

A comparative analysis of sustainable development in
France and Slovenia.

CHAPTER

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Introduction

According to the Environment and Development Brundtland's report of 1987 the sustainable development is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. Sustainable development combine three thematic: environment, economy and social.

Therefore, sustainable development will be dealt and mostly two major actors that are parts of this sustainable development, France and Slovenia. The purpose will be to compare them in terms of sustainability and to understand how they manage to do so. Thus to respect this sustainable development some goals were created in 2015 by the United Nations General Assembly under the name of SDGs, namely “The Sustainable Development Goals”. Countries must achieve them within 2030.

There are 17 SDGs that are classified by several thematic and that will be studied in this order: environment, economy and finally society.



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Introduction

Firstly, environment will be discussed and particularly SDGs that are linked to ecology. Indeed, there are four goals that the United Nations General Assembly implemented in order to improve the ecological sustainability as “life on land”; “life below water”; “clean water” and “sanitation and climate action”.

Then, the social part will be talked about, mostly the four that are linked to this subject, namely “decent work and economic growth”, “industry innovation and infrastructure”, “reduced inequalities” and at last “responsible consumption and production”.

Finally, SDGs on society will be dealt as the first one “no poverty”, “zero hunger”, “good health and well-being”, “quality education”, “gender equality”, “affordable and clean energy”, “peace justice and strong institutions”, and finally “sustainable cities and strong communities”.

To illustrate these thematic, Eurostat indicators will be used, such as the recycling rate of municipal waste, and the percentage of green spaces. Moreover, in the social part, several other indicators will be utilized as the “standardised death due to homicide by sex”; “the general government expenditures on law court”; “people at risk of poverty or social exclusion” and “the healthy life years at birth”.



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Research goals

All along this research several goals were aimed.

Firstly, this research was aimed to shed light on the efforts of both cities to improve their sustainable development. Also describing how these improvements have been implemented through the years was a source of motivation.

Moreover, this paper was made in order to understand and making people understand the future of global cities. Since, the faster habits will be changed, the faster changes will be seen all around the world.

Finally, the most important goal was to share knowledge and to gather elements.

So that it can easily raise an awareness among people and future generations that can make a difference.



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Methodology

Methodologically, the paper relies on secondary data sources and analysis that are the following: Firstly, an overview of existing literature as well as the summation of main findings and their analysis. Secondly, an analysis of secondary data sources as Eurostat.

Moreover, this paper comprises primary data collection, which encompasses a survey. This survey was made in Ljubljana's downtown, several questions on the sustainable development were asked to its inhabitants. The main goal of this survey was to understand how people adapt themselves to these new sustainable capitals and how these cities have risen to the top sustainable cities in Europe.

In order to study these two countries in the best possible way, this paper focused on respective capitals.



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Major features in Slovenia and France

Firstly, France and Slovenia are developed countries, an analysis from “countryeconomy.com” shows that their 2021 GDP were respectively of 2,500,870 billion and 52.02 billion euros. Likewise, their 2021 GDP per capita were of 36.520 euros for France and 24.680 euros for Slovenia.

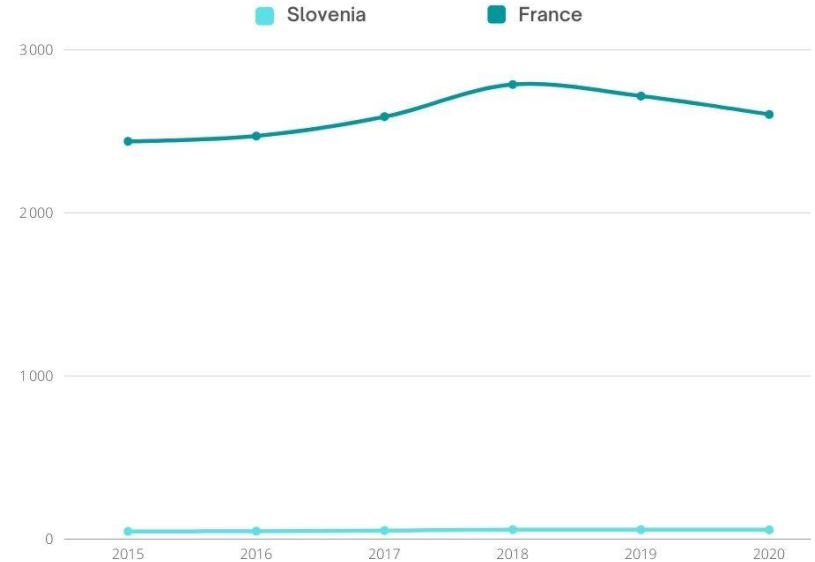
In addition, a paper from “donneesmondiales.com” compared countries’ area. It shows that, France’s area is around 549,087 km² that is to say 26 times larger than Slovenia which is around 20,675 km².

These economic situations and wide areas allow them to have a lot of green cities, that are parts of this transition such as Nantes, Paris, Bled and Ljubljana.

According Wikipedia’s definition, green cities are “cities designed with consideration for social, economic and environmental impact”.

Therefore, these cities are examples that show that a green transition is possible even in bigger cities. In fact, according “Forbes.com”, in the ranking of the greenest cities in Europe in 2022 made by European Best Destination finds Ljubljana at the 1st place and Paris at the 18th place.

GDP in billions of dollars (\$)



Major features of Ljubljana and Paris:

The city of Paris is part of a region that imports 80% of its resources and produces 40 million tons each year. The Chamber of Commerce and Industry of Paris analyzed that the Ile-de-France region produces 31.4% of the national wealth, with a high concentration of diverse companies, the region is the house of 1,166,577 companies, among them several richest companies and a lot of different start ups. Hence, it is the 1st European employment area, it is a city whose system is based on innovation, the inhabitants feel more and more concerned by sustainable development. A statistical document from “citymayors.com” on the richest cities in the world relate that the capital GDP in 2021 was \$981 billion and the GDP per inhabitant of the region was €65,2000 (US \$73,000) which is the highest in France. In 2021 it was the 6th richest city in the world and his annual growth was around 1.9% between 2005 and 2020.



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Major features of Ljubljana and Paris:

Comparatively, Ljubljana and its region produce 25% of the country's domestic products and its working population is 62%. It is an attractive city for a lot of businesses and companies headquarters. Young labour and its job market enables this attractiveness thanks to the top educational institutions.

The predominant sectors in the region are pharmaceuticals, petrochemicals, food processing and tourism. The Slovenian capital has won numerous awards, exposed in the town hall, for its sustainability in tourism, transport, social and economic measures.

Thus Ljubljana can congratulate itself to be The Golden Apple 2016 and The Emerging Europe Award 2019. The city also the price of The Greenest Capital Of Europe in 2016. Thanks to this election, the elected city has benefited from an increase in visitors and in its economy. Prove Eurostat since 2016, within one year, the number of nights spent by visitors in Ljubljana has increased by 17% what has obviously benefited the economy.



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Ecology

Moreover, according Eurostat France and Slovenia's carbon footprint have decreased in recent years. For instance, France net greenhouse gas emissions went from 83 tones per capita to 73 tones per capita, and for Slovenia it went from 123.1 to 85 tons in 2019. Therefore, deeds that allowed decreases will be disclosed..

In Ljubljana and Paris, a lot of climate actions were set. These cities clearly want to change things. For instance, they try to protect their biodiversity, according to an article from [The Time](#) written by Precious Adesina in 2018 Paris has 9% of its city covered by green spaces. Nevertheless, according to "recyclingbins.co.uk" and "ljubljanasi" it's not enough for this city compared to Ljubljana who has 542 square meters of public green space per capita, 80 hectares of green space and Tivoli Park located in the heart of the city is about 5 km square in total the city has 75% of green space.

There are a lot more examples that we can develop, but these are the most important in order to show that there are a lot that have been implemented to improve sustainability.



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Ecology

In addition, it's very interesting to see that city centers gradually become car free. For instance, bike paths are everywhere in both cities so that you can move around with zero carbon emissions. Also, public transportation is developed in both cities; you can travel by bikes, walk, even by subway (only in Paris) and private electric trains and buses (in Ljubljana). These sustainable transport options are pretty well-developed and allow people to travel almost everywhere. This development can be shown according to Biketour ranking that ranks France and Slovenia at the 10th and 9th for being a bike-friendly city.

For example, Ljubljana has made available to residents and tourists a bike-sharing system named BicikeLJ for only 1€ per week and can be used throughout the city.

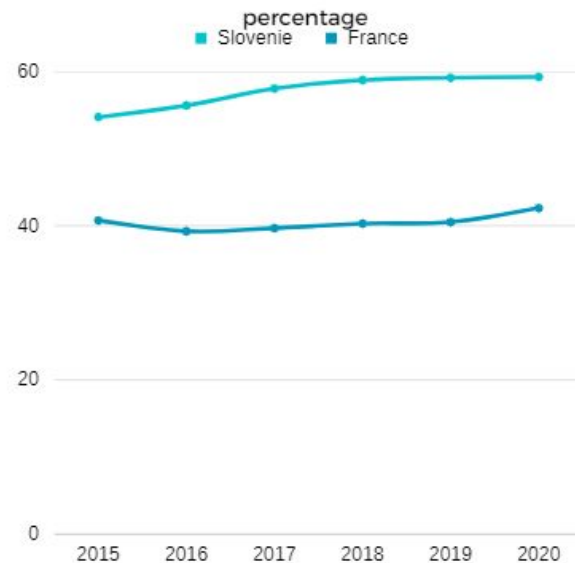


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Finally Ljubljana, is devoted in recycling for instance according to Eurostat from 2015 to 2020, in Slovenia, the recycling rate is higher than France. In 2020 it was around 59% in Slovenia whereas in France, only 42% of waste is recycled, a 17% gap, which is huge. Nevertheless, it's still more than many other developed countries such as Spain which has a rate of 36.4% or Sweden which has a rate of 38.8%.

Recycling rate of municipal waste in Slovenia and France in



Therefore, 70 persons of all ages and all social category, were surveyed in Ljubljana in order to know if they are aware of recycling. Below is the survey that we run through the city.

Is recycling important for you?	Yes: 91.43%
	No: 8.57%

Therefore, this survey can assert what was said before, namely that people are mostly aware of this main stake that is recycling.

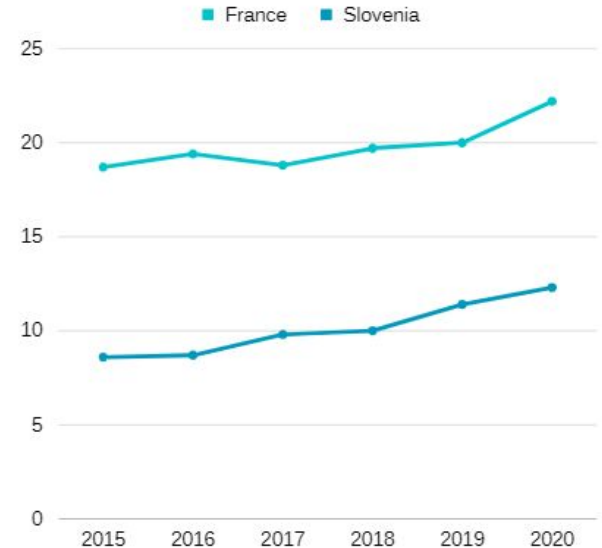
Economic development and sustainability

Furthermore, this part discuss the circular economy, because it is the future of a sustainable society.

Firstly, according to *the Ellenmacarthurfoundation in 2013* circular economy is “a systemic approach to economic development designed to benefit businesses, society, and the environment”. Therefore this economy allies what we always wanted to do, economic development, because it’s necessary in our capitalistic world, and sustainability.

According to a study on Eurostat from 2015 to 2020, both countries have a circular material use rate and have improved in recent years. This indicator is interesting to see if an economy is circular. For instance, in 2014, before the implementation of the SDGs this indicator was around 17% and then it went to 22%. In the same way, in Slovenia this indicator was at around 8.5% and it went to 12.3%. Thus, it’s likely that within the years people see improvements.

Circular material use rate of Slovenia and France in percentage



Social

Finally, the social aspect that is, absolutely necessary for development to be livable and equitable, will be developed.

Indeed, both countries decided to spend quite a lot of money for social expenditures.

For instance, France spends 30% of its GDP on social expenditures, which is a lot. This is the first country that spends that amount of money.

Likewise, Slovenia is ranked at the 16th place, it spends around 23-24% of its GDP for social expenditures. Both countries, have higher expenditures than the OECD average.



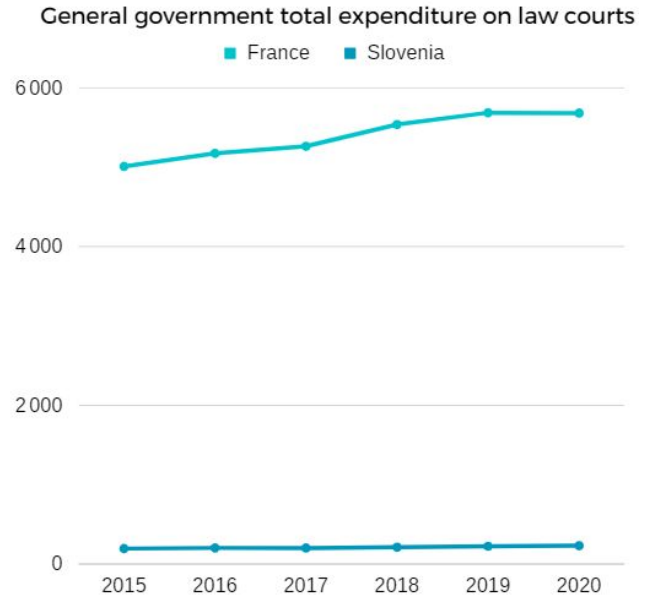
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Moreover, in these 17 "social" goals we find goal 16 which ensure access to justice for all and the establishment of effective, responsible and open institutions at all levels.

To illustrate this social aspect, if we take the example of homicide and injuries inflicted by another person with the intent to injure or kill by any means, including 'late effects' from assault, we can see that since the signing of the SDGs, in France this rate has decreased by 0.08. In the same way, in Slovenia it has decreased by 0.34 which may be a glimmer of hope for the future.

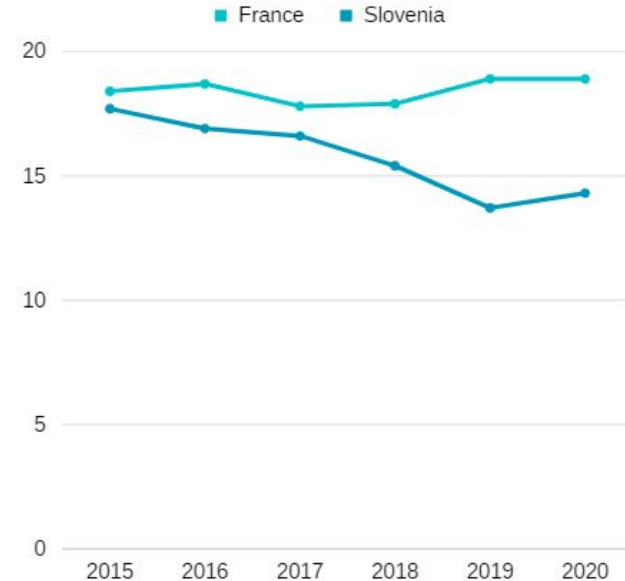
In the same way, according to Eurostat, France has increased its court expenditure budget by 704 million euros. In Slovenia, the increase was 33 million euros as you can see on the chart.



Furthermore, among the other social objectives of sustainable development, we find the will to eradicate poverty. Thus, the indicator of people at risk of poverty and social exclusion can illustrate this goal.

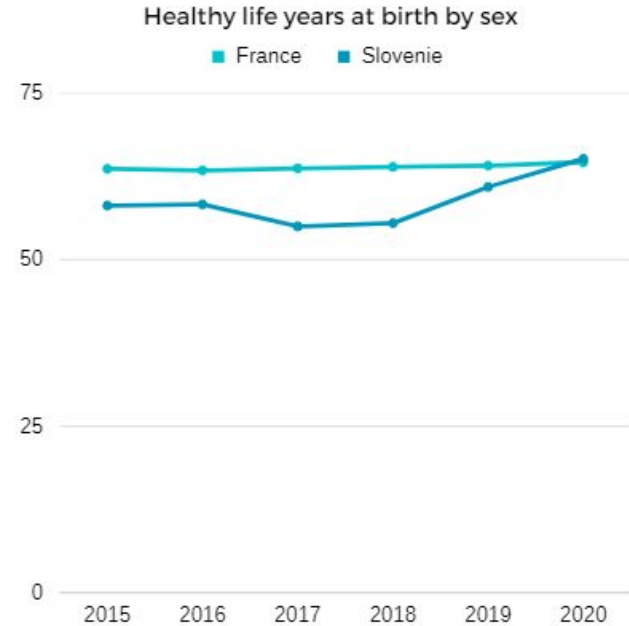
Here, France has 18.9% of people at risk which represents an increase of 0.5% since 2015. Conversely, Slovenia has managed to lower its rate by 3.4% since 2015.

People at risk of poverty or social exclusion in percentage (%)



Let's take as a last example goal 3 "good health and well-being". One of its main indicator is healthy life expectancy. In 2020, the French had an average life expectancy of 64 years and 6 months. While France has gained 1 year since 2015, Slovenia has gained 7 years.

Both cities have tried through the years to fulfill social goals and it is attested through those indicators.



Comparison of projects for a sustainable city in Paris

Both cities have in their project a line of conduct including sustainable development through the circular economy.

Therefore a comparison of their future projects will be done.

The Great Paris Circular 2021 Project aims to combine the circular economy with the solidarity and social economy.

The solidarity and social economy is, according to the French Ministry of Economy and Finances documentation center, an economy based on an association of companies on the principle of solidarity and social utility.

Individual profits are forbidden and profits are reinvested. And their financial resources are generally partly public.

Combining these two economies will allow them to create economic and social value for the city and the country, reduce the consumption of resources, promote the alliance between the different actors and lead to sustainable innovations that will be shared



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An agenda for the year 2030 has also been written on the basis of 3 axes: accompanying the territories in this economic transformation; engage the economy in a circular and solidarity-based green recovery; act as an example in terms of education, purchasing and public procurement. This agenda brings together more than 45 actions.

Among the most important measures, we find the financing of 100 companies carriers of production and consumption models based on the circular economy and the ensuring that 100% of reconstruction/deconstruction operations in high schools are carried out after a resource diagnosis.

Also, the French government has set up numerous regional aids for projects concerning Zero Plastic, innovation for the future of waste or in the field of sustainable construction.



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Comparison of projects for a sustainable city in Ljubljana

Concerning the city of Ljubljana, a sustainability strategy named 'Vision 2025' was published on the official website of the city of Ljubljana, "ljubljanasi".

Several projects of garden city, of increase of green spaces are evoked in it, they allow to ally the demographic stakes of which the city is going to face because of the constant increase of its population and the ecological stakes.

The Slovenian capital has included in its development plan for 2025 the preparation for the post-oil world. It plans to use alternative, renewable and non-polluting energy sources such as hydrogen production technology, starting with public buses.

Ljubljana aims to make its most energy-consuming buildings carbon neutral.

In the logic of reusing the resources already available, the city plans to reactivate former industrial wastelands.

A biological center and an ecological park will also be developed to promote the reuse of already available resources.

Rainwater will be made available to households for the purpose of saving rainwater.



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In terms of agriculture, the region's fruits and vegetables will be produced using hot bed technology. It permits the use of the heat of the compost that is placed under the crops. This allows to heat the plantations and thus to have products more quickly and on the long term. It avoids the use of artificially heated greenhouses.

In addition, the project aims to gradually transform suburban farms into ecological farms, as is already starting to happen.

The parks will offer ecotourism activities that will preserve the fauna and flora threatened by human activity.



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Actions for sustainable development in Paris

The largest economic sector of Paris is leisure tourism (cafes, hotels, restaurants, transportation and cultural activities). Indeed, the capital attracts 42.8 million tourists per year and the tourism sector alone accounts for 12.8% of the city's jobs according to “numbr.co”.

Paris has set a lot of deeds through the years in the field of tourism that allows it to improve its impact on the environment and also to develop itself economically.

In order to best combine tourism and sustainable development, according to “paris.info.com” the city has set up eco-responsible accommodation with some hotels that have signed the charter "for a sustainable accommodation in Paris", the possibility for tourists to eat organic, local and seasonal food or the possibility to shop in an eco-responsible way with some products stamped "Go for Good " that respect the environment, social development and support French manufacturing.

In concrete terms, the city is committed to use this circular economy to reduce its CO2 emissions, produce and consume differently, which generates the creation of sustainable jobs that cannot be relocated.



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In a report published on the official website of the city of “paris.fr”, the jobs linked to the circular economy would be equivalent to 66,500 FTEs in 2016, i.e. 2.9% of jobs in Paris. They would also generate an added value of 7 billion euros per year.

This allowed the meeting of more than 240 actors from the industrial, academic, associative and institutional world around 65 proposals like the zero waste trajectory, food waste, energy recovery, industrial ecology and construction waste. Among the actions we find the development of an interactive web application by the Urban Ecology Agency that allows the visualization of the urban metabolism (incoming and outgoing material, water and energy flows) of the city in order to allow other actors to better understand their actions in favor of sustainable development.



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Actions for sustainable development in Ljubljana

On the other hand is that, in order to set the circular economy in Ljubljana the city and its inhabitants set several measures of recycling, sorting and eco-conception.

Among them we found, the worn-out dry-cleaned bus seat covers that it's donated to the Abandoned Animal Shelter in Ljubljana, the reuse of construction materials from a factory site for the construction of a path.

Then, the cooperation of 2 large groups Energetika and Novartis allowed the recovery of hot gas by one of the groups in order to heat the house of the inhabitants. This has allowed to reduce their CO₂ emissions by 1,000 tons, a reduction of 51,000 m³. Energetika Ljubljana supplies about 300 apartments with an area of 70 m² through this reuse.



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Furthermore, the incorporation of a recycled bus into the project for the integration of young people in order to integrate them into the professional life.

It is important to note that the city is the 1st European capital to have adopted the "zero waste" program. In 2022 it is 63% of sorted waste who was collected, 74% of homes supplied by district heating and natural gas and 40 public drinking fountains available all around town.

To further expand this sustainable way of living and to anchor sustainability in the habits of the inhabitants, the city organized more than 1,700 free events and activities around the subject each year. This is a great way to sensitize people to the threat of climate change.



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Conclusion

To put in a nutshell, France and Slovenia and more precisely their capitals attract a lot of tourists every year and are very attractive for people looking for a job and contribute greatly to the greatness of their country. In addition, both cities follow similar policies based on the 17 United Nations goals.

Let's note that despite a lot of similarities that have been noticed through this paper, the two countries and more precisely the two capitals do not have the same factors to fulfill the objectives of sustainable development. Whether it is on the demographic level, the industrial level, the rate of green spaces or the water delivery system.

Since the signature of the SDGs in 2015, both countries have made great efforts to live in a more ecologically, economically and socially sustainable way.

On the ecological level, many actions have been implemented in the major issues of waste reduction and carbon footprint.

On the social level, many investments have been made whether in the legal field, the health field or the field of precariousness. Moreover, we have seen that France and Slovenia have a very high GDP which makes them developed countries. Thus, these cities prove that social and environmental improvements fits with economic development and so every country can make efforts to be more sustainable and can adopt a more circular economy through many actions and projects mentioned above.



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