

Escape the Crisis

Toolkit Guidelines



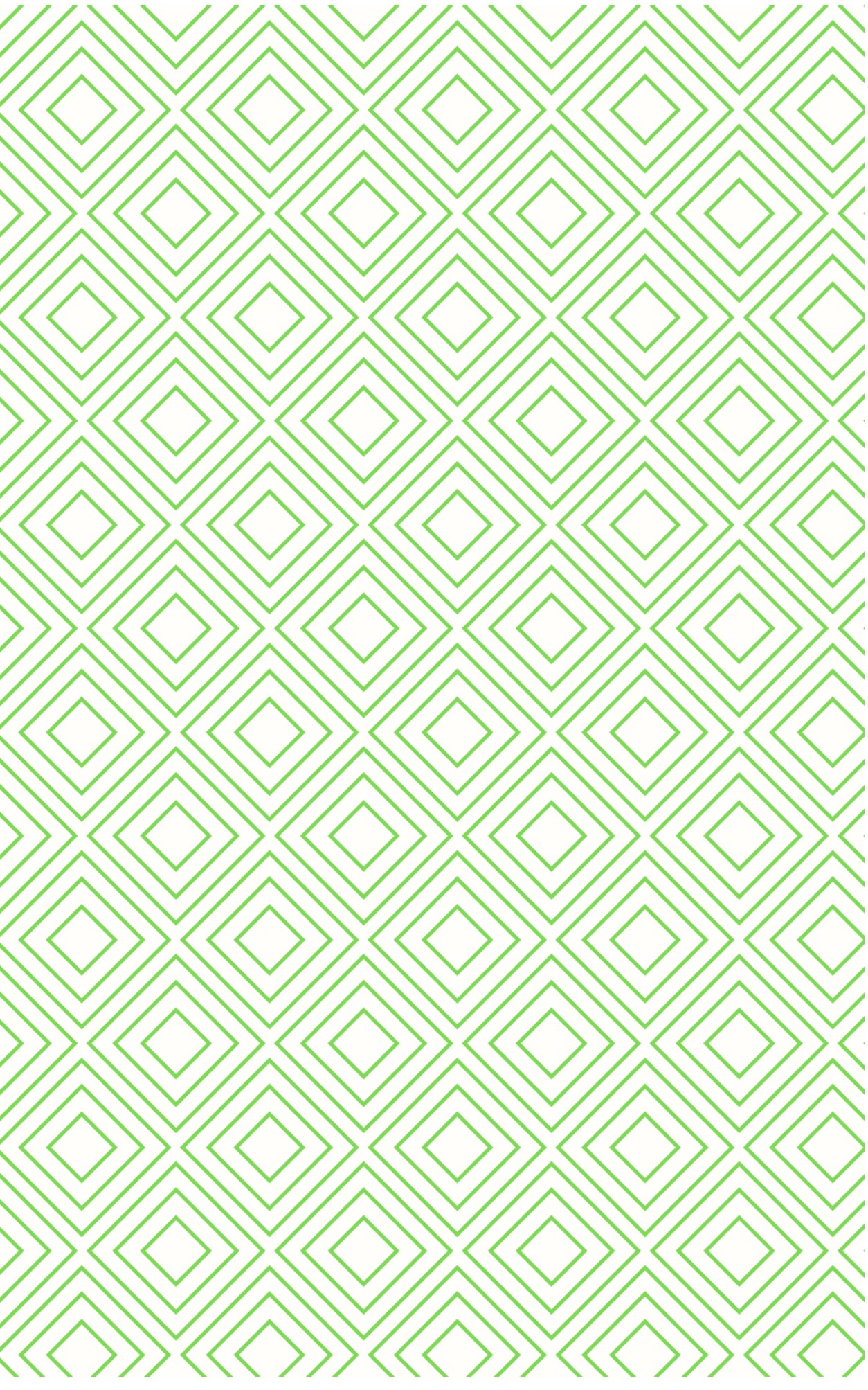
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Index

1. Introduction	1
1.1. Context and “Escape the Crisis” project.....	2
1.2. The partnership and the importance of the european dimension to fight the Climate Crisis	2
1.3. Global Citizenship Education (GCED): objectives and strategies for sustainable development and non-formal education	6
1.4. Toolkit Guidelines structure	7
2. Climate Change	9
2.1. What is Climate Change? Definition, causes, impacts and projections	10
2.2. Mitigation and adaptation options	13
2.3. Climate Injustice (food security, migrations, conflicts).....	15
2.4. Climate Action and Communication	16
3. Food Systems Sustainability	19
3.1. Climate crisis, sustainable development and the role of food systems	20
3.2. Food systems: perpetrator, victim and solution of the climate crisis.....	21
3.2.1. Why the perpetrator?.....	22
3.2.2. Why the victim?	24
3.2.3. Why the solution?	25
3.3. Key studies.....	28
4. Escape room	30
4.1. The definition of Escape Room: the characteristic and mission	31
4.2. The Escape Room in the classroom: didactic functions and construction	31
4.3. Resolve Escape Room and Outdoor projects.....	32
4.4. The Game Master's role: how to organize the escape room for teachers.....	34
5. Conclusions	36
References	38

1. Introduction



1.1. Context and *Escape the Crisis* project


Climate change is affecting every region on earth: as we experienced, the major impacts include an increase of global temperature, rising sea levels, and more extreme weather conditions. Two-way linkages between human behavior and climate have the potential to strongly influence the global climate and emissions, therefore one of the keys to protecting our planet is promoting sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change. The issue of climate change, as one of the most important challenges of our time, has also contributed to creating a rift between the older and the new generation. In this framework, education has a key role to play in inspiring sustainable behavior, but climate change awareness is still facing several obstacles: lacks engaging narratives; lacks the personal experience dimension; fails to overcome the emotional barriers, thus failing to achieve behavioral change.

“Escape the crisis” project, funded by the Erasmus + EU Programme, aims at providing European high-school teachers and VET trainers with an innovative, more effective tool to teach climate change and raise awareness on the environmental impact of daily approach to food consumption, among younger generations.

1.2. The partnership and the importance of the European dimension to fight the Climate Crisis

This project has been designed, structured and written thanks to the cooperation among the partners: CEFA (IT) as leading organization, Area Europa (IT), Resolve (IT), Mediterráneo Culinary Center (ES) and Saint Joseph School (EL).

CEFA is an NGO founded in 1972 in Bologna (<https://www.cefaonlus.it/>), operating in the contexts of international cooperation and voluntary activities of young people. Its sectors of intervention are training, global citizenship education (GCED), employment, migration, human rights and agriculture, with the goal of promoting social growth and a broader sense of community in Europe, Africa and Latin America. CEFA’s goals are: to create sustainable models of development, to carry on actions encouraging growth, people’s well-being and resilience to climate change; to fight discrimination, xenophobia, to promote social inclusion and gender equality. CEFA encourages the target group’s participation in order for them to be at the forefront of this process. Since 1998, CEFA has been working with **GCED’s** projects to respond to these challenges, trying to contribute to the *UN 2030 Agenda* for sustainable development. CEFA has been carrying out



projects of development education and awareness-raising activities in schools of all levels in Italy. Its activities aim at combating racism, discrimination, and climate change, through education and non-formal educational methods.

Mediterráneo Culinary Center

(www.mediterraneoculinary.com) is a VET school specialized in Cooking, Gastronomy, Dietetics and Nutrition, with more than 20 years of experience and a clear international vocation, recognised by the Ministry of Education and Culture of the Valencian Community. The main activities undertaken in the center are the training of students, experts and companies in the Hospitality, Gastronomic and Nutrition sector. The center offers a wide range of educational programmes and official qualifications (from EQF level 3 to level 5, and EQF level 7) concerning Intermediate and Higher Education Vocational Training in dietetics, hotel management and gastronomy such as catering and pastry, and also master's degrees and postgraduate courses. MCC is deeply focused on sustainability, and it has a **Sustainability Protocol** applied to all courses and areas of the center, especially in the kitchens. Furthermore, MCC follows the latest trends on sustainability and food waste by learning from other partners; prove of this is the recycling system carried out in the school kitchens, which follows an innovative

system implemented by one of our VET partners in The Netherlands.

Area Europa (www.areaeuropa.it) is a co-operative consulting company, established in Bologna (ITA) in 1999, with the aim of promoting cooperation and social and economic development in Europe. It manages projects co-financed by various European programmes: Erasmus+, LIFE, Interreg, Horizon and COSME. Thanks to the interdisciplinary team, the numerous experienced collaborators and a wide network of partners, the company offers numerous targeted services: project design, project management, technical and financial management, business strategy and development consultancy, event organization and facilitation, training and thematic workshops. In addition to its role as a technical support unit, in the last few years Area Europa has also decided to invest its thematic knowledge to start creating cultural and scientific content for training, in relation to the European challenges it cares about: climate change, agriculture, food, circular economy, sustainability, biodiversity conservation, social innovation and civic engagement.

Saint Joseph Greek-French High School.

Email: info@stjoseph.gr Portal: <http://www.stjoseph.gr>

Saint Joseph Schools have been in running operation since 1856, founded by St Emilie,

a Catholic nun from France. The schools began their operation as all-girl schools, with the Sisters helping the students and their families. Since then, thousands of students have graduated and have went on to become respected members of society. There are 3 schools in operation today, a primary school in Volos, Greece; a primary and secondary school in Pireas, Greece and our school in Pefki, Athens, again a primary and secondary school. The students follow the Greek Ministry's Curriculum with extended lessons in French and English. The school's University Entrance Exams statistics rank among the highest nationwide.

Resolve Escape Room (www.escaperoomresolve.it) was created in 2017 with the aim of create Escape Rooms that can be played by groups of people for pure fun or to organize birthdays, themed events or team building. At national level, the innovation was also to carry out outdoor projects, thanks to our "Dark Witch Mobile Room", a real escape room transportable anywhere, and our exclusives Outdoor Games, in which paths are created with boxes closed by padlocks with logical- mathematical-creative consequential enigmas, satisfying the individual needs of the customer. Resolve has released many projects for schools, in particular with the theme of school orientation or to explain multidisciplinary

topics through the escape room game. We offer a new type of live-action game in which the ingenuity and collaboration of the team is required to succeed in the mission.

This particular **consortium** has been chosen for the knowledge and skills that each partner could bring to the project, as well as their experiences in previous EU and international initiatives on similar topics. Moreover, Italy, Spain and Greece are some of the most sensitive areas in Europe, suffering and experiencing the consequences of climate change.



The 2030 Agenda for Sustainable Development, adopted by all United Nations member states in 2015, aims to “*promote and enhance the global partnership for sustainable development, by establishing multi-stakeholder partnerships that mobilize and share knowledge, skills, technologies and financial resources, to support the achievement of the Sustainable Development Goals in all countries, especially countries in way of development*”.

Within this framework, in the last decades, we have been globally called to action to face the most relevant issues: to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity by following the 17 Sustainable Development Goals guidelines.

Choosing both national and international partners has been key to strengthening a sense of ownership towards EU policies and favoring an active participation among different entities, each bringing its expertise and added value to the project and its goals while promoting mutual cultural, social and political enrichment and the creation of new synergies (SDG n. 17).

Choosing to use an innovative educational tool such as the Escape room game, is in line with what has been recognized to be a common goal for all, meaning “*achieving inclusive and quality education*” (SDG n.4) which represents one of the most powerful

vehicles for sustainable development and a sustainable lifestyle (SDG n.4.7). In this particular case we aim at “*improving education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning*” (SDG n.13.3), through the lens of our behavioral approaches to food consumption and production, whose unsustainable patterns are the root cause of 3 planetary crises we have been facing for many years now: climate change, biodiversity loss and pollution (SDG n.12).



Pic 1: Sustainable Development Goals, United Nations

1.3. Global Citizenship Education (GCED): objectives and strategies for sustainable development and non-formal education

GCED is meant as all those actions aimed at developing one's personality and human ties as well as at strengthening the respect of human rights and fundamental freedoms. This implies that all peoples and nations are able to inform themselves and take part in decision-making processes at the local, regional and global levels.

GCED considers education as a transformative action, using innovative, student-centered teaching methods based on dialogue and reflection. It implies educational processes at all levels - informal, non-formal and formal - promoting responsible citizenship and democracy by motivating peoples and communities to enjoy their rights and assume responsibilities.

Thanks to the era of globalization, we all recognize that we are globally connected and internationally interdependent. In this context, GCED actions promote all of those projects having as a core this vision, aiming to motivate European citizens to understand global dynamics, interconnections and to act for greater inclusion and equity in using both formal and non-formal education.



HELP EDUCATE THE CHILDREN IN YOUR COMMUNITY.

617 million children and adolescents lack minimum proficiency in reading and mathematics.



Pic 2: Specific target of 4th SDG, United Nation

COVID-19 PANDEMIC

HAS DEEPENED A

GLOBAL LEARNING CRISIS

147 MILLION CHILDREN

MISSED OVER HALF

OF IN-PERSON

INSTRUCTION

IN 2020-2021



ENTRENCHED INEQUITIES IN EDUCATION HAVE ONLY WORSENERD DURING THE PANDEMIC



MANY COUNTRIES ARE IMPROVING SCHOOL INFRASTRUCTURE AS CLASSROOMS REOPEN

GLOBALLY,
PRIMARY SCHOOLS
(2019-2020)



ELECTRICITY



DRINKING WATER



BASIC SANITATION




COMPUTERS



INTERNET ACCESS

THE SUSTAINABLE DEVELOPMENT GOALS REPORT 2022: UNSTATS.UN.ORG/SDGS/REPORT/2022/

Pic 3: Infographic on 2022 report of 4th SDG, United Nations



The consortium, in line with the GCED's strategies, decided to use and enhance non-formal education because it is based on the idea of "learning by doing", which consists in the interaction between learners and concrete situations that they can experience, such as participatory activities and collective or role-playing games. Doing activities and learning in a playful-educational way plays a fundamental role in building and stimulating a community that will take action and be responsible for the challenges ahead. This non-formal approach, in fact, allows learners to get familiar and provide them with proper tools to understand the complexity of climate change and food consumption issues.

This innovative methodology is in line with the Erasmus+ programme, since it promotes a firsthand experience and includes the international and emotional dimensions to the educational process, encouraging people to act on the issues influencing their lives and to feel a sense of belonging to a common humanity.


1.4. Toolkit guidelines structure

As first output of the Escape the Crisis project, the Toolkit – composed by the Guidelines, Handbook and an Escape Room Box experience - represents an innovative instrument to teach climate change and raise awareness on the environmental impact of daily approach to food

consumption through Escape games. It's a step-by-step guide on how to develop the proper methodology to design and conduct an educational escape room.

As these guidelines have been written by different experts, each of them contributing to its realization by sharing their expertise and personal experience, this document is divided in 3 different sections:

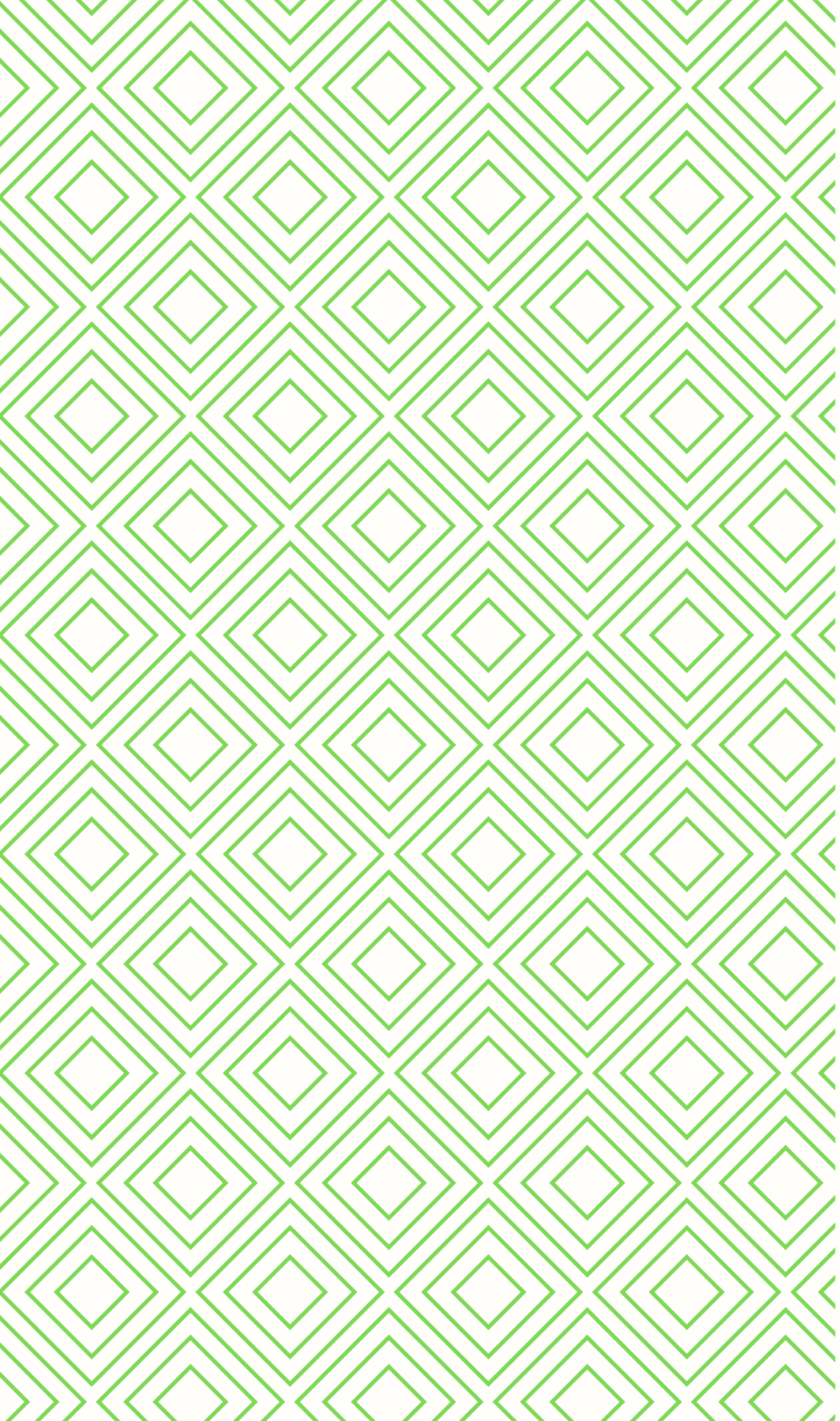
- 1) *Climate change*: by Area Europa, which focuses on causes and effects of climate change thanks to examples and scientific reports on it, with a special focus on actions and good practices on reducing our impact on the environment.
- 2) *Food system sustainability*: by Area Europa and CEFA, which outlines the connection between climate change, food system, and how our everyday food consumption can affect the global climate.
- 3) *Escape Room games*: by Resolve, which outlines definition, goal, and methodology to realize an Escape Room game. This section will help understand key elements to be considered when developing and designing an escape room initiative. It sets out the fundamental components of the design process, the proper approach to be used in schools, and key tools and



methodologies with useful tips, to teach the topic innovatively and raise awareness among students on climate change. The Escape Room game makes learning more stimulating and replicable in schools, and manages to activate motivation and pleasure in learning, giving students the opportunity to be agents in tackling the climate crisis during the game as well as in real life.

The two educational institutions, partners of the project, Saint Joseph School and Mediterráneo Culinary Center, have contributed to this toolkit, performing a peer review and offering their experience as teachers dealing with youngsters on a daily basis.

2. Climate Change

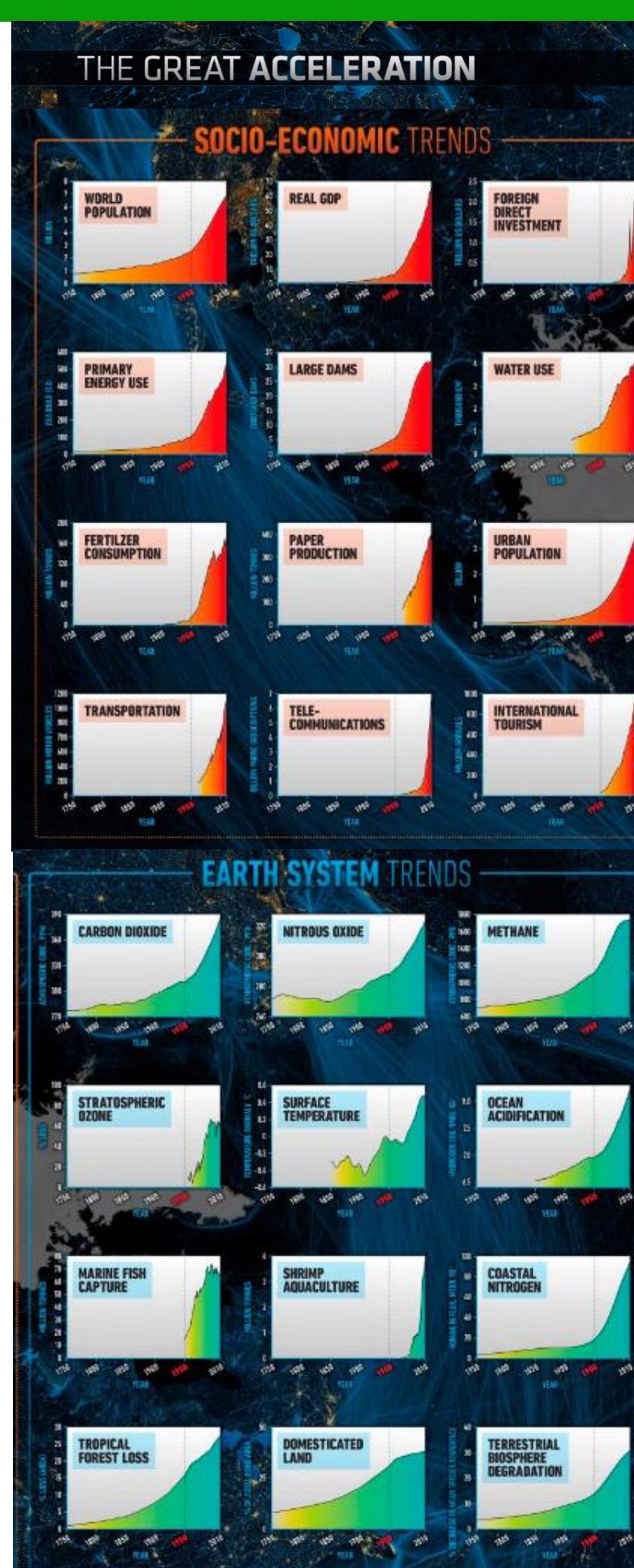


2.1. What is Climate Change? Definition, causes, impacts and projections


The concept of "climate change" refers to long-term changes in temperatures and weather patterns. These changes can be caused by natural causes (e.g., due to changes in Earth's orbit, solar radiation, ocean circulation, and volcanic eruptions), or due to purely anthropogenic causes.

This is an important aspect to consider: throughout Earth's history, climate has changed continuously. However, when it occurs naturally, it is a slow process that has taken place over thousands of years, which has the positive effect of making the planet climatically habitable. The human-influenced climate crisis, on the other hand, through the emission of large amounts of greenhouse gases (GHGs) into the atmosphere, has occurred and continues to occur at a much faster rate, with potentially disastrous consequences. In fact, since the Industrial Revolution in the 18th century, human activities have been the main factor behind climate change, attributable mainly to the burning of fossil fuels such as coal, oil and gas. For this reason, it would be preferable to use the term "climate crisis" and not "climate change."

Researchers call the "Great Acceleration" the continuous and simultaneous acceleration in the rate of growth of human



Pic 4: The Great Acceleration 2015 from International Geosphere-Biosphere Programme



activity (population growth, urbanization, real GDP, energy production, transportation, etc.) that, since the economic boom of the 1950s, has had an enormous harmful impact on changes in the Earth System. Since the 2000s, research and debate on global warming and climate change has intensified, and as a result of this data, many researchers and scientists have begun to refer to the "Anthropocene," laying the groundwork for theorizing a new geological era in which the Earth's environment, in the totality of its physical, chemical, and biological characteristics, is strongly influenced, on local and global scales, by human action, with particular reference to increasing concentrations of carbon dioxide (CO₂) and methane (CH₄) in the atmosphere.

The combustion of fossil fuels releases so-called greenhouse gasses, namely water vapor, carbon dioxide, methane, nitrous oxide, ozone and other artificial chemicals, into the Earth's atmosphere. Here, these gasses trap heat from the sun's rays inside the atmosphere, causing an increase in Earth's average temperature. This increase in the planet's temperature is called global warming, which has an evident impact on the climate. Energy, industry, transportation, construction, agriculture, and land use are among the main contributors to these emissions, which come, for example, from any chemical industrial process, from the energy industry to produce heat and electricity, from the use

of gasoline to fuel all kinds of transportation (road, rail, sea and aviation) or the use of coal to heat buildings, from the deforestation, from agricultural processes of growing crops and livestock, and from the disposal of solid waste through incineration or the use of waste dumps.

Greenhouse gas concentrations are at their highest levels in 2 million years, and emissions persist. Today the Earth is 1.1°C warmer than at the end of the 19th century. To compare with the past on how fast this is happening, the temperature increase caused by natural causes observed over the past 10,000 years is 5°C. The last decade (2011-2020) was the warmest ever recorded. Many people still think that climate change essentially means an increase in temperatures. However, global warming is only the very beginning of this crisis. The Earth is a system in which everything is interconnected, so changes in one area can affect changes in all others, with a "cascade effect".

Nowadays, we are facing numerous harmful consequences of the climate crisis on the planet. Current impacts include, among others, intense droughts, water shortages, severe fires, sea level rise, flooding, melting polar ice, catastrophic storms, and biodiversity loss. In addition, climate change can affect the health, ability to grow food, housing, safety, and jobs of all of us.

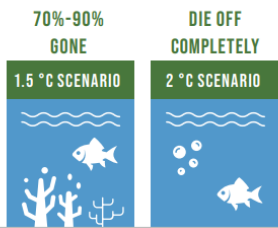


CLIMATE CHANGE

IS HUMANITY'S "CODE RED" WARNING

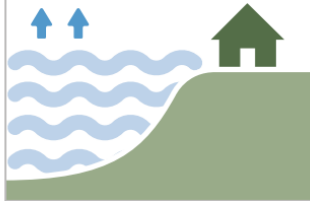
OUR WINDOW TO AVOID CLIMATE CATASTROPHE IS CLOSING RAPIDLY

DIFFERENT TEMPERATURE SCENARIOS FOR CORAL REEFS



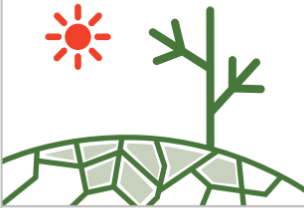
CORAL REEFS

SEA LEVEL WILL RISE 30-60 CM BY 2100



SEA LEVEL RISE

DROUGHT ESTIMATED TO DISPLACE 700 MILLION PEOPLE BY 2030



DROUGHTS

MEDIUM- TO LARGE-SCALE DISASTERS WILL INCREASE 40% FROM 2015 TO 2030



DISASTERS

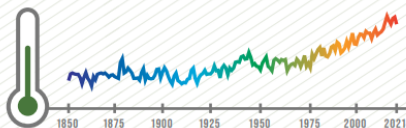
ENERGY-RELATED CO₂ EMISSIONS INCREASED

6% IN 2021

REACHING HIGHEST LEVEL EVER



RISING GLOBAL TEMPERATURES CONTINUE UNABATED, LEADING TO MORE EXTREME WEATHER




Phenomena such as sea level rise and salt intrusion have intensified to the point of displacement of entire communities, while prolonged drought puts people at risk of famine.

The latest projections predict an increase in the frequency, duration, and severity of meteorological and hydrological droughts for most of Europe in the 21st century. Climate change is likely to increase the frequency of flooding across Europe in the coming years, severe storms are expected to become more common and more intense as temperatures warm. Flash floods, triggered by local intense precipitation events, are expected to become more frequent. Large changes in flood frequency mean that what is now an extreme event could become the norm by the end of the century in some locations. On the other hand, the greatest increase in drought conditions is expected in southern Europe, where competition among water users such as agriculture, industry, tourism and households could arise. With regard to fires, some European countries, especially in Mediterranean Europe, have already experienced unprecedented forest fires during extreme heat waves combined with drought during the last summers. Studies agree that the risk of wildfires will increase in most of Europe.

Ecosystems are evidently affected by the climate crisis. Habitats are changing, the timing of events such as flowering and spawning are shifting, and species are

Pic 5: Infographic on 2022 report of 13th SDG, United Nations



changing their areas. The ocean is becoming more acidic, affecting marine life, due to the absorption of about 30 percent of the carbon dioxide that is released into the atmosphere from burning fossil fuels. As a result, sea level rise, due to thermal expansion and melting of ice caps and glaciers, puts coastal areas at greater risk of erosion and storm surges. This will result in negative impacts not only on the environment, but also on economic sectors, health and human well-being. Speaking of which, our food supply also depends on weather and climate conditions. For this combination of reasons, agriculture is in fact one of the main economic sectors directly affected by the impact of the climate crisis. Increasing temperatures and changes in precipitation patterns actually affect the quantity, quality and stability of food production. Specifically, for the European agricultural sector, the results indicate an increased vulnerability of agricultural production due to increased plant growth rates. These unexpected weather patterns may make it difficult to maintain and grow crops in regions that rely on agriculture because expected temperature and rainfall levels can no longer be relied upon. Although agricultural practices may be adaptable, changes such as rising temperatures, water stress, disease, and extreme weather conditions create challenges for farmers who bring food to our tables. These impacts affect agricultural production and trade,

agricultural product prices, and farmers' incomes - also affected by agricultural policies, land use policies and climate mitigation policies. However, farmers can limit the negative impacts and enhance the positive impacts of climate change through appropriate adaptation measures, such as adapting crop varieties, changing planting dates and improving irrigation.

2.2. Mitigation and adaptation options


Contrary to what many still think, climate change is not a hypothetical event that belongs to a remote future, but a current and elusive phenomenon that people must learn to live with. We are experiencing it right now. Climate change is a daily topic on the political agenda and one of the most important challenges at the European level, as European countries are expected to face particularly negative impacts in the coming decades. As mentioned, it is not a reversible process, but what we can do is to work in order to reduce its effects on the one hand, and on the other hand to prepare for its effects, making our society more resilient. There are several ways to try to tackle it. Among these, we can identify two categories of intervention: mitigation and adaptation. Climate change mitigation has been defined as “a human intervention to reduce the sources or enhance the sinks of greenhouse



Pic 6: West Pokot, as part of the Resilience Support for Sustainable Livelihoods project which aims to increase the resilience of communities to drought and other effects of climate change in the ASAL areas of Kenya, courtesy of CEFA Onlus.

gasses (GHGs)". The researchers of the Intergovernmental Panel on Climate Change (IPCC), the UN body for assessing the science related to climate change, also assess human interventions to reduce the sources of other substances which may contribute directly or indirectly to limiting climate change, including, for example, the reduction of particulate matter emissions that can directly alter the radiation balance or measures that control emissions of carbon monoxide, nitrogen oxides, and other pollutants that can alter the concentration of tropospheric ozone, which has an indirect

effect on the climate. Mitigation involves reducing the flow of heat-trapping GHGs into the atmosphere, either by reducing the sources of these gasses or by enhancing the sinks that accumulate and store these gasses (such as oceans, forests, and soils). The goal of mitigation is to avoid significant human interference with the climate system and "stabilize greenhouse gas levels within a time frame sufficient to allow ecosystems to naturally adapt to climate change, to ensure food production, and to allow economic development to proceed in a sustainable manner". A wide range of mitigation options



are available today that, from industry to agriculture, can reduce the intensity of greenhouse gas emissions, improve energy intensity through improvements in air quality, technology, behavior, production, and resource efficiency, and enable structural changes. The challenge is to contain the global average temperature increase within +1.5 °C compared to the pre-industrial era.

On the other hand, climate change adaptation is “the process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate harm or exploit beneficial opportunities. In natural systems, human intervention may facilitate adjustment to expected climate and its effects”. The ultimate goal of this strategy of intervention is to reduce our vulnerability to the harmful effects of climate change. Adaptation can take different approaches depending on its context: development of social, ecological, technological and infrastructure assets, vulnerability reduction, disaster risk management, institutional, educational and behavioral change and proactive adaptation planning. This may include, for example, utilizing scarce water resources more efficiently, adapting agricultural and forestry practices, and ensuring that buildings and infrastructure are able to resist future climatic conditions and extreme weather events.

2.3. Climate Injustice: food security, migrations, conflicts

Ignoring the consequences of climate change also means having to deal with its effects on the social, political and economic balance of the planet. Developing countries in particular, which often base their economies on the primary sector, are particularly vulnerable to rising temperatures and are also unlikely to have government institutions capable of countering and preventing the advent of natural disasters. The result of inadequate policies, unable to anticipate declining agricultural production and economic recession, is often reflected in voluntary or forced migration flows, delegitimization of institutional authorities and social relations. Securing climate change is particularly essential when considering how the interaction between these factors can generate violence and hostility. Climate change can take on a key role in triggering conflict, acting as an aggravating factor in countries with precarious political and economic situations. For example, according to a recent World Bank report, it is estimated that by 2050 there will be 216 million climate migrants. Indeed, many experts believe that where tensions and pressures already exist within states, climate change may increase tension and trigger conflict. Moreover, since natural resources in past centuries have


already been disputed between countries and regions, climate change takes on an aggravating role by increasing the frequency of hostilities. The regions of the world that suffer most from the consequences of climate change are predominantly developing countries that are dependent on the primary sector, with reduced access to mineral resources and little economic influence internationally. Should the aforementioned conditions of vulnerability occur, i.e., decreased agricultural production, economic recession, population displacement and delegitimization of institutional authorities and social relations, the inability of governments to keep a situation under control could result in conflict situations.

Lately, in the public debate, people have started to talk about “climate justice”. Easy, from our perspective, to interpret the innovative combination of these two words: thus, climate change generates injustice, because the countries that suffer most from the impacts of climate change are by no means those that have contributed most to the genesis of the phenomenon. Within each country, the poorest and most marginalized communities that are the most affected. Moreover, future generations are at risk of living in far worse climate and environmental conditions than previous generations. All these issues must be properly addressed and managed at the national and international policy level.

2.4. Climate Action and Communication

Also at the institutional level, climate change seems to be one of the greatest challenges of our time: on a global scale, it was included among the 17 Sustainable Development Goals proposed in 2015 by the UN with the aim of changing the world for the better and improving the lives of people in their countries by 2030. On a European scale, the EU is addressing this issue by developing from 2019 the Green Deal, a set of policy initiatives proposed by the European Commission with the overall goals of halving the emissions of CO₂ by 2030 and of achieving climate neutrality in Europe by 2050.

However, this task falls not only to states, ministries and agencies, scientists and experts, but also to all of us, citizens. Every individual has in fact a key role to play in the challenge against the climate crisis. The huge mobilization around the world’s squares has demonstrated this in recent years. Squares animated mostly by young people: schools represent in this sense a living laboratory to trigger a real process of change in the younger generations. Students, teachers, administrators, support staff, operators, parents and local community members should be involved in climate action: participation and active citizenship gives everyone the opportunity to develop skills such as critical thinking, consensus building




and empathy, skills needed also to communicate, advocate and create a more sustainable society.

There are several climate-friendly actions that every school can take, from the education on sustainable development to the formation of various ecological groups, through which debates, exchange of opinions, various activities, and local promotions would be encouraged. It would be also necessary to introduce and adopt circular economy culture at school, from the basic principles "reduce, reuse, recycle" up to the critique of the linear progress model that is leading us toward the kind of catastrophes we are talking about, in line with the ecological transition and socio-economic paradigm shift we need to save the planet. Schools should also encourage students to waste prevention and take care of the management of green areas, plant trees and maintain them on and around campus, promoting the responsibility of every student to care and reconnect with nature. In fact, in spite of all the talk about green, lately human beings live in a kind of perpetual isolation from the natural environment. From our homes to our work and leisure places, we are usually immersed in artificial settings. The digital revolution of our century, besides simplifying our lives and making us smarter, has, however, on the other hand, disconnected us from nature: we do not realize the ecosystem networks in which our species is embedded, our

connections with the rest of the biosphere and the environment, the complexity of the climate system, and the global biogeochemical cycles in which we humans also participate.

Regarding climate communication, several studies show that climate change lacks the kind of narratives that engage people in climate action and relate climate change to their personal lives, fails to create a sense of belonging to a larger group of people struggling with the problem and fails to overcome psycho-emotional barriers to behavioral change, lacking of the narrative dimension that makes information stick. Or, on the other hand, the media overdoes the spectacularization of the climate emergency, inhibiting climate action and making people feel a sense of helplessness that limits any participation in active citizenship that should deal with challenges like this. Apocalyptic predictions of destructions, devastations and extinctions, repeated again and again in the press, can lead in fact to the so-called "apocalypse fatigue". Faced with these overwhelming messages, even well-intentioned people may begin to avoid conversations about finding solutions. The majority of the mainstream media foregrounds the theme of apocalypse or catastrophe. From psychological research we know that if the threat of catastrophe is exaggerated, people experience fear, guilt, or a combination of these feelings. Hence, the origin of the eco-anxiety that has been



taking over among the younger generation for some time now. Dangerous and counterproductive: fear and guilt are passive, inhibiting emotions. They cause people to disconnect and avoid the topic rather than deal with it.

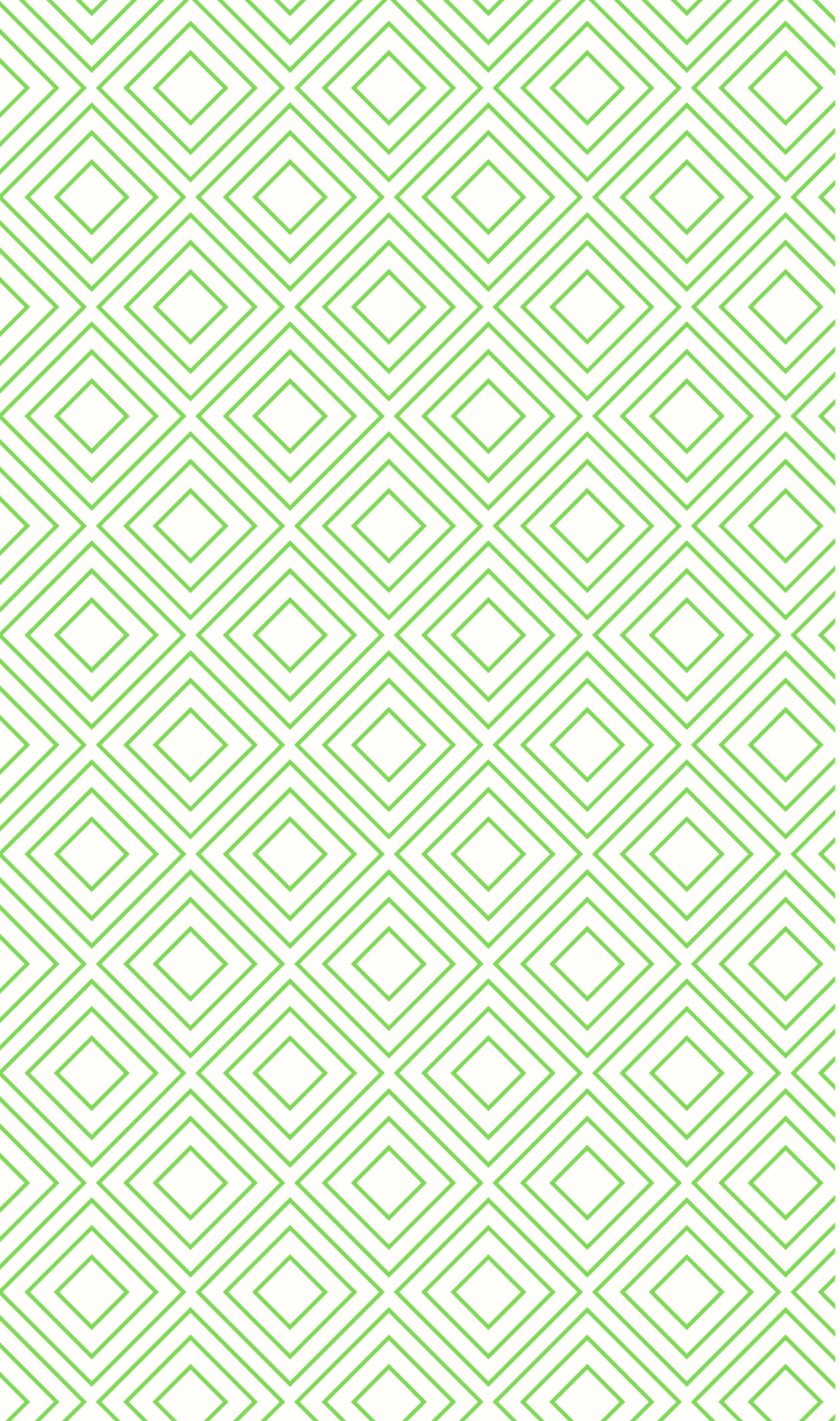
If we can reframe the climate issue in this way in our society's discourse, fear and guilt will be less linked to this issue, while there will be more of a sense of "collective efficacy" or the idea that we can do something together as a society. If we are part of the problem, we can also be part of the solution. Now, this deep reframing of the issue takes time: it is different from just the slogan or headline of a new news story. But reframing has an impact on the way people perceive and walk through the problem.

Psychologists and scientists say that "the best chance of increasing optimism and hope in the eco-anxious people is to ensure

they have access to the best and most reliable information on climate mitigation and adaptation. Especially important is information on how they could connect more strongly with nature, contribute to greener choices at an individual level, and join forces with like-minded communities and groups."

In conclusion, what is the moral? Without information, public awareness is not possible. We need to keep reframing it. Without using top-down approaches, but by making everyone a participant in science and knowledge. Research also shows that understanding that there is a scientific consensus on climate change is a factor that influences, in a positive way, individual beliefs and responses. To generate awareness, raise our voices and push our agenda - bottom-up - towards a more sustainable and fairer planet.

3. Food Systems Sustainability




3.1. Climate crisis, sustainable development and the role of food systems

Scientists no longer have any doubts: if measures are not taken to reduce global CO2 emissions by 2100, the earth's temperature could rise by around 4°C. The effects of this would be frightening: less frequent but much more intense and damaging rainfall, alternating with extreme weather events. Some estimates predict that one billion people could run out of water, two billion would go hungry, and the production of maize, rice and wheat would drop by 2% every 10 years. In addition, some 187 million

people could be forced to abandon their homes and flee waterlogged territories. Scholars agree that it is imperative that we all work to limit the rise in temperatures to +2°C, the limit to acceptable living conditions. The path toward a more sustainable system is more than ever urgent. Which is the role of food in this context? Food has a central role in the effort of going toward a more sustainable future reaching more than one Sustainable Development Goal of the ONU Agenda 2030. According to this, in the opening keynote speech at the 2016 EAT Forum, Professor Johan Rockström presented the new way of viewing the Sustainable Development Goals,



Pic 7: The SDGs VS the SDGs Wedding Cake - Azote for Stockholm Resilience Centre, Stockholm University



demonstrating how they are all linked (directly or indirectly) to food.

For doing so, he suggested not to see each goal as an entity by itself: even if they are intended as an integrated whole, often are presented as a choice of priorities. In fact they are all interconnected and there is not one more important than another: environmental protection and human health, regeneration of the territory and citizens, well-being, social justice and climate change. The meaning that creates this connection is sustainable food or – how the association Slow Food would say - good, clean and fair food. In order to explain this, therefore, they provide a new integrated framework, the so-called “wedding cake” (See the picture on previous page).

The base layer of the cake is made from all those goals related with the protection of our biosphere: oceans (SDG 14, life below water), water (SDG 6, clean water and sanitation), forests, land and soil (SDG 15, life on land) and climate (SDG 13, climate action). All these goals, as it has been seen also before, are strictly connected with food system: the 40% of global land is used for food production, oceans are overfished and polluted with plastic, water is essential for every kind of crop and farm and climate change is caused also by GHG and CO₂ food system emissions. If those goals are not

achieved, it is not possible to reach a just, equitable and social inclusive development. These represent the safe operating space within which humans can attain all the other social aspirational goals. The second and third layer of the cake are instead made of all those goals connected to the society, where again food plays a fundamental role: starting from the most obvious like eradicating poverty (SDG 1) and zero hunger (SDG 2), that in turn require gender equality (SDG 5), decent jobs (SDG 8) and reduced inequality (SDG 10), since especially in developing countries women have a fundamental role in agriculture. A successful sustainable development agenda requires this holistic and system understanding that means also partnerships between governments, the private sector and civil society (like reads SDG 17), unite to work for a better food system, that does not care only about “feeding” people but that is involved – directly and indirectly – in much more issues. Through food and with this view, the shift toward sustainability can be possible.

3.2. Food systems: perpetrator, victim and solution of the climate crisis

The modern industrial agribusiness model, which has emerged over the last 50 years, may have led to increased productivity in the immediate term, but the environmental impact has been devastating: pollution, soil

erosion, damage to the landscape, reduction of energy resources, and an overall loss of diversity, both biological and cultural. According to this model, agricultural production has taken on the characteristics of industry, changing its form and becoming an agri-food industry. The hallmarks of this system have caused serious consequences for the environment and compromised the economic survival of small producers. According to this model, natural resources are considered mere raw materials to be consumed and produced on a large scale with indiscriminate exploitation of resources such as water, land, soil and forests. This approach has serious consequences, with alarming prospects for the future and the health of our environment. With the world population expected to increase from 6 to 9 billion by 2050, competition for the use of natural resources will become increasingly fierce, putting further pressure on our planet. The current global food system will have to be radically overhauled if its impact on the environment is to be significantly reduced.

3.2.1. Why the perpetrator?

The food sector is currently responsible for almost a third of global greenhouse gas emissions worldwide. Methane emissions released by livestock and nitrous oxide emissions produced by some fertilizers contribute to climate change. The excessive use of nitrogen fertilizers degrades soil, water and air. In addition, as growing more

crops has led to a rise in water use for irrigation, agriculture is now responsible for 70% of global freshwater consumption. Monocropping, or growing a single crop year after year on the same land, also significantly reduces biodiversity. Moreover, the lower the variety of plants, animals and other living things in an ecosystem, the less resilient it becomes.

Some crucial data to have in mind to understand the impact of food systems on the planet:

- The combined production of nitrous oxide and methane from the agricultural sector appears to have the same impact on climate change as the transport sector.
- It was estimated that in 2005, 9% of total EU greenhouse gas emissions were attributable to agriculture. Regarding the effects of the entire food chain, from producer to consumer, an EU report calculated (by analysing environmental inputs and outputs) that the food sector was responsible for 31% of greenhouse gas emissions from the then 25 EU member states.
- According to the Intergovernmental Panel on Climate Change (IPCC) report, nitrogen fertilizers are the main source of emissions from agriculture, accounting for 38%.
- Meat production is blamed for almost one fifth of global greenhouse gas emissions generated, for example,



during the production of animal feed. Ruminants, especially cows, emit methane, which is 23 times more deleterious to global warming than carbon dioxide.

- The production of 1 kg of beef generates an amount of greenhouse gasses equal to 36.4 kg of carbon dioxide, without taking into account transport and farm management: this amount corresponds to the carbon dioxide emitted by an average European car every 250 km.
- To produce 1 kg of meat with intensive industrial methods, 20 kg of feed is needed for cattle, 7.3 kg for pigs and 4.5 kg for poultry.
- Among the various human activities, the livestock sector is the most land-intensive. The total area occupied by pastures corresponds to 26% of the planet's land surface not covered by ice. The total area devoted to fodder production is 33% of the total arable land. In total, livestock farming accounts for 70% of the land for agricultural use and 30% of the planet's land surface.
- The average distance our food has to travel has doubled in the last 30 years.
- Every year, a total of 1.3 billion tonnes of food is wasted worldwide: one third of total production. This unnecessary production of food involves the use of an amount of water equal to the flow of the Volga River and the use of 1.4 billion hectares of land (almost 30% of the

world's agricultural area). The corresponding production in greenhouse gases is 3.3 billion tonnes (FAO, 2015).

- According to the FAO, 54% of food wastage occurs 'upstream', at the production, harvesting and storage stages, and 46% occurs 'downstream', at the processing, distribution and consumption stages. Generally speaking, in developing countries food losses occur more at the production stage, while food wastage at the retailer or consumer level tends to be more significant in middle and high-income regions.
- Forcing people to move: climate migrants are the human face of climate change. According to the World Bank study, which takes into account three regions, Sub-Saharan Africa, South Asia and Latin America, which account for 55% of the population of developing countries, this geographical area could experience internal displacements, beyond armed conflicts, of the magnitude of 143 million people by 2050. In Ethiopia, an agricultural country with a strong population growth (up to 85% by 2050), it is the collapse of harvests that is the primary cause of migration. Bangladesh is weakened in particular by the erosion of its coastal areas and difficulties in access to drinking water. Mexico, on the other

hand, is seeing the populations living in rural areas affected by the effects of global warming flooding into urban centers. (Data from Groundswell: Preparing for Internal Climate Migration, 2018 World Bank Climate Migration Report).

3.2.2. Why the victim?

Food production is closely linked to environmental conditions; production, storage, distribution, and markets are consequently sensitive to weather extremes and climate fluctuations. Food production and its quality are also affected by soil and water quality, the presence of pests and diseases, and other biophysical conditions. It has been calculated that a 1°C increase in average temperature is equivalent to moving crops 150 kilometers further north in latitude and 150 meters in altitude. Already today, new vineyards are producing Champagne grapes in Great Britain, something unthinkable a few years ago. With a special feature: the effects. The increase in CO2 concentrations and temperatures could theoretically favor agricultural production in the middle and high latitudes, particularly in the regions furthest from the equator: Siberia, Scandinavian countries, Greenland and Canada, which would see an increase in agricultural production. These positive effects, such as the expansion of areas suitable for cultivation - especially in the Russian Federation and Central Asia - and

the lengthening of the growing season of plants, will not, however, be sufficient to compensate for the agricultural losses that will be severe, especially in subtropical countries.

The real problems are the negative effects of climate change affecting agriculture:

- Rising temperatures and increasing atmospheric CO2 concentrations are expected to accelerate the proliferation of weeds and destructive insects, and new diseases will appear. In the future, global average crop yields will decrease by 2%, varying by region, while demand for food will grow by 14% per decade.




Pic 8: Infographic on 2022 report of 12th SDG, United Nations

- The first three food crops (rice, maize, wheat), which provide 60 per cent of the calories consumed globally, will decline further in the future. Only the decrease in rice yields in tropical areas will be partly compensated by an increase in other areas. The change in yields will cause an increase in the prices of basic necessities, which will predictably bring with it social upheavals especially in poorer countries, where the staple diet is based on a few foods (the soaring prices of cereals, and thus of bread, were at the root of the outbreak of the Arab Springs in 2010-2011).
- A report by Oxfam estimates that - in the absence of substantial changes - food prices could increase by 70- 90% by 2030 and the potential effect of climate change could raise the price of maize, wheat and rice by 120-180%.
- IPCC estimates indicate that a 3° to 5°C rise in the planet's average annual temperatures could force developing countries to increase their cereal imports by 10 to 40%. The global number of people suffering from hunger could increase by 20% by 2050, and will be particularly severe (65%) in sub-Saharan Africa. The positive results achieved in recent years in the fight against hunger will be severely undermined, and we will return to a situation similar to that of past decades.

3.2.3. Why the solution?

According to the Intergovernmental Panel on Climate Change (IPCC), changes to our lifestyles and behaviour, enabled by right policies, infrastructure and technology, could result in a 40–70 % reduction in greenhouse gas emissions by 2050. One such key change would be shifting to more balanced, sustainable, healthy diets, as well as reducing food loss and waste. Sustainable land management practices, such as conserving and reusing water, using organic fertilisers and planting trees on cropland, will also help to reduce agriculture's overall environmental impact.

Every human being is in daily contact with food. Our food choices can support one production system rather than another. 'Voting with your wallet', or rather with your fork, becomes an indirect tool to mitigate climate change. Changing our diet is the best chance to win the fight against climate change. Data on the environmental impact of food products make us think a lot about the importance of consciously choosing what ends up on our tables. According to the latest report, the worldwide adoption of a more sustainable, predominantly plant-based diet, combined with reduced waste, is the fastest and most effective way to mitigate the effects of climate change. We need to get into the mindset that every choice we make has an impact on the environment. If we really are what we eat, we can be the generation of those who have



chosen to save the planet, starting from the dinner table.

Behaviours that affect eating habits, and thus diets, can in fact have a considerable impact on greenhouse gas emissions: reducing the consumption of meat, especially red meat, and dairy products as already defined by the World Health Organization can curb climate change and improve health. In particular, the greenhouse gas emissions required to produce meat occur during the cultivation of the grains to feed the animals, the production of the feed, the entire life cycle of the animals and the sale.

Reducing food waste can also lead to a reduction in land pressure. Changes in diet towards non-carnivorous forms and a reduction in food waste reduce: greenhouse gas emissions, cultivated areas (as most areas are actually cultivated to feed farm animals) and grazing requirements, while increasing biodiversity and thus reducing mitigation costs. In essence, they decrease pressure on land and thus production intensity, fertilizer, pesticide, water and energy use, bringing benefits with respect to desertification and land degradation.

Solutions related to reducing emissions in the food system, and in particular diets, are likely to be hampered by socio-cultural factors, while those related to reducing food waste by lack of financial incentives, lack of knowledge, lack of convenience, and in any case low priority. This is why it is crucial to

make sure that there is more AWARENESS about these issues and about the crucial role, that each of us can have, influencing the food industry, making it change. Last but not least, eating a sustainable diet is only good for the planet, but also for our health.



Pic 9: West Pokot, as part of the Resilience Support for Sustainable Livelihoods project which aims to increase the resilience of communities to drought and other effects of climate change in the ASAL areas of Kenya, courtesy of CEFA Onlus.

3.3. Key studies

Below you can find two Key studies relevant to the topics dealt with in the project; namely two international cooperation projects implemented by CEFA, in partnership with other entities, which have a strong link between climate change and food system and consumption. These are only two instances of how one can intervene in areas critical to climate change, to address these issues, coherently with the context and the environment in which one operates.

Project Title	Ustahimilivu Support to Resilience for Sustainable Livelihoods <i>Funded by the European Commission</i>
Where?	West Pokot County, Kenya is located in an arid and semi-arid (ASAL) region with difficult environment and access to food, where insecurity has been exacerbated by the negative impact of climate change. This has had negative socio economic and environmental impacts that threaten the means of subsistence of pastoral communities, increased resource based conflicts and lead to the reduction of family income. Women in Kenya make up more than 70% of the agricultural workforce and contribute up to 80% of the all work in domestic food production. The actions' multisectorial livelihoods and support for the development of resilience are therefore aimed at women heads of households and vulnerable families.
Objectives	The overall objective of the action is to contribute towards increased resilience of communities to drought and other effects of climate change in ASAL ¹ areas of Kenya. The specific objectives of the action are to enhance food and nutrition security of vulnerable households, especially for women and children in West Pokot County, and to generate sustainable livelihoods and protect productive assets in West Pokot County.
Activities	<ul style="list-style-type: none"> - Enhance the production activities of honey and mango with a value chain approach. - Implementation of a Nutrition Sensitive Agriculture program through establishment of kitchen gardens targeting women and youths. - Improve access to water for agriculture, livestock and human consumption through the establishment of canal irrigation schemes equipped with water points.
Results	<ul style="list-style-type: none"> → Productive, climate resilient and nutrition sensitive agriculture and livestock production strategies and measures implemented → Strengthened key productive household assets and community investments that are sustainably protected and safeguarded against recurrent droughts and the effects of climate change and recovery capacities

Table 1- Ustahimilivu Support to Resilience for Sustainable Livelihoods - EU funded - Implemented by CEFA in partnership

¹ Arid and Semi-Arid Lands

Project Title	Cadenas de Valor Rural organizations and mechanisms of associative production and marketing <i>Funded by the European Commission</i>
Where?	Ecuador. Between 2017-18 income poverty in Ecuador increased, in particular in the rural areas and for the most vulnerable part of population indigenous and females. Although, climate change has become a serious problem that affects the survival and future development of mankind, especially on agricultural production and related processes.
Objectives	Strengthen a model of inclusive, participatory and associative value chains of cocoa, quinoa and coffee, within the framework of public policies in Ecuador, efficient in economic, energy and environmental terms to contribute to sustainable development. The focuses were: <ul style="list-style-type: none"> - Production (rural agriculture) - Organizational strengthening (inequality reduction gender and generational issue) - Reporting and research (technic innovation) - Marketing - Climate change (mitigation/adaptation Causes Energies)
Activities	<ul style="list-style-type: none"> - Training activities - Research session on local agriculture and sustainable agricultural methods - Exchange of good practices - Renewal of the plantation with the “change of crown” method - Promotion of a self-certification system related to the “Chakra Seal” - Creation of guides, videos, booklets and posters used in workshops and events and disseminated through web pages and social networks
Results	<ul style="list-style-type: none"> → Creation of consultancy with the aim to analyze the vulnerability of coffee, cocoa and quinoa crops in the intervention areas of the project linked to the consequences of climate change → Environmental Seal The Chakra Seal that works as a Participatory Guarantee System, to guarantee the organic quality of the production of small farmers → Borer control in the coffee plantation with the producers for the integral control of this plague → Preparation of the National Cadmium Agenda a series of investigation activities and determination of corrective measures for cocoa chain. → Increased productivity thanks to the improvement of transformation and conservation with technologies with low energy impact and resistant to climate change.

Table 2 - Cadenas de Valor - EU funded - Implemented by CEFA in partnership

4. Escape room

4.1. The definition of Escape Room: characteristics and mission

Escape rooms are a recent phenomenon in the field of entertainment, which have become popular since 2010 in cities all over the world. It is a group game with a main character which performs logically, where the participants, once locked in a room which is decorated according to a specific theme, have to discover a way out. Players are asked to look for clues, solve puzzles, complete tasks within one or more rooms, in order to reach a specific goal. Typically, the objective is to find a way out of the room within a time frame of 30 to 60 minutes. It is a live-action group game in which participants physically interpret the characters through their own actions. Everything is organized within a narrative context that characterizes the game set up and provides players with roles to assume and a reason to escape or solve a puzzle. A fundamental role is played by the Game Master, a person outside the room who instructs the participants on the plot and the rules which have to be followed and sometimes takes on the role of narrator. As the clock ticks down, participants must face a series of trials, search for tracks and complete various tasks in order to advance in the game. Often the Game Master monitors the progress of the game and, if necessary, intervenes by providing voice

instructions or other types of suggestions to help the players.


4.2. The Escape Room in the classroom: didactic functions and construction

More and more in recent years, games are used in schools for the development of skills: escape rooms require players to have and show communication, team-working, problem-solving and critical thinking skills, as well as attention to detail and lateral thinking. Team working involves collaboration in order to achieve a goal: the social nature of knowledge thus emerges, as it is personally constructed by each individual through others and for others. In this dynamic role play, communicative competence intervenes in a constant and distributed way right from the first basic encounter between the players, who collaborate through a process of synthesis, and the organization of knowledge already acquired to solve the present situation. Problem-solving indicates the set of processes for analyzing, addressing and positively solving problem situations: a problem arises when a living being, motivated to reach a goal, cannot do so automatically or mechanically, through instinctive activity or learned behavior. Finally, critical thinking is a type of thinking that aims to reach a judgment by a way of mental process involving judgment, analysis,

evaluation, not dissociated from explanations of the considerations on which that judgment is based. Collaboration and communication within the group, self-awareness (time and resource management, resilience/tenacity), reflective and critical thinking (problem-solving, lateral thinking), involvement and motivation are the basis of an Escape Room in the classroom. In addition, experimenting with an escape room in the classroom necessarily induces collaboration: there is therefore a natural intrinsic motivation to collaborate in order to have an original, valid, well-kept and long-lasting end product. In addition to the development of transversal skills, escape rooms can easily be linked to disciplines: they are linked to puzzles, to specific knowledge of a given theme or topic, to particular skills, to familiarize oneself with a discipline tool (e.g. the use of a compass, a compass, the periodic table). In recent years, various researches have highlighted the importance of game-based learning, i.e. the possibility of stimulating, fostering and realizing any kind of learning through play: the game-based approach is believed to be effective in facilitating the development of skills in students. Furthermore, it has been shown that through such play, the climate in the classroom can be improved, collaboration encouraged and pupils motivated to deal with mathematical, logical as well as creative situations.

4.3. Resolve Escape Room and Outdoor projects

Resolve Escape Room originates from a project designed to realize Escape Rooms, but to arrive at a much broader project both in the educational sphere (workshops for schools, organization of summer camps/after-school activities) and for business (corporate team building, recruiting, evaluation and analysis of internal corporate personnel). The realization of such projects is designed, supervised and implemented by experts from various sectors (educational, administrative, technical and IT) who, with intense dedication and constant research, study how to create each individual project that is requested by the client, considering the client's needs and purposes. Combining the Escape Room concept with outdoor courses stems from an increasingly real need to be able to "learn through fun" and to do this, there is the need to create a dynamic course, which requires the use of different sensory skills (sight, touch, smell, hearing..), intellectual (the puzzles are of different types: mathematical, artistic, mechanical, physical, computerized) and sometimes, if required, also physical (clients often ask for moving routes, in which participants must inspect large open spaces, such as woods or cities). In addition, outdoor routes stimulate not only the ability to analyze and adapt to situations (thus implementing problem-



solving mechanisms), but also they give the possibility/need to interface with a group in order to achieve a common goal, to be able to finish the route. Usually, in fact, our Outdoor Paths are designed to play in different groups that challenge each other with a predetermined timer (one hour as in Escape Rooms) in which the final goal is to be able to finish the path before all the other groups in order to win the final prize. In school projects, this general formula is almost always modified; in fact, groups do not have to compete to finish before the other groups, but as soon as they have finished solving their route, they will have to solve a final puzzle together with all the other groups. In this way, the key to success is collaboration between the groups, so that they can finish the route, which then becomes unique. But what do outdoor trails for schools generally consist of? They are treasure hunts, in which each group has to search for consequential boxes closed by padlocks in order to be able to finish their route (both static and moving routes can be realized). Inside each treasure box there are logical-mathematical, creative, text-analysis and graphic puzzles, specially designed according to the age of the participants, which must be solved by the group and which will give as the solution a numerical combination that will be used to open the lock of the next box. At the end of the game, each group by itself will not be able to complete the final riddle, but must wait for


the other groups in order to play together and solve it. Then follows a key part of the escape route: the final evaluation and debriefing. The final evaluation is absolutely the key to support learning and to reflect on the games. Whichever way an escape room is incorporated into the activities of a class, it is crucial that in the planning the activity adequate time is set aside to reflect on the performance of each individual performance in the relationship to the group, in order to consolidate what has been acquired. Learning occurs within the game, but only becomes conscious and stable after it has been brought to light through discussion. The evaluation session at the end of an educational escape room is as important as the game itself since it gives players the opportunity to evaluate what happened (including their feelings and emotions), to reflect on what went well, what did not work and the reason why. Discussing the teams' performance, delving into common problems and mistakes, and tying the game's puzzles to the curriculum is where the teacher can check that the students have achieved the desired learning outcomes and explain any mistakes made or misunderstandings that arose from the game. Themes that are often requested are, for example, school orientation (for classes that will be attending secondary school) or courses on certain social issues that interweave topics addressed in the classroom (climate problems, bullying, etc.)

in an interdisciplinary manner. In the realization of projects, we are very attentive to the type of target group we refer to (age group, social context), constructing each pathway in a detailed and customized manner according to the request submitted to us.

4.4. The Game Master's role: how to organize the escape room for teachers.

Within an Escape Room, the Game Master's role is fundamental because his task will be to introduce and explain to a group of players the history of the chosen room, illustrate the rules and introduce the purpose of the game. In an Outdoor Course the role of the Game Master is very similar, although it differs with respect to the management of the group: very often it is the teachers of a class themselves who take on this role, as in the case of our "Escape the Crisis" project, and they do not have to observe from outside a room, but are always present constantly communicating not only with a group of players, but very often with at least three groups (for the success of a course the class will be divided into several groups with a maximum of 10 elements in each). But what are the main tasks of a teacher as Game Master? Firstly, the Game Master must have a thorough knowledge of the theme of the course and all the puzzles

(how many and which puzzles there are and also what clues are needed to realize them). This is obviously an initial phase that must be planned before the game with the pupils, as the Game Master will have to explain the rules carefully and will also have the task of being a mediator throughout the course of the course. Indeed, should pupils be unable to understand certain passages or have doubts, they must always turn to the Game Master for help. At the end of each puzzle, each group must inform the Game Master of the solution they have found, giving a detailed explanation of why they have found it and also explaining why the other solutions have been excluded (each puzzle will lead to a numerical solution that will open a box closed by a padlock). If the solution is correct and the Game Master is satisfied with the motivation, the group can open their box; otherwise the Game Master will not confirm the solution and the group will have to think again about the clues to solve the puzzle. When all groups have opened their box there will be a final puzzle that must be solved by all groups in order to open a final box, in which there will be the final solution. However, the Game Master's role does not end with the end of the game; on the contrary, this will be a new starting point to go over all the topics dealt with by the groups, to open a class debate on the topics encountered and to have an overview of the entire route. Thanks to the Outdoor pathway, teachers will also be able to



deepen and connect their own teaching subjects, realizing an extension/deepening to the school didactic pathway. These above descriptions are the general characteristics that teachers must have in order to be able to follow an Outdoor Course: we have created a manual with all the necessary guidelines for the complete realization of the Escape the Crisis project.

5. Conclusions

The “Escape the Crisis” project and its toolkit, both born from the collaboration of different European entities, contribute to the 4th, 12th and 13th Sustainable Development Goals, through the recognition and the use of alternative education methodologies, such as non-formal education and edutainment, to encourage young people to be active citizens in facing the challenges of climate crisis.

The escape room game, in fact, plays a key role in reaching an inclusive and equal quality education, as when applied in classrooms, it stimulates participants’ problem-solving skills and cooperation towards a common goal. In this way, teachers can implement an alternative and more dynamic learning process, making younger generations’ engagement more effective.

A massive effect of human activity on climate and the environment characterizes the Anthropocene era, that we are living in nowadays, and this is two-fold. On one hand, the Great Acceleration brings with it global warming, severe climate conditions such as storms, flash floods that influence both countries’ habitat and economic - health sectors. Under these conditions, the most affected ones are developing countries that,

because of inadequate policies, are facing severe conflicts related to competition for natural resources and raw materials, and migration flows. On the other hand, humanity has the opportunity to take action in choosing two ways of intervention: the first is represented by *mitigation*, that is the intervention in contrasting climate change, the second one is represented by *adaptation*, in reducing human vulnerability to climate change. Within this framework, in striving for a more sustainable system for the years to come, a central role is played by food consumption and food system sustainability. This is because the food system plays a triple role: perpetrator, victim, and solution.

Since the Toolkit, as well as the action of the “Escape the Crisis” project, deals with these three fundamental and strategic topics (climate change, non-formal education and food system sustainability), we believe it represents an effective tool to contribute to our final aim, which is in fact, to educate, encourage and raise awareness among young generations on adopting a more sustainable lifestyle, as well as to take action for their and next generations’ future.

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Pictures and tables

Section 1: Global Citizen Education

Pic 1: Sustainable Development Goals, United Nations. https://www.un.org/sustainabledevelopment/news/communications	5
Pic 2: Specific target of 4th SDG, United Nation: https://www.un.org/sustainabledevelopment/news/communications-material	6
Pic 3: Infographic on 2022 report of 4th SDG, United Nations. Found on: https://sdgs.un.org/goals/goal4	6

Section 2: Climate Change

Pic 4: The Great Acceleration 2015 from International Geosphere-Biosphere Programme: http://www.igbp.net/globalchange/greatacceleration.4.1b8ae20512db692f2a680001630.html	10
Pic 5: Infographic on 2022 report of 13th SDG, United Nations: https://sdgs.un.org/goals/goal4	12
Pic 6: West Pokot, as part of the Resilience Support for Sustainable Livelihoods project which aims to increase the resilience of communities to drought and other effects of climate change in the ASAL areas of Kenya, courtesy of CEFA Onlus.....	14

Section 3: Food systems Sustainability

Pic 7: The SDGs VS the SDGs Wedding Cake - Azote for Stockholm Resilience Centre, Stockholm University.....	20
Pic 8: Infographic on 2022 report of 12th SDG, United Nations: https://sdgs.un.org/goals/goal12	24
Pic 9: West Pokot, as part of the Resilience Support for Sustainable Livelihoods project which aims to increase the resilience of communities to drought and other effects of climate change in the ASAL areas of Kenya, courtesy of CEFA Onlus.....	27
Table 1 - Ustahimilivu Support to Resilience for Sustainable Livelihoods - EU funded - Implemented by CEFA in partnership	28
Table 2 - Cadenas de Valor - EU funded - Implemented by CEFA in partnership.....	29