is depended on natural materials and processes. Moreover, urban mining felt like a contributing tool in this transformation to a circular flow.

References

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