

GLocal (Change the Attitude – Change the Climate! Think Global – Act Local!)

1. ABSTRACT

This is the summary of the comparative chapter of the GLocal e-book, which provides an overview of the key findings and insights generated by the project team over the course of two years of collaboration as part of an Erasmus+ strategic partnership.

Specifically, this summary chapter focuses on the current reality of climate change in Europe, with a particular emphasis on Switzerland. The chapter examines the effects of climate change, its underlying causes, and practical strategies for combating its harmful impacts.

In addition to discussing the current state of climate change, the chapter also provides an in-depth analysis of the GLocal e-course piloting questionnaire.

The comparative chapter of the GLocal e-book offers an overview of the key issues related to climate change in Europe today, as well as practical policy recommendations at both national and European levels. These recommendations are aimed at addressing the pressing challenge of promoting sustainable living and fighting against the negative impacts of climate change and emphasize the importance of taking action at both the national and supranational levels. The policy recommendations put forth by the Glocal project are based on our common research and analysis within the project period.

2. Project Methodology

In the framework of the GLocal partnership, all institutions have done research on how climate change affects our planet and what actions should be taken, especially at an individual level to reduce our carbon footprint.

The literature review was carried out through a combination of sources and methods, including books, studies, research papers, scholarly articles, published reports and statistics, and fieldwork. It examined the current state of climate change in each partner country.

It was also important that existing knowledge was complemented with local realities and in order to understand the latter we conducted several pilots and fieldwork studies.

Within the GLocal project we developed a structured learning handbook comprising of five modules. The handbook is designed for teachers, educators, youth leaders, organizations, and individuals of all ages. Its primary goal is to promote understanding and awareness of climate change, its various forms and to provide effective strategies for protecting the environment and promoting sustainable living.

3. GLocal objectives are:

- Raising awareness on the environmental situation by means of scientific data (to be found only from leading organisations which offer scientific information on climate change)
- Offering simple, efficient, and practical solutions, accessible to everyone to reduce the carbon footprint
- Encouraging students to become environmentally aware
- Identify the best practical solution in fighting the climate change
- Create an ECourse which can be used as teaching resources in promoting Sustainable Living

To reach these objectives each partnering country conducted desk research on data and statistics on climate change in their countries, identifying most important pollutants, and actions taken by the authorities at the local, regional, and national level.

4. Climate change – current state in Europe and in Switzerland

4.1 Climate change is a global issue affecting all regions, including Europe. Below we present the facts and statistics we found out regarding the state of climate change in Europe:

Temperature increase: Europe is experiencing a faster warming trend than the global average. The average temperature in Europe has increased by 1.9 degrees Celsius since the pre-industrial era, compared to the global average of 1.1 degrees Celsius.

Extreme weather events: Climate change is contributing to an increase in extreme weather events in Europe, such as heatwaves, droughts, floods, and wildfires.

Glacier melting: The glaciers in the European Alps are melting at an alarming rate, with some experts predicting that they could disappear completely by the end of the century. This would have significant impacts on the availability of water for millions of people.

Sea level rise: The sea level along Europe's coastlines is rising, posing a significant threat to coastal communities and infrastructure. In some areas, such as the Mediterranean and the Black Sea, the sea level is rising faster than the global average.

Biodiversity loss: Climate change is a major threat to Europe's biodiversity, with many plant and animal species at risk of extinction. The European Environment Agency reports that up to 10% of European tree species are at risk of extinction due to climate change.

In response to these challenges, the European Union has set ambitious targets to reduce greenhouse gas emissions and transition to a more sustainable economy. The European Green Deal, a comprehensive plan to make the EU climate-neutral by 2050, includes measures to increase energy efficiency, invest in renewable energy, and promote sustainable transportation and agriculture practices. However, achieving these targets will require significant effort and investment from governments, businesses, and individuals across the continent.

4.2 Switzerland is also feeling the effects of climate change.

Our country is seeing an increase in temperatures, with a rise of around 1.9°C over the last century. This is more than twice the global average temperature increase.

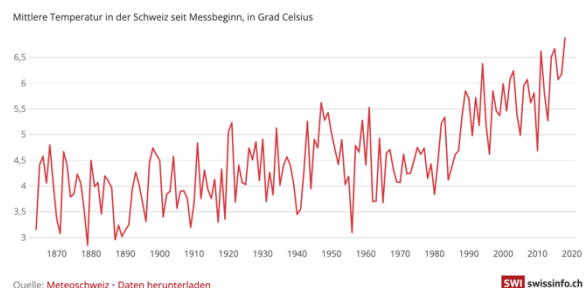
As a result, the glaciers are rapidly melting, with some experts predicting that they could disappear entirely by the end of the century.

Switzerland is also experiencing more extreme weather events, such as heavy rainfall and flooding. In 2021, the country experienced some of its worst flooding in decades, with homes, roads, and bridges destroyed and multiple deaths reported. The flooding was attributed to heavy rainfall and the melting of glaciers and snow in the Alps.

In response to these challenges, Switzerland has implemented a number of policies to address climate change. The country has set a target of achieving net-zero greenhouse gas emissions by 2050 and has implemented a number of measures to reduce its carbon footprint, such as investing in renewable energy and increasing energy efficiency. It is also part of the European Union Emissions Trading System, which aims to reduce greenhouse gas emissions by putting a price on carbon.

In addition, Switzerland is working to adapt to the impacts of climate change, such as by investing in flood protection measures and encouraging sustainable land use practices. Yet, while our country is taking steps to address climate change, we are still feeling the effects of global warming.

Below a few examples of how Switzerland is trying to fight climate change:



Transitioning to renewable energy sources: The government has set a target of achieving net-zero emissions by 2050 and has implemented policies to encourage the adoption of renewable energy sources such as solar and wind power.

Improving energy efficiency: The country has a building code that sets minimum energy efficiency standards for new buildings and major renovations. The government has also incentivized the use of energy-efficient vehicles and public transportation.

Encouraging sustainable agriculture: The Swiss government has implemented policies to promote sustainable agriculture practices such as organic farming and reduced pesticide use.

Promoting circular economy: Switzerland is promoting a circular economy by reducing waste and increasing recycling. The country has one of the highest recycling rates in the world, with over 50% of waste being recycled.

Investing in carbon capture and storage:

Switzerland is investing in carbon capture and storage (CCS) technologies to reduce greenhouse gas emissions from industrial processes. The country has a CCS pilot project in place at a cement plant, which captures and stores carbon dioxide underground and it is at the forefront of developing technologies aimed at reducing the amount of CO₂ in the atmosphere. The Swiss company **Climeworks**, in collaboration with the Icelandic carbon storage company **Carbfix**, launched the world's largest plant capable of filtering carbon dioxide from the atmosphere – called direct air capture (DAC) – and storing it permanently underground.

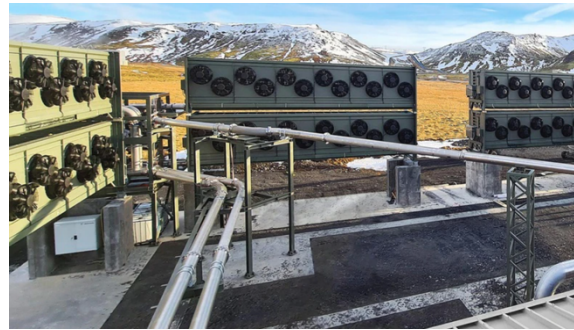


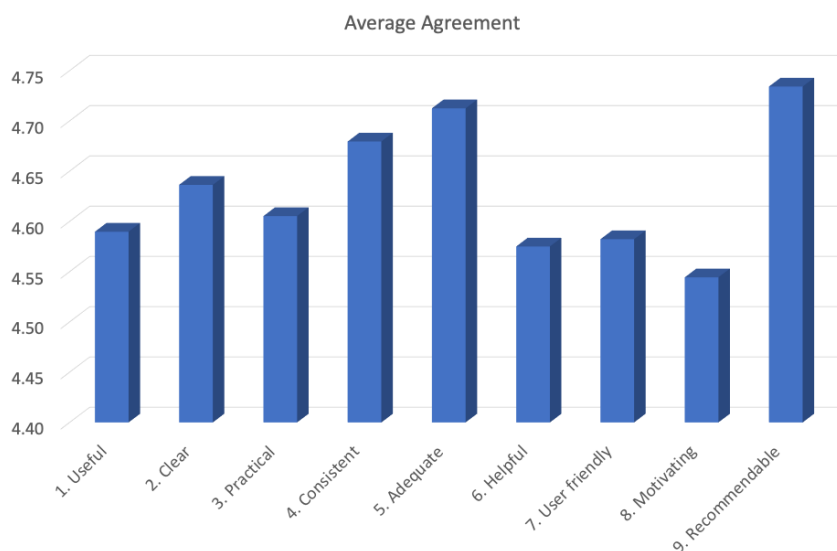
Foto: (2022, September 16). Carbon capture: ‘The road to gigatonne capacity is an ambitious journey.’

5. Analysis of the project findings from IO2 pilot – Eruditus participants

We received data from 82 readers, consisting mainly of students and teachers who have already shown an interest in sustainable living.

In the first chart, we present the level of agreement for each question, with 5 indicating strong agreement and 1 indicating strong disagreement. It should be noted that the highly positive feedback may be influenced by the readers' pre-existing interest in sustainable living.

Based on the data, we found that the ECourse is highly recommendable by the responders, with an average score of 4.75 out of 5. With an average of 4.55 the data also suggests that the responders feel slightly less motivated by the course to act towards sustainable living.

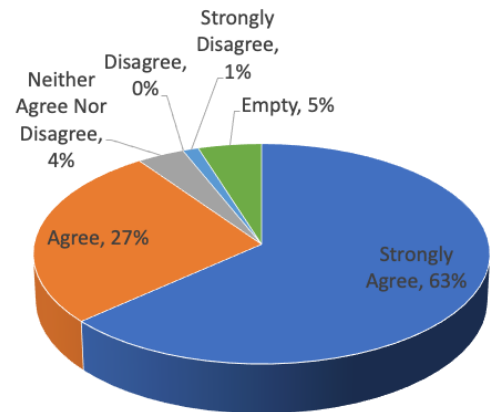


1. This course was useful to me

- Strongly Agree – 63%
- Agree - 27%
- Neither Agree Nor Disagree - 4%
- Disagree – 0%
- Strongly Disagree – 1%
- No answer – 5%

The data indicates that the course was well-received, and it was effective in meeting its objectives. According to the answers, it has provided value to those who participated, with most respondents (90%) finding it to be useful. No respondents expressed disagreement with the statement, suggesting a high level of satisfaction.

This course was useful to me

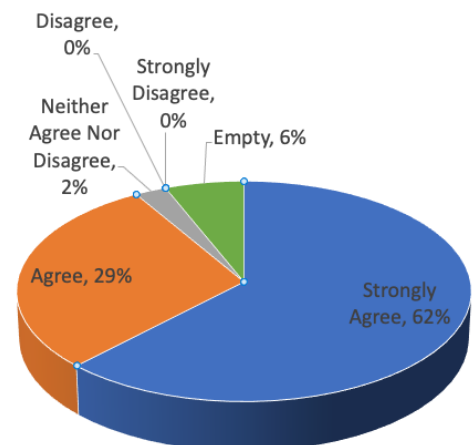


2. The concepts explained were clear

- Strongly Agree – 62%
- Agree - 29%
- Neither Agree Nor Disagree - 2%
- Disagree – 0%
- Strongly Disagree – 0%
- No answer – 6%

The large majority of respondents (91%) found the concepts of the Ecourse to be clearly explained. No respondents expressed disagreement, which suggests a high level of clarity. That indicates that the course was effective in communicating its concepts to those who participated.

The concepts explained were clear

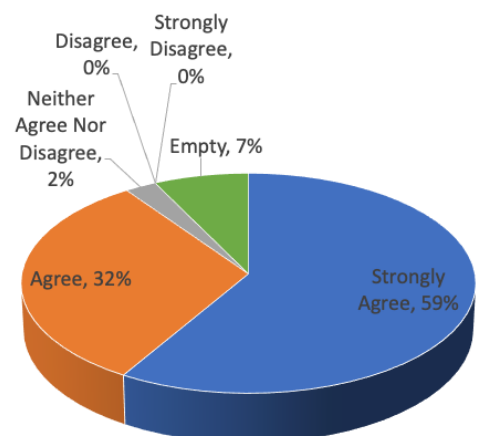


3. The content of the units was practical

- Strongly Agree – 59%
- Agree - 32%
- Neither Agree Nor Disagree - 2%
- Disagree – 0%
- Strongly Disagree – 0%
- No answer – 7%

The Ecourse was successful in presenting practical content, with a majority of respondents (91%) agreeing to this. That allows us to conclude that the course has a high level of practicality.

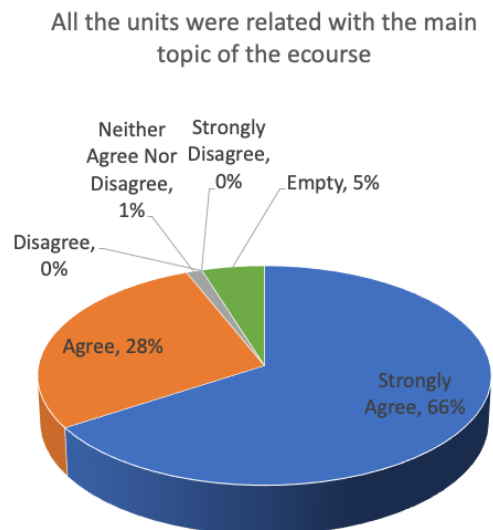
The content of the units was practical



4. All the units were related with the main topic of the Ecourse

- Strongly Agree – 66%
- Agree - 28%
- Neither Agree Nor Disagree - 1%
- Disagree – 0%
- Strongly Disagree – 0%
- No answer – 5%

The Ecourse seems to be successful in maintaining a cohesive focus on the main topic throughout all the units, with a large majority of respondents (94%) agreeing with the statement.

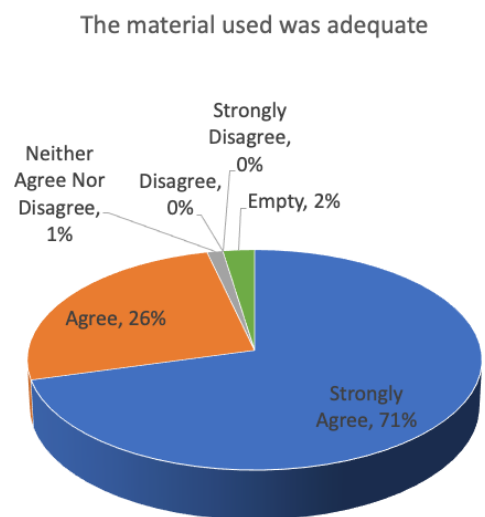


5. The material used was adequate

- Strongly Agree – 71%
- Agree - 26%
- Neither Agree Nor Disagree - 1%
- Disagree – 0%
- Strongly Disagree – 0%
- No answer – 2%

The results show that the vast majority of respondents (97%) either strongly agreed or agreed that the material used in the course was adequate.

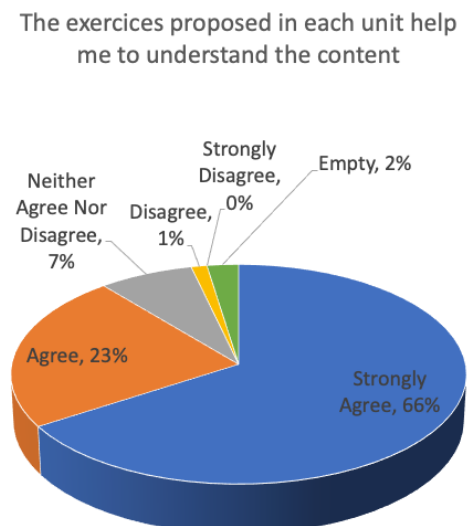
None of the respondents expressed disagreement or strong disagreement with the statement. The 1% of respondents neither agreed nor disagreed and 2% of respondents did not answer the question, which may have been due to various reasons such as lack of interest or availability.



6. The exercises proposed in each unit help me to understand the content

- Strongly Agree – 66%
- Agree - 23%
- Neither Agree Nor Disagree - 7%
- Disagree – 1%
- Strongly Disagree – 0%
- No answer – 2%

These answers indicate that the majority of respondents (89%) either strongly agreed or agreed that the exercises proposed in each unit helped them to understand the content. However, 7% of respondents were neutral or uncertain about the statement, and 2% did not answer the question.

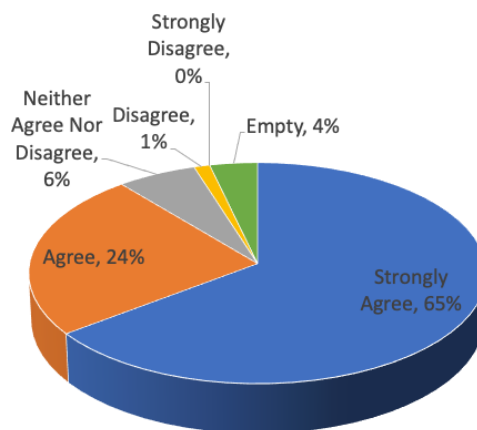


7. The platform was easy to use

- Strongly Agree – 65%
- Agree - 24%
- Neither Agree Nor Disagree - 6%
- Disagree – 1%
- Strongly Disagree – 0%
- No answer – 4%

The majority of respondents (89%) either strongly agreed or agreed that the platform was easy to use. Only a small percentage (1%) of respondents expressed disagreement. However, 6% of respondents were neutral or uncertain about the statement, and 4% did not answer the question. This suggests that most users found the platform user-friendly, but there is some room for improvement to address the 6% of respondents who were uncertain about the platform's ease of use.

The platform was easy to use

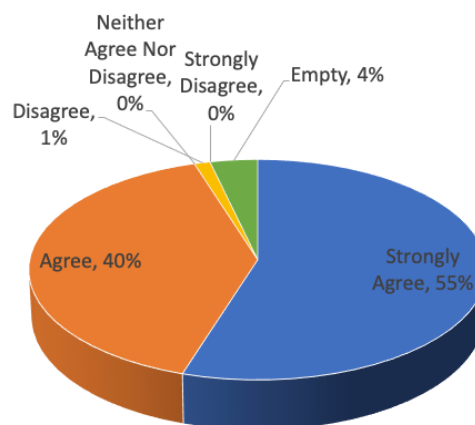


8. After doing the course I feel prepared to take sustainable action

- Strongly Agree – 55%
- Agree - 40%
- Neither Agree Nor Disagree - 0%
- Disagree – 1%
- Strongly Disagree – 0%
- No answer – 4%

95% of the participants either strongly agreed or agreed that they felt prepared to take sustainable action after completing the course. Only a very small percentage of respondents expressed disagreement (1%). This suggests that the course was effective in achieving its intended outcome of preparing participants to take sustainable action. However, 4% of respondents did not answer the question, so it's unclear whether they felt prepared or not.

After doing the course I feel prepared to take sustainable action

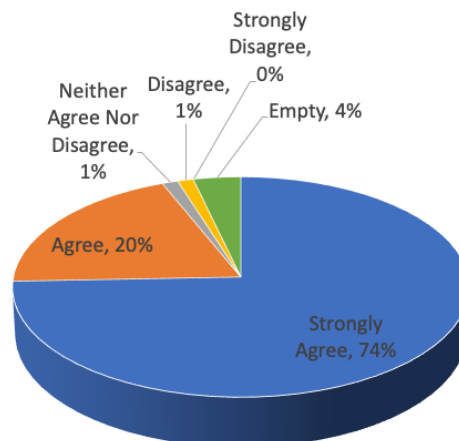


9. I would recommend this course to other people

- Strongly Agree – 74%
- Agree - 20%
- Neither Agree Nor Disagree - 1%
- Disagree – 1%
- Strongly Disagree – 0%
- No answer – 4%

The answers to this question indicate that the majority of respondents, with 74% strongly agreeing and 20% agreeing, would recommend the course to other people. This is a positive indication of the perceived value and effectiveness of the course, as well as the overall satisfaction of the participants.

I would recommend this course to other people



6. Reflections on the project findings from IO2 pilot

Based on the responses we received from our participants, it appears that the majority of them found the ECourse to be valuable and effective, with high levels of agreement regarding the clarity of concepts, practicality of the content, adequacy of the material used, ease of use of the platform, and the likelihood of recommending the course to others. Additionally, the percentage of respondents who strongly agreed with these statements was consistently high, indicating a notable level of satisfaction.

However, it is also important to note that the sample size and composition of the respondents may impact the generalization of these findings when it comes to a broader population. Most of our responders were students or teachers who are connected to our school. Therefore, some of their answers may have been positively biased. Moreover, because they were mostly from a similar demographic and had similar backgrounds, their responses may not be representative of the larger population.

Additionally, the lack of negative feedback does not necessarily mean that the course was perfect and without flaws. That is why it will be important to gather additional feedback and evaluate areas for improvement in order to further improve the Ecourse.

7. Critical Reflections on results from IOs and the project in our country context

“Change the Attitude-Change the Climate! Think Global-Act Local!” intended to take advantage of the role schools and other education institutions have – to inform and educate – in order to raise awareness about the critical situation in which our own planet is now.

Our main objective was to create in-depth awareness about the climate change and gather 10 simple and practical solutions we as individuals can implement to fight global warming and reduce the harm we inflict on the planet. We intended, by common efforts, experience, knowledge, and willingness to find out the most efficient 10 ways to fight global warming and try to stop the damage we produce to our own planet.

We have done research on the topic, analyses, we exchanged best practices, and we have to admit now that we have learned more than we have initially expected about what we can do better to live sustainable and help our Earth.

We hope that the ECourse we created will be helpful to other teachers and it will offer resources in teaching about climate change and sustainable living. The making of the ECourse was a challenging task which required extensive research, time, and creativity. At times we fell behind the deadlines because of its complexity, but in the end, we managed to finish it, which brought to all of us a well felt sense of completion.

Additional to the recommendations for the national and EU policy makers, we can also add some recommendations for ourselves: it has been obvious to us all that we should continue with promoting sustainable living on a personal level, but also in our teaching. We should think of a continuation of GLocal project, and we should find ways to disseminate on a larger scale the GLocal projects findings.

8. Recommendations

8.1 Recommendations for EU policy makers

Increase public awareness: By increasing public awareness about the impacts of climate change and the need for individual action to reduce emissions, we can change the attitude of many towards sustainable living. But mainly it should have a strong focus on schools and other education institutions as they have the potential to spread the message more effectively and rapidly.

Increase environmental education in schools:

Expanding the curriculum of environmental education in schools, starting from primary level and extending to universities, can contribute to shifting our perspective towards sustainable living in both the short and long term.

Support sustainable transportation: The use of public transportation should be encouraged by supporting the transport companies to offer cheaper tickets compared to plane tickets.

Reduce food waste: to effectively tackle this problem, it is essential to promote sustainable practices at every stage of the food supply chain, including production, transportation, retail, and consumption.

Reduce plastic pollution: Major steps should be taken to reduce plastic pollution, which is a major threat to marine ecosystems and wildlife. This could include banning single-use plastics, promoting the use of reusable products, and improving waste management practices.

8.2 Recommendations for national policy makers:

Promote the adoption of renewable heating systems: we consider that Switzerland should increase the adoption of renewable heating systems, such as heat pumps and solar thermal systems. This can be done by providing incentives for individuals to switch from oil or gas heating systems to renewable heating systems. (Contrary to the general belief, many inhabitants – especially the older ones - cannot financially afford the costs of renewable energy.)

Encourage a reduction in dairy consumption: It is well known that Switzerland has a strong and ancestral dairy farming and cheesemaking tradition. Dairy products in general are highly appreciated throughout the country, with butter and cream being classic ingredients of Swiss cuisine. Yet, encouraging the reduction in dairy consumption will not only lead to a healthier diet but will also reduce the greenhouse gas emissions from agriculture.

Promote sustainable agriculture practices: Switzerland should encourage farmers to adopt sustainable agriculture practices, such as crop rotation, conservation tillage, and agroforestry, which can reduce greenhouse gas emissions from agriculture and increase carbon sequestration in soils.

Promote environmentally conscious consumer behaviour: The country could encourage individuals to make environmentally conscious consumer choices by providing more information and education on sustainable products and services and offering incentives for eco-friendly choices.

Encourage businesses which promote sustainable living:

We have noticed that shops which offer unpackaged products have begun to emerge. But they have yet to receive widespread attention or promotion. In Zürich we were able to identify only two such shops. They are largely unknown to the general public, and it is only those who are already interested in sustainable living that are likely to seek them out.

Therefore, we consider that there is a need for a broader campaign to promote the benefits of unpackaged products. Such a campaign could play an essential role in reducing excessive packaging, which is a significant contributor to environmental degradation.

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