Module 4: Málaga Municipality

4.4 Unpacking the Crisis

4.4.1 Waste. Cover or burn

The problem of waste has focused on waste management, but the focus should be on reduction and reuse. The growing amount of waste requires new policies that prioritise waste minimisation, and industry must commit to redesigning products to facilitate recycling. Currently, waste ends up in landfills or incinerators, both of which have negative impacts. A UNEP report indicates that municipal solid waste generation could increase from 2.3 billion tonnes in 2023 to 3.8 billion tonnes in 2050, with management costs that could rise to $361 billion when hidden impacts are included.

There is an urgent need to decouple waste generation from economic growth and to adopt circular economy and zero waste approaches.

According to a new report by the United Nations Environment Programme (UNEP), entitled "The End of the Waste Era: Turning Waste into Resources" , only a drastic reduction in waste generation will ensure a liveable and affordable future. The report provides us with the most substantial up-to-date data on global waste generation and the cost of waste and waste management since 2018.

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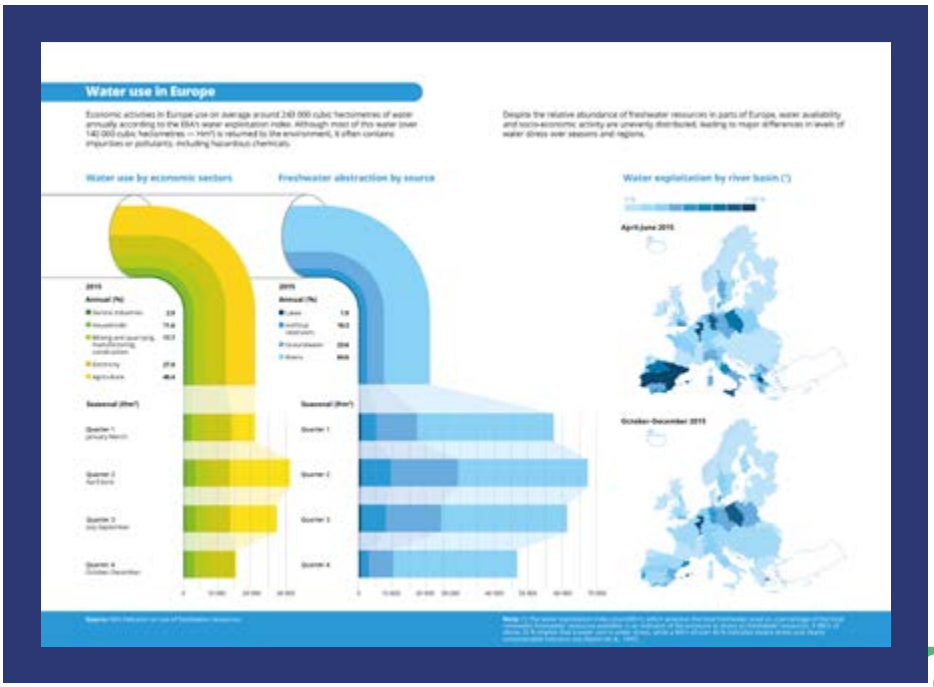
4.4.2 Water. The availability

Water scarcity is a growing problem globally, affecting even Europe, where 80% of the water consumed comes from vulnerable sources such as rivers and groundwater. Increasing demand, overexploitation and climate change are aggravating the situation. In Europe, water demand has increased by 24% in the last 50 years. Agriculture consumes 40% of total water, followed by power generation (28%) and manufacturing industry (18%). Overexploitation of water resources has negative effects on the environment and biodiversity. Climate change will intensify these problems, making it urgent to use water more efficiently and implement water-saving measures.



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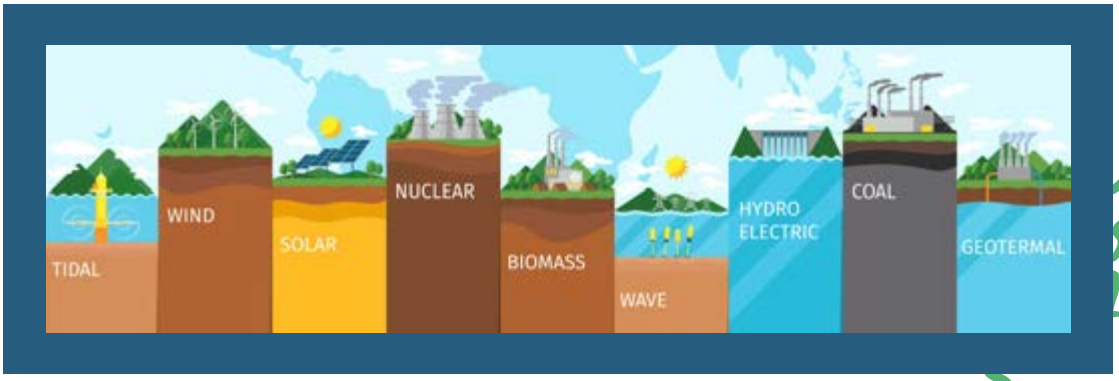
All this water consumption is good for the economy and, consequently, for our quality of life. However, local water resources in an area may have to cope with competing demands from a variety of water users, which may result in the water needs of the natural environment being ignored. Over-exploitation of water resources can be harmful to water-dependent animals and plants.

4.4.3 Energy. Sources and Options

There are two main types of energy: renewable energy and non-renewable energy:

Renewable energies are clean and almost inexhaustible resources provided by nature. Due to their autochthonous nature, they contribute to reducing dependence on third countries and favour technological development and job creation.

Non-renewable energies are those whose reserves are limited and therefore diminish as they are consumed. The smaller the reserves are, the more difficult it is to extract them and the more expensive they are to do so: oil, coal, natural gas and nuclear energy are considered non-renewable energies.



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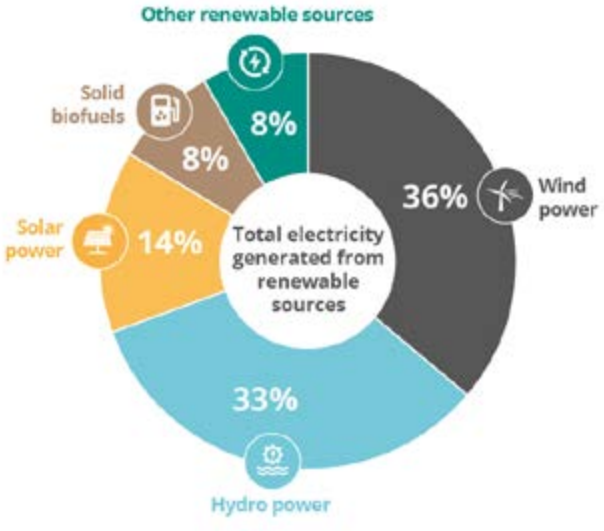
According to the Paris Agreement, in order for the effects of global warming not to be irreversible, GHG emissions must be completely neutralised by 2050. This requires the elimination of fossil fuels (oil, natural gas, coal) and their replacement by renewable energy sources, which is a technological challenge.



4.4.4 Mobility. Your choice.

Over the last century, European cities have been designed primarily for cars, which has led to congestion, pollution and a decline in quality of life. There is a growing trend to reclaim urban areas for community use, such as parks and spaces for pedestrians and cyclists.

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· **Citizen contribution:**

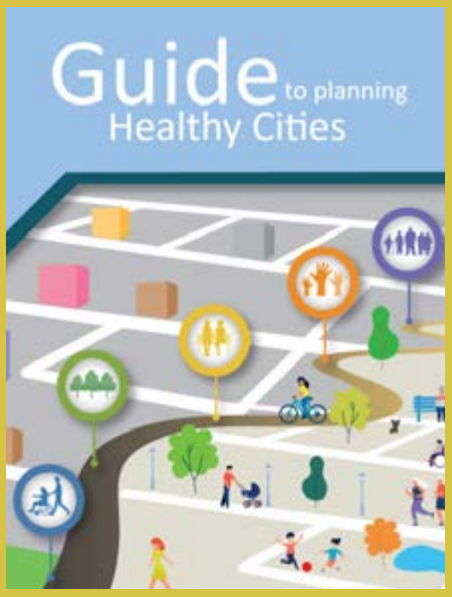
1. Change travel habits: Use public transport, cycling or walking.

2. Car sharing: Reduce use of private cars.

3. Electric or hybrid vehicles: Prefer these if a car is needed.

4. Efficient driving: Save fuel.

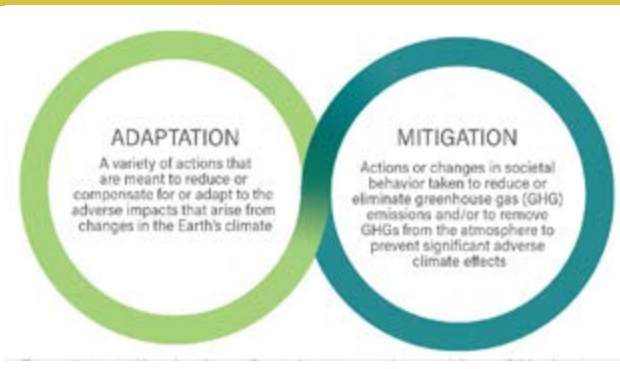
5. Support sustainable mobility policies: Encourage positive change.



Sustainable mobility is a challenge that requires the commitment of all: governments, businesses, citizens and organisations - together we can build a greener, more sustainable future where transport is accessible, affordable and environmentally friendly.

4.4.5 Climate. Mitigation/Adaptation

Climate change is an ongoing reality, with the last decade being the warmest on record. Climate extremes such as forest fires, heat waves, droughts and hurricanes are on the rise, along with slow onset events such as desertification and biodiversity loss. In the face of this global challenge, it is essential to implement both climate change mitigation and adaptation measures.



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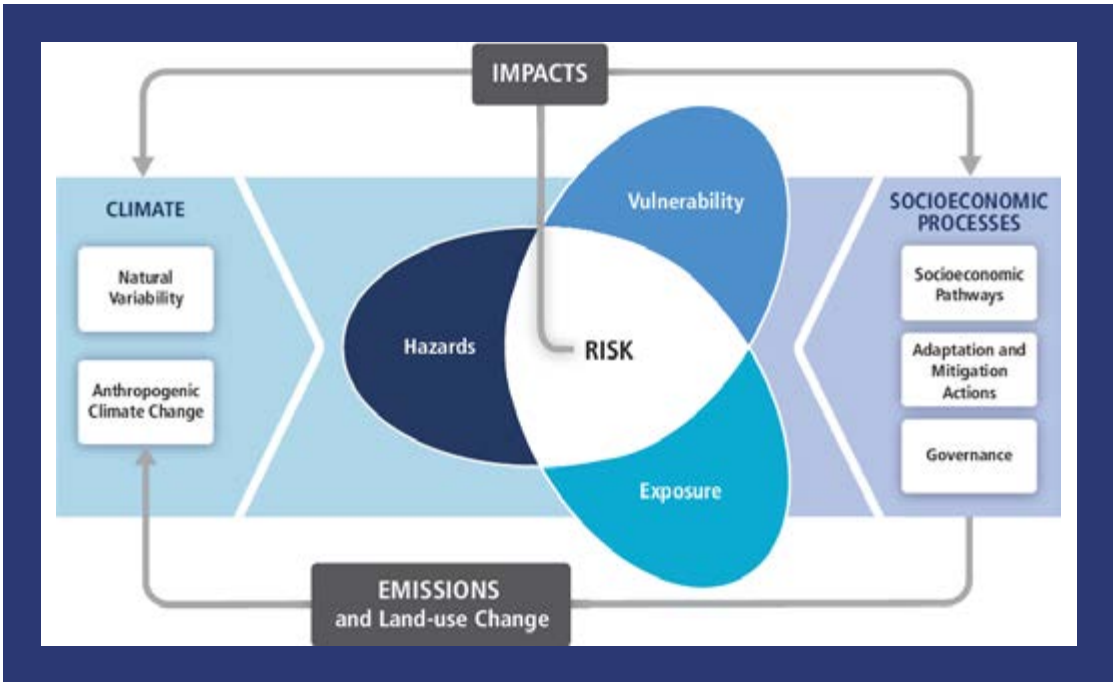
· Vulnerability to climate change and its components:

Levels of risk to climate change are conditioned by a number of factors including exposure, sensitivity and adaptive capacity. In the field of adaptation, interventions are proposed to limit vulnerability to climate risk. For example, to prevent the health impacts of heatwaves, it is possible to act on exposure (by locating new housing in cooler or ventilated areas), on sensitivity (by promoting generic health improvements in at-risk groups) or on adaptive capacity (by providing practical information on how to act in the event of a heatwave).



On this website you can find out about some of the climate change mitigation and adaptation measures that are being developed at European level: https://www.eea.europa.eu/es/themes/climate

4.4.6 Air Quality. ATM and acoustics

The atmosphere, the gaseous layer surrounding the Earth, is polluted by harmful substances and forms of energy. The main sources of air pollution are industry, transport, energy production and agriculture. Despite the general reduction of air pollution in Europe in recent decades, the desired air quality levels have not yet been achieved, especially in urban areas.

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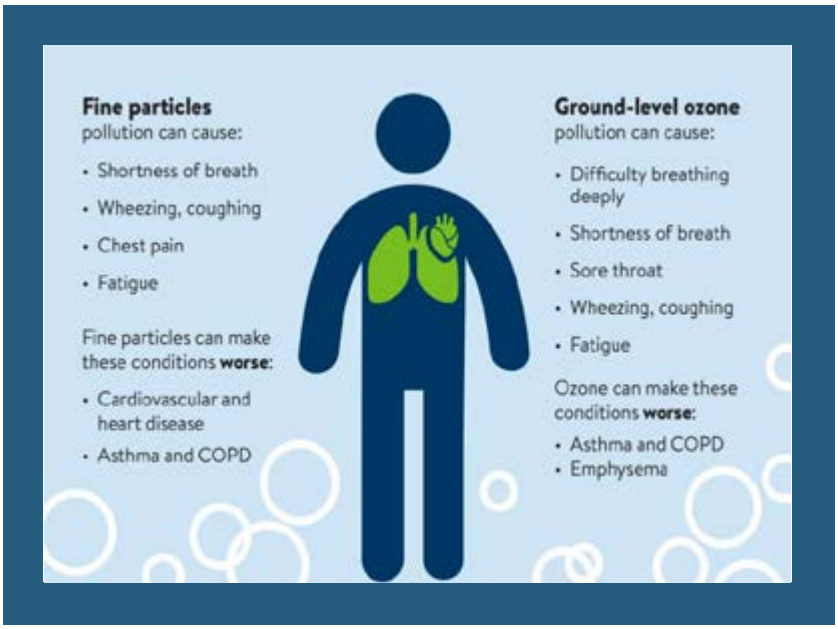
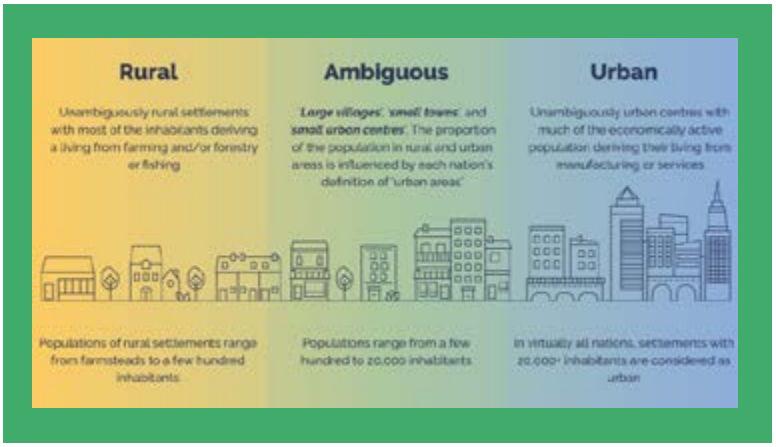


The most harmful pollutants today are fine particulate matter, nitrogen oxides and ground-level ozone. Air pollution can cause cancer, cardiovascular and respiratory diseases and is the leading environmental cause of premature death in the EU.



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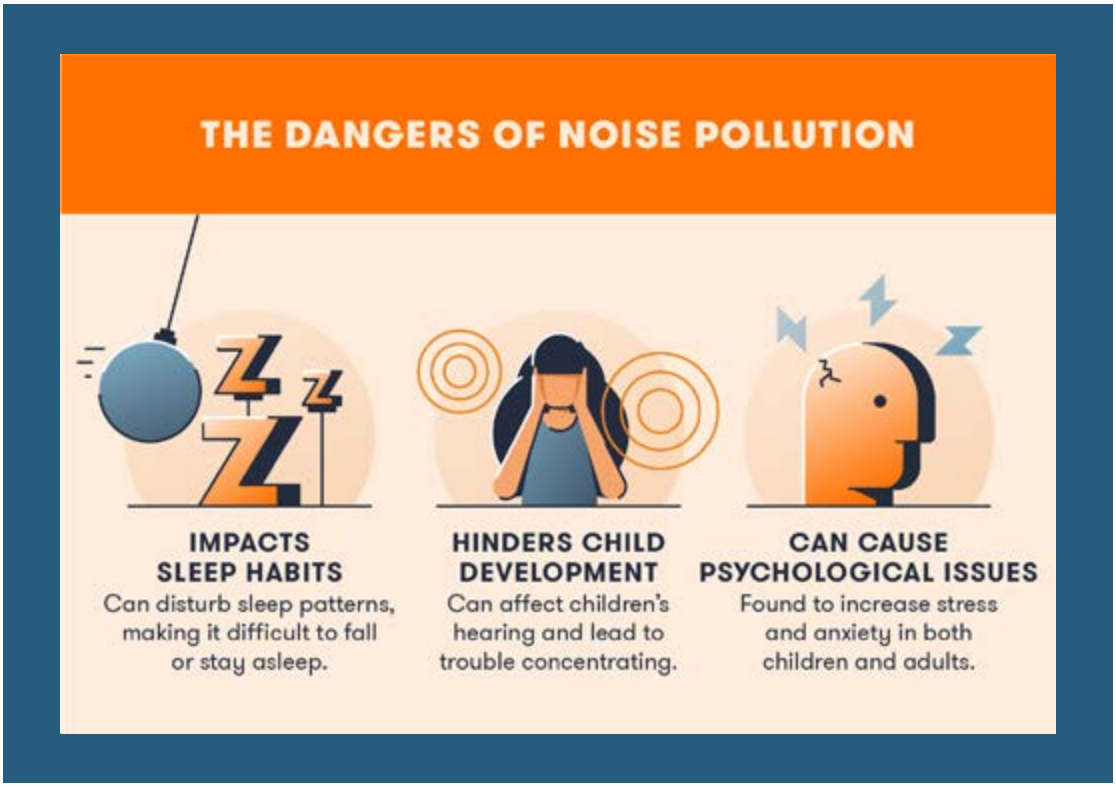
Environmental noise has increased in urban areas due to traffic, industrial and recreational activities. Approximately 20% of the EU population is exposed to unacceptable noise levels, affecting quality of life and causing health problems such as stress and sleep disorders. Noise also has a negative impact on wildlife.

· Results of the fight against noise pollution:

The Union's approach to noise pollution is two-pronged: a general framework for determining the levels of noise pollution requiring action at both Member State and Union level; and a series of legislative acts on the main sources of noise, such as road, air and rail traffic, and noise from outdoor machinery.



In the following link, you can access the interactive viewer on noise in Europe, developed within the NOISE project, which allows you to view data on noise in Europe, sources, people affected, etc.(https://www.tiempo.com/ram/199882/visor-de-ruidos-en-europa/).

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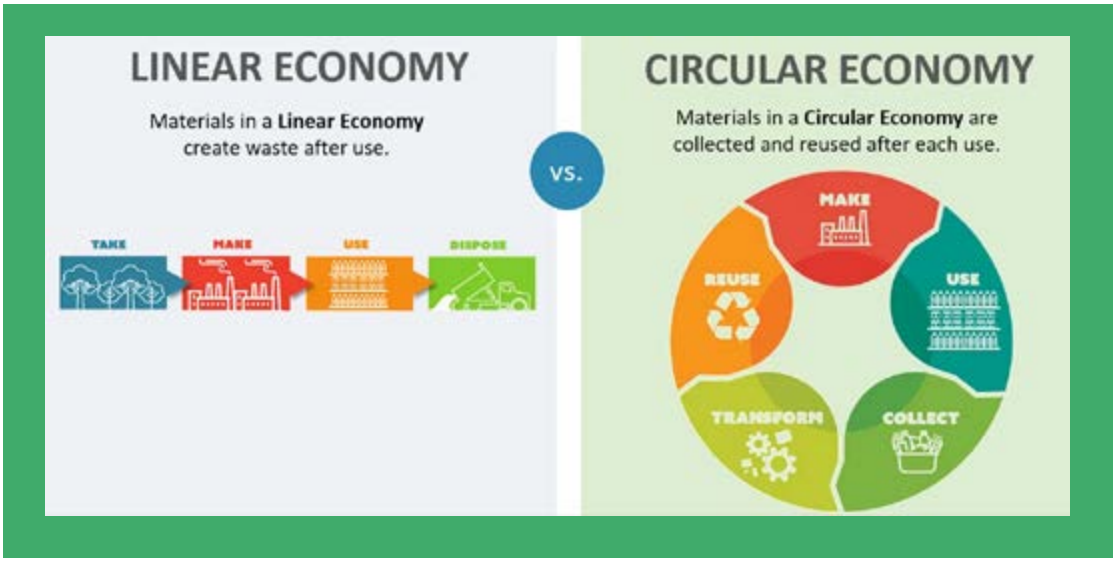
4.4.7 Consumption Patterns

Today, people have access to a wide variety of products and goods to satisfy their needs, from the most basic to the most sophisticated. However, this over-consumption by a minority is causing a resource deficit. It is crucial to analyse our consumption patterns and their impact on the environment and society.

Faced with this situation, it is necessary to look for alternatives that will allow us to build a more sustainable future. Three key concepts in this regard are the linear economy versus the circular economy and degrowth.



In the following video made by COTEC, you will be able to see in 15 minutes a summary of what Circular Economy means and why it is so important to implement it in our society. https://www.youtube.com/watch?v=Lc4-2cVKxp0

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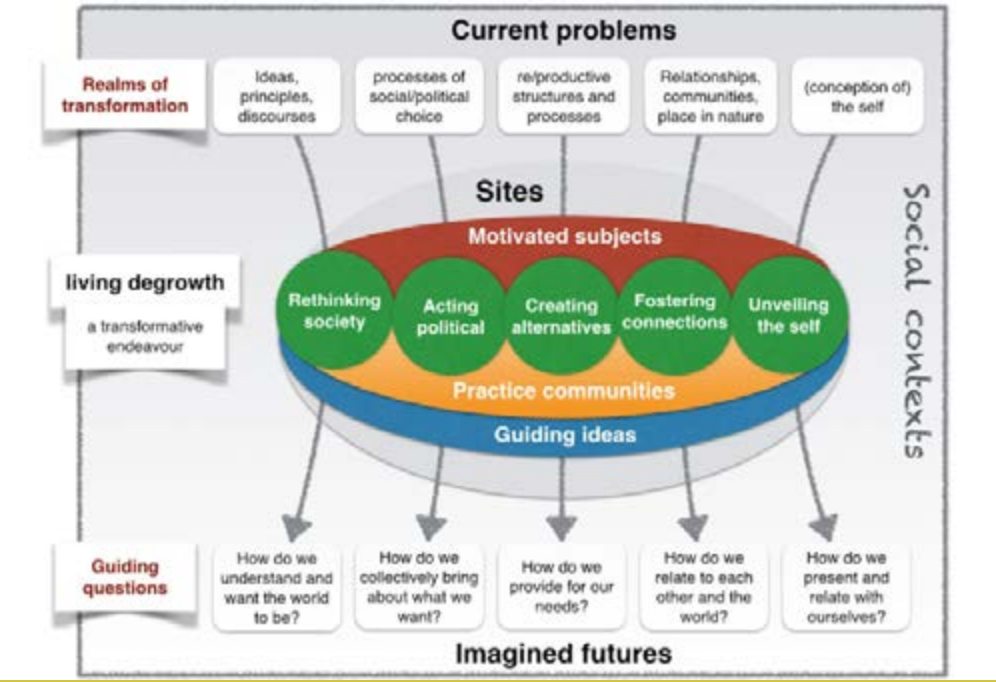
· Degrowth:

Degrowth is a school of thought that advocates the reduction of material production and consumption in order to ensure the survival of the planet. It is based on the premise that continuous economic growth is not possible on a planet with limited capacities, since, once these limits are exceeded, human beings force our own extinction.



This theory advocates reducing our ecological footprint by decoupling social welfare from economic growth, so that we can "live better with less". To this end, it advocates production on a reduced scale, with durable, recyclable and reusable products, and to reformulate work, the concept of economic profit and people's lifestyles.

https://www.youtube.com/watch?v=d7B3ruQOzl0 (Video explaining degrowth)

· Practical activity. Learning control

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