

SUFFICIENCY

DECODING

THE EVOLVING GLOSSARY OF A FAIR AND RESOURCE-WISE LOCAL ECONOMY

ENERGY-CITIES.EU

AUTHOR EMÉRENCE NOUHAUD

REVIEWED BY

MÉLANIE BOURGEOIS AND ALLISON LE CORRE

PUBLICATION DATE

FEBRUARY 2023

LIST OF CONCEPTS



INTRODUCTION: WHY THIS GLOSSARY?

In its **"Resource wise and socially just economy"** Hub, Energy Cities aims at giving local governments all the tools they need to shift their economies towards a more balanced system, respecting social and planetary boundaries.

 \mathbf{N}

"Sufficiency" has emerged as a key component of the ecological transition throughout the years, especially in France and Germany, and notably became a buzzword with the 2022 energy crisis.

However, for many of us, it remains an abstract concept, easily confused with other related terms (efficiency, austerity...). However, this concept holds a lot of potential for European local governments seeking to shift their economies towards a fairer model, respecting the limits of the planet.

Energy Cities will inspire and support local governments in this direction. To work together, it is essential that we speak the same language. **Energy Cities has therefore set itself a mission to help members and partners: to decode sufficiency.** With this glossary, we provide you with definitions and examples to grasp everything about sufficiency and the concepts revolving around it.

DEFINITIONS



Sufficiency

Measures and daily practices that avoid demand for energy, materials, land and water while delivering human wellbeing for all within planetary boundaries (IPCC report, Mitigation of Climate Change, 2022). Energy Cities emphasises sufficiency as a collective and structural approach, as opposed to sole individual efforts.

Energy sufficiency

The concept of sufficiency applied to energy resources, to avoid energy consumption.

Land sobriety

The concept of sufficiency applied to land resources, which aims at limiting urban sprawl in order to preserve biodiversity. The *EU Soil Strategy for 2030* sets an objective for "no net land take by 2050" and encourages Member States to set targets to reduce net land take by 2030. In France, there is *Zero net artificialisation (ZAN) objectives* to reduce by half the artificalisation by 2030 and reach zero net artificialisation by 2050.

Self-sufficiency

At the individual level (concern for individual and local autonomy), to be independent from external resources and help. This is a false friend of the sufficiency concept.

In its sixth report, for the first time, the IPPC dedicated a chapter to sufficiency. The panel insists on the need to control our modes of consumption (resources, space, energy etc.) and production to limit our GHG emissions and the pressure on ecosystems.

With the energy crisis in Europe, energy sufficiency has gained credibility among policy makers as a solution to achieve the ecological transition. Nevertheless, fully committing to such a structural change in our societies still presents many challenges.

ADEME (2020)

Exploring sufficiency actions in territorial approaches in Europe.

Negawatt (2022)

Energy sufficiency: towards a more sustanable and fair society.





Austerity

Austerity, in policy terms, refers to measures taken to decrease public spending as a way of reducing budget deficit. These measures are often implemented in desperate times, when the economic situation is critical.

In terms of climate, if current measures remain the same and do not reach ambitious targets, our societies will go through drastic austerity whether it is willingly to or not.

Given the depletion of resources, our economic model is not sustainable in the long term and such a shift will lead to austerity if it is not anticipated.

Austerity can be chosen or forced. Some of the policies adopted in the context of the 2022 energy crisis in Europe exemplify forced austerity. Governments are preparing for load sheddings which entails voluntary power cuts in targeted areas, decided by authorities. Many other countries and regions of the world are facing load sheddings on a daily or weekly basis (South Africa for example), but in Europe it has not been a usual practice.

The drastic rise in prices is a burden on municipalities who bear these costs alone. Local elected representatives are in a difficult position, torn between reducing public services and increasing taxes. Strasbourg (France) has temporarily decided to close swimming pools and museums a few days per week to face the increase in energy prices since September 2022.



Circular economy

Reduce, Reuse and Recycle.

The circular economy is about producing goods and services in a sustainable way by limiting the consumption and waste of resources. Its goal is to move from a throwaway society to a more circular economic model.

In practice, this means reducing waste to a minimum. When a product reaches the end of its life, its resources are in the economic cycle. They can then be used again and again to recreate value.

Circularity is closely linked to the doughnut city model (explained below) which takes into consideration planetary limits as well as social boundaries.

To tackle the potential rebound effects of a circular economy, it is key to combine it with sufficiency and have as a first objective the reduction of goods and services. Indeed, organisations or individuals tend to consume more when they know that their goods will be recycled afterwards.

The city of Amsterdam (The Netherlands) developed a circular strategy in 2020. Food and organic waste streams represent one part of this strategy. It covers the full cycle, from food consumption and how it is produced, to food waste and how it is managed.

To achieve shorter food chains, Amsterdam aims at developing urban agriculture as well as increasing regional production. Tracking the impact of imported goods and products helps favor local employment and seasonal consumption by Amsterdam citizens. Around 41kg of edible food per person is wasted on a yearly basis in the Netherlands. With the transition, Amsterdam aims at reducing food waste by 50% by 2030.

Towards a circular economy in Amsterdam interactive presentation



Degrowth

Degrowth refers to an economic situation during which the economic wealth produced does not increase or even decrease. The concept of degrowth or beyond growth assumes that only a reduction in global production and consumption can ensure the future of humanity and the preservation of the planet, considering its limited resources. It is about defining new indicators for the economy of national and local governments focusing for example on well-being and not only on the Gross Domestic Product (GDP).

Sufficiency and growth cannot be combined in the long run. To avoid strategies of green washing or green growth, sufficiency appears to be part of the solution as it targets growth excesses while introducing well-being in the equation.

There is no example of a full-on degrowth strategy at local level, but there are increasing attempts to implement degrowth measures.

For example, Amsterdam (The Netherlands) has decided to reduce the number of flights from Schiphol Airport to limit noise pollution as well as emissions.

The aviation sector's emissions have been growing significantly in the past decades and represent a large amount of carbon emissions. This sector is particularly targeted when greener alternatives, such as the train, are available.

In order to implement degrowth measures, policy makers must, for the time being, go through the coercion of such sectors, that do not associate their impact with the climate challenge. Many are reluctant to change the system and stop referring to growth as the main indicator of success.

Check some examples of concrete measures for cities: Metabolism of Cities, video of Timothée Parrique "How can degrowth be applied to cities?" 2022.





Doughnut model

The Doughnut is the visual representation of the limits that we must respect today : defined by a social floor and an ecological ceiling, in between which our societies should exist to be viable on a social as well as an ecological front.

The doughnut theory, developed by the British economist Kate Raworth, is above all a tailor-made system to understand the scope of public decisions and to plan them better in the future.

The combination of social and ecological aspects in the doughnut theory are in line with sufficiency and is a good visual approach to sufficiency.

The Brussels Capital Region (Belgium) has decided to bet on the doughnut model to develop a collaborative system, based on the mobilization of actors and a systemic approach that brings together economic, social and environmental issues and rethinks indicators.

It aims to transform Brussels' economy into one that is decarbonized, circular, social, democratic and digital. The Brussels' Donut will be the compass to lead future policies and use the model with the social floor and ecological ceiling. To duplicate the project, Brussels' Donut team will facilitate workshops for organisations.

Find out more about Brussels donut model And for the whole theory, here on the Doughnut Economies LAB.

09



Efficiency

It is the reduction of resource consumption to produce the same good or service. It is an optimisation strategy.

Eco-efficiency

Is about reducing ecological damage to a minimum while maximizing efficiency at the same time.

Energy Efficiency

Means using less energy to produce the same result.

Efficiency is different from sufficiency in the sense that it does not first reflect on the necessity of certain goods and services, nor does it intend to avoid the consumption of resources. Efficiency and sufficiency are complementary and both important to reduce the resource demand.

Light emitting diodes (LEDs) and compact fluorescent lights (CFLs) use far less energy for the same amount of illumination as traditional incandescent bulbs. These lights are more efficient but still contribute to light pollution (sometimes worse) and do not adhere to the sufficiency principle.

The city of Lisbon (Portugal) has implemented a smart lighting system while changing from traditional light bulbs to LEDs. This measure is an improvement in terms of efficiency but has no particular impact on the consumption as a sufficiency measure would.



Energy demand reduction

The increase in global energy demand is driven by economic growth and the rising demand for energy services. Energy demand reduction therefore aims at reducing the energy consumed by implementing both efficiency and sufficiency.

Zurich (Switzerland) has implemented a 2000 watts society strategy elaborated in 1990 by ETH Zurich and voted in 2008. Energy demand reduction in Zurich has focused on raising awareness among citizens to drive changes in behaviours and energy consumption. With large renovation projects and an increase in the share of renewable energy, they have been able to reduce the energy consumption per capita.

In practice, 2000-watt zones in urban areas involve urban planning, architecture, environmental design, energy, infrastructure and mobility. This allows for forward-looking planning that takes into account the environmental impact at all levels.

Center for Research into Energy Demand Solutions (2021) UK, CREDS.

More info about 2000 watts society

Happy frugality / voluntary simplicity

Happy frugality, coined by Richard Gregg in 1936, is a way of life that consists of voluntarily reducing one's consumption by controlling one's needs. The aim is to lead a life more focused on "essential" values with a complete rejection of consumerism. Frugal people reject excess and avoid unnecessary and wasteful spending.

Contrary to sufficiency, frugality is only interested in the quantitative and very little in the qualitative, and is focused on the individual rather than the collective.

Frugality is therefore a sub-concept of sufficiency.



Just transition

Just transition implies that the ecological transition should bring all citizens on board and leave no one behind – in other words the transition should not be at the expense of social concerns. It means reaching a climate-neutral economy while securing the future of all citizens.

Sufficiency also embraces the notion of just transition by making it a condition of its success. This entails that, by taking into account social and geographical disparities, not all countries, local governments or individuals will have to make the same efforts or changes.

One challenge of the ecological transition is to gather all citizens and not exclude certain population groups from the fight against climate change. The energy crisis has highly affected the European market. The price shock has had dramatic consequences for millions of Europeans in vulnerable situations and raises the issue of energy poverty. Indeed, the ecological transition can not be achieved if it is not social and collective.

Regarding energy poverty, there is often a lack of policies to give access to renewable energy production to all citizens, including the most vulnerable households. Instead, these households rely on fossil fuels which are more expensive, damage air quality and keep them in poverty traps. On the contrary, renewables are far less subject to conflicts and have more regular prices with lower emissions.

Achieving the transition means ending dependency on fossil fuels, but at the same time, making sure that alternatives are equally accessible to citizens, regardless of their incomes.

Energy Cities (2022), Renewable for All.



Needs

Requiring something because it is essential due to a lack of subsistence means. To achieve a just transition, one has to rethink and focus on essential needs that do not harm the environment. It has to be the basis of our reflection towards a new economic model.

Sufficiency is a needs-based approach given that it focuses on the neccesity or not to consume certain goods. It sheds the light on having a more rational lifestyle.

Since 2014, Grenoble (France) has implemented significant changes to adapt the needs of citizens to a greener lifestyle. The metropolis is the very first in Europe to reduce advertisement on its territory by 90%. The objective is to clean up public space, and encourage associative and cultural display.

Indeed, advertising has a direct impact on the environment : through the space it occupies, the energy it consumes and the raw materials needed for its production. In addition to this, there are also indirect effects. Many advertisements promote products that are harmful to the environment. It also encourages over-consumption, and many recent examples demonstrate the continual creation, by commercials, of a need that does not necessarily exist.

In Grenoble, the aims are to protect, rehabilitate and enhance urban landscapes and to fight against all forms of pollution, particularly visual.

Equal Times (2020), The growing global movement to end outdoor advertising.

Movia (2021), Re-envisioning outdoor advertising in a Climate Crisis.

Raw materials

Raw materials are materials or substances used in the primary production or manufacturing of goods.

A sufficient model is expected to relieve the pressure that industries put on raw materials. With the development of circular models, recycling is to be prioritised over the use of new, raw resources.

Rebound effect

The rebound effect is the increased consumption observed after progress of efficiency and, as a result, lowering costs of a good or service. This effect cancels out the technical and other progress made in reducing resource consumption. Sufficiency, contrarily to efficiency, limits the rebound effect by deeply changing the consumption habits of goods and services.

In Sweden, the transport policy measures implemented in the last decades has had a significant rebound effect on energy consumption.

As part of the Swedish aim to reach a fossil-independent transport fleet by 2030 and reduce Greenhouse Gases emissions (GHG), policymakers invested in energy efficient transport. However, the overall energy demand did not decrease with the lower energy price, but instead it rose. The different measures led to an increase of car ownership and a higher consumption of large cars.

EE-Rebound, What's the rebound effect?



Resilience

The capacity of social, economic and environmental systems to cope with a hazardous event, responding in ways that hold their essential structure, while also maintaining the capacity for adaptation, learning and transformation. This is an objective for cities facing, among other challenges, the consequences of climate change and energy crises.

Sufficiency contributes to making a society more resilient as it relieves pressure off planterary resources.

In Europe, cities must face the evergrowing challenge of heat waves, particularly in Spain. To reduce heat in the city and become more resilient, Barcelona (Spain) has focused on CO2 sequestration. This involves street trees, green corridors, urban gardens and the preservation of the peri-urban forest of Collserola.

These measures are only one side of a resilience strategy : green solutions. Resilience is also about grey and soft solutions, focused on technology, infrastructure, policy and people's behaviours.

Climate ADAPT, Resource center for adaptation to climate change.

Energy Cities (2021) Understanding, planning and combating urban heat islands.



Resource-efficient

Resource efficiency is the practice of using less to provide the same amount or more of a useful output from a service or good. Energy efficiency is a subcategory applying the concept to the energy sector.

Resource efficiency focuses on optimising the process that uses resources, but does not first question the use of a service/good and its necessity, as the sufficiency framework does.

Dunkerque (France) has introduced a solidarity pricing system for water, a scarce resource for the city, as well as support for paying bills through municipal social action centres, or via a solidarity fund. A major emphasis is also placed on raising awareness around increased scarcity of the resource, which was the focus of an exhibition in 2022.

All of this municipal involvement has contributed to a drop in average household consumption, which is well below the national average.

EEA (2018), Water use in Europe – Quantity and quality face big challenges. EEA (2022), Beyond water quality – Sewage treatment in a Circular Economy.

-



Resource-wise

What is done with awareness of limited resources available on the planet, for instance by promoting recycling to limit the extraction of new resources. This a generic terminology that can be embedded into other concepts from this glossary.

Compared to resource-efficient, resource-wise is closer to sufficiency as it focuses on reducing consumption and waste of resources, taking into account planetary boundaries.

The city of Venlo (The Netherlands) is a great example of resource-wise decisions. With its City Hall, Venlo has established the Cradle to Cradle (C2C) strategy. The municipal offices were designed and built based on the principle that anything manufactured for the project has to be used in a closed cycle : all inputs must be controlled and used again in the production.

Cradle to Cradle, as a resource-wise strategy, is about adding value rather than using and wasting resources endlessly.

Read more about the C2C building in Venlo

CONCLUSION

N

Sufficiency remains an under-exploited area in public policy. Nevertheless, its relevance for shifting economies is significant. With an approach focused on demand and changing lifestyles, sufficiency is an essential concept to grasp. With this glossary, we have tried to detail the ideas that revolve around it and illustrate the concept concretely.

These new terms and their nuances need to be understood by everyone in order to make sense and be highlighted. This glossary is evolving and Energy Cities is looking forward to receiving your feedback, your own definitions and experiences to share.



www.energy-cities.eu



f @energycities.eu

BESANÇON

2 chemin de Palente 25000 Besançon, France

BRUSSELS

Mundo Madou Avenue des Arts 7-8 1210 Brussels, Belgium

Energy Cities' mission is to empower cities and citizens to shape and transition to future-proof cities. We showcase concrete alternatives deployed by cities, we advocate changing policy and economic governance at all levels and we foster wide cultural change leading to a future-proof society. Energy Cities community is composed by local leaders of thousands of cities in 30 European countries.