

# SmartGreen

News from the environment

**Post**

## CHRISTMAS AND COVID

The best gift we can give is to protect  
the environment

### HEALTH & LIFESTYLE

Eco-friendly  
Christmas tree,  
the real one respects  
the environment

### SCIENCE

Breast cancer prevention  
and nutrition:  
foods that help women

### GREEN BEAUTY

What is the difference  
between natural,  
organic and eco-friendly  
cosmetics



# SmartGreen

News from the environment **Post**

SmartGreen Post is a blog on the green world, from climate change to separate waste collection. You will always be updated on news from Italy and the world, on the environment, green economy and new technologies. In addition, you can find our tips for a more eco-friendly and healthy lifestyle, as well as a section dedicated to sustainable tourism.

SmartGreen Post is part of a larger Green project that includes SmartRicicla, the separate collection app available in Italy, the United Kingdom, Ireland, Australia, Canada and the United States of America. You can download the app directly on the Play Store. For more information visit the website [www.smartricicla.com](http://www.smartricicla.com)

SmartGreen Post wants to be a small contribution to the protection of our planet, because to prevent catastrophe it is necessary to know and then act, each in his own small way, with simple but highly effective gestures.





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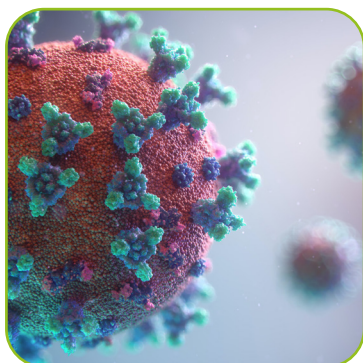


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## Green Christmas: from decorations to food, make eco-friendly choice

Christmas is approaching but it will not be a Christmas like any other. We will miss the hugs, the big family reunions, the street celebrations for the New Year. Yet, there is within us an unshakable will to defend traditions: houses are filled with decorations, Christmas trees, garlands, cribs, streets are colored with lights, shops - albeit suffering due to anti-Covid measures. - they are crowded with people busy choosing gifts for friends and relatives.

Christmas is the celebration of the family and, in a certain sense, the celebration of the environment. Why? In a period of the year marked by unbridled consumerism and food waste, we can make a difference.

How? Through small gestures. Starting from the choice of a sustainable tree to the reduction of waste at the table, we can make Christmas a more environmentally friendly holiday. Overall, waste is estimated to increase by an average of 30% in this period. Considering the typology of Christmas symbols, from the packaging of sweets and gifts to disposable tableware, an increase in the volume of waste often destined for unsorted waste is expected, a further burden for disposal by local administrations with inevitable impacts on the environment and on the health of citizens. But everyone can make a difference by taking advantage of the holidays to learn more careful lifestyles, with an eye also to the wallet.

Let's start with the choice of the tree: better to opt for a real fir, purchased from a certified nursery, which can be replanted or donated after the holidays. Alternatively, we can use plants we already own or dry branches. For the decorations, we use creativity by making small decorations with waste materials. For the lights, the better the LEDs that allow energy savings of up to 80%.

Buy gifts in local shops, possibly without using the car, and package them in an original and sustainable way, perhaps with newspaper and old fabrics.

For lunches and dinners, even if in small numbers due to Covid, make green choices. If you really don't want a vegetarian menu, then buy meat and fish from local productions and above all, avoid waste. Don't throw away the leftovers and prefer classic dishes to disposable plastic ones.

Finally, give up on fireworks: the environment and the animals will be grateful to you.

Piera Vincenti

Editor of SmartGreen Post, she has many years of experience as a journalist and copywriter, alongside which she has added new skills in the digital and social media management sector. With SmartGreen Post she expresses its true ecological nature.



**About us****FOUNDER****Mario Telesca**

Computer scientist, sensitive to environmental issues, he has carried out various green projects including SmartRicola, the app for separate collection. He has always been looking for the perfect union between science and art.

**FREELANCERS****Maria Giuseppina Ferrulli**

Archaeologist specialist in late ancient and medieval archeology and teacher of literature.

**Ingrid Leka**

Ingrid Leka is an asset consultant who helps women in their financial journey with clear and simple language. In her book “La madre di Cappuccetto Rosso era una stronza” she talks about financial concepts through fairy tales.

**Maria Carmela Padula**

Nutritional biologist and researcher, nutrition training, Master in “Dietetics and Clinical Nutrition”.

**Gaia Lamperti**

Freelance photojournalist passionate about travel, human rights and environmental issues. After studying and working in the U.S. and Australia, she graduated in Italian Literature at University of Milan and completed a master degree in International Journalism at City University of London.



## About us



**Claudia Lippi**

Environmental Guide and Hiker specialized in Ecosustainable Sailing & Trekking. She has volunteered for Sea Turtle Rescue Centers that have turned her life upside down.



**Angelo Rosiello**

Geologist, specialized in fluid geochemistry in volcanic and non-volcanic areas.



**Michele Colangelo**

PhD at Pyrenean Institute of Ecology (IPE-CSIC, Zaragoza – Spain). His activities are focused on the study of the vulnerability of Mediterranean forests to climate change.



**Claudio Ventura**

He has always cultivated a passion for nature and the environment. Thanks to the degree in business administration he was able to specialize and further deepen the concepts of circular economy and industrial ecology.



**Ste Vi**

Cosmetologist and research & development manager.



**Alberto Iuzzolino**

Passionate about environmental issues, he carried out environmental education activities in schools in the Basilicata Region as part of the Legambiente separate collection education project.





# Eco-friendly Christmas tree, the real one respects the environment

Real or fake tree? And what to do with it, once the holidays are over? A handbook to choose a truly eco-friendly Christmas fir

*Piera Vincenti*

Real or synthetic Christmas tree? This is the question we ask ourselves every year in view of the holidays, especially when our priority is to choose an eco-friendly Christmas tree that respects the environment and does not pollute.

We often think that by choosing a real tree we are promoting deforestation. Nothing could be more wrong, indeed. The fir trees are by no means eradicated but mostly come from nurseries and companies that grow them specifically for the holiday market.

The classic artificial tree, on the other hand, is made of PVC plastics and terephthalate polyethylene so it is not biodegradable. On average, for the construction of a fir of about 10 kg it takes 20 kg of oil and the manufacturing process releases 23 kg of CO<sub>2</sub> into the atmosphere. To these numbers we must add the transport from almost exclusively Asian countries. These numbers must be multiplied by at least seven million trees sold in Italy every year, which will take two centuries to dispose of.





It is not really what can be called an eco-friendly Christmas tree. If you do choose to buy it, then, get one that you really like and that is of excellent quality so that you can use it for several years. And when you decide to change, don't throw it away but give it away or see it again. Surely someone else will appreciate.



Choosing a real Christmas tree is good for the environment. Not only does it not pollute but it contributes to the reduction of CO2 assimilated during growth and prevents hydrogeological instability. Furthermore, it is good for populations living in rural areas where fir trees are grown, especially in Tuscany and Veneto. And if the plantation is organic, well, you will know that you have a real eco-sustainable Christmas tree at home.

It is preferable to opt for a tree that is alive and well, with roots, which must be watered regularly and placed at a safe distance from heaters. This type of tree should not be overly burdened

with lights and decorations. You don't even need to spray synthetic snow because the tree is alive and breathing. The air in your home will be purified by the plant that will spread its balsamic aroma. Veterinarians also recommend natural trees over synthetic ones since dogs and cats, not loving being stung by needles, will thus be dissuaded from climbing natural fir trees as they do fake ones, avoiding damage or minor domestic accidents.

Whether you prefer trees with roots or firs in pots, it is good to make sure that the plant has been grown in certified plantations and not taken from the woods: certified trees do not aggravate the phenomenon of deforestation in any way but, on the contrary, do not they counteract the advance.

What to do with the tree after Christmas? It all depends on the space you have available: you can keep it on the balcony or in the garden, watch it grow and take care of it to have a bigger and more beautiful Christmas tree year after year. If you don't have space, you can give it to someone with available land or even to the municipalities or the State Forestry Corps. As for the latter, always contact him before deciding to bring your sapling back into the woods, thus avoiding spreading alien species in the wrong places, creating ecological pollution.



## Sustainability, how restoring damaged ecosystems improves quality of life

*Gaia Lamperti*

The movement for rewilding is a progressive approach to the restoration of damaged ecosystems, allowing them to recover and promoting an increase in biodiversity



© Sacca di Goro, progetto Life AGREE - Istituto Delta

The United Nations decided to dedicate the decade 2021-2030 to the 'restoration of ecosystems on every continent and every ocean'. Indeed, damaged ecosystems' rehabilitation could actually play an essential role in the fight against poverty and climate change.

In this regard, in recent years, the movement for rewilding has been gaining ground, a progressive approach to the restoration of damaged ecosystems, allowing them to recover naturally and promoting an increase in their flora and fauna biodiversity.

"Techniques with low environmental impact based on the use of natural materials are the best as they tend to conciliate the safety of the territory with the conservation of naturalistic values," explained the researcher Anna Di Noi in a report of the Higher Institute for Environmental Research (ISPRA).

Essentially, this approach would bring nature back to a state where it can take care of itself without human intervention, mostly. "Restoring an ecosystem is a natural dynamic process, but it is artificially triggered in

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a very complex and delicate way and can only be started after conducting in-depth studies and research on the original conditions of the ecosystem,” Di Noi highlighted.

Furthermore, the concept of rewilding is radical and interesting because it could be a powerful solution to mitigate climate change by helping to reduce carbon in the atmosphere. A study recently published in the scientific publication *Nature* showed how rewilding as little as 15% of deteriorated territories could remove from the atmosphere almost a third of all the excess carbon emitted since the beginning of the Industrial Revolution.

In Italy, there are already numerous projects aiming to restore damaged ecosystems. The Delta Institute



© Roberto Fabbri

is one of the most eminent in the field and boasts several successful projects, especially in the Po delta. “Specifically, we work on wetlands, as they contribute to numerous ecosystem services that humans also benefit from, sometimes even unconsciously,” said Dr. Graziano Caramori, biologist of the institute, in an interview with SmartGreen Post.

Much emphasis is placed on the timing of these regenerative processes. An effective restoration shows its first effects already after a single vegetative season, while for more lasting results, approximately 2-3 years are expected. “Fundamental to any type of sustainable development is the renewal of resources. However, it is also fundamental that this renewal takes place in sensible times for human beings,” explained Caramori.

Furthermore, the intervention to restore an area to its initial conditions must always adopt a holistic approach. “The system works only when all its components work, even the less visible ones,” Caramori pointed out. “An example above all, invertebrates or small organisms that normally have less influence on public opinion, are no less important for this”.



© Lago Pratignano – S. Stefanelli

Among the projects carried out by the Delta Institute on Italian territory, there is Life AGREE which involved the Sacca di Goro, a brackish lagoon of the Po' river. Started in 2014 and showing results as early as 2015, the project has rebalanced the hydrodynamics and habitat of the lagoon, restoring not only the biodiversity of the area, but also having a major impact from an economic point of view in terms of production of clams in the area. "When you have a tangible effect like in this case, it is easier to spread and understand the benefits of rewilding," commented Caramori.

It is therefore essential to understand that, at the basis of any degraded ecosystem's restoration, there is a profound interconnection between multiple levels. Hence, the United Nations initiative to dedicate this decade to the restoration of ecosystems. Investing in rewilding processes, in fact, would not only bring environmental and visible benefits, but would also play an essential role in improving the quality of life and mitigating climate change.



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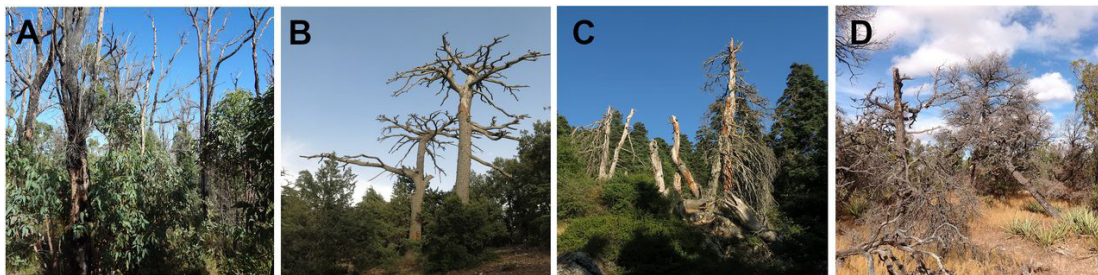




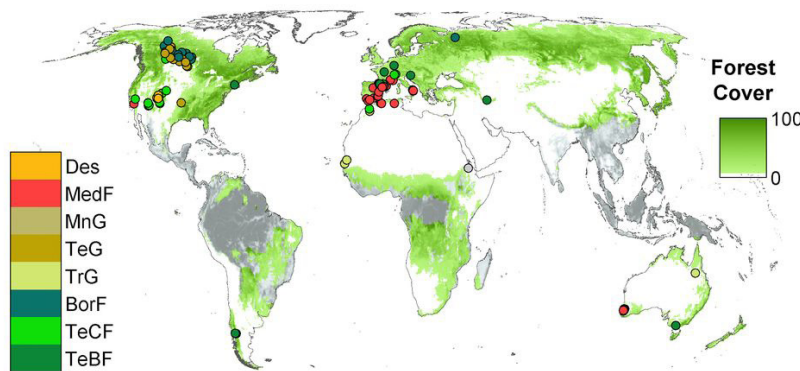
# Effects of climate change: the future of our forests in an warmer world

Michele Colangelo

A global study of the ecological dynamics of forest replacement reveals some potential scenarios as a consequence of drought-induced mortality



(A) Auto-sostituzione (*E. marginata*) Foresta di Jarrah settentrionale, Australia (G.M., 2014).  
 (B) Sostituzione con un'altra specie arborea (*Cedrus atlantica*) Marocco (E.B., 2017).  
 (C) Sostituzione con specie arbustive (*Abies pinsapo*) Sierra de las Nieves, Spagna (E.B., 2017).  
 (D) Nessuna sostituzione con vegetazione legnosa (*P. edulis*) New Mexico, USA (F.L., 2012).



Forest vulnerability to drought is expected to increase under anthropogenic climate change, and drought-induced mortality and community dynamics following drought have major ecological and societal impacts.

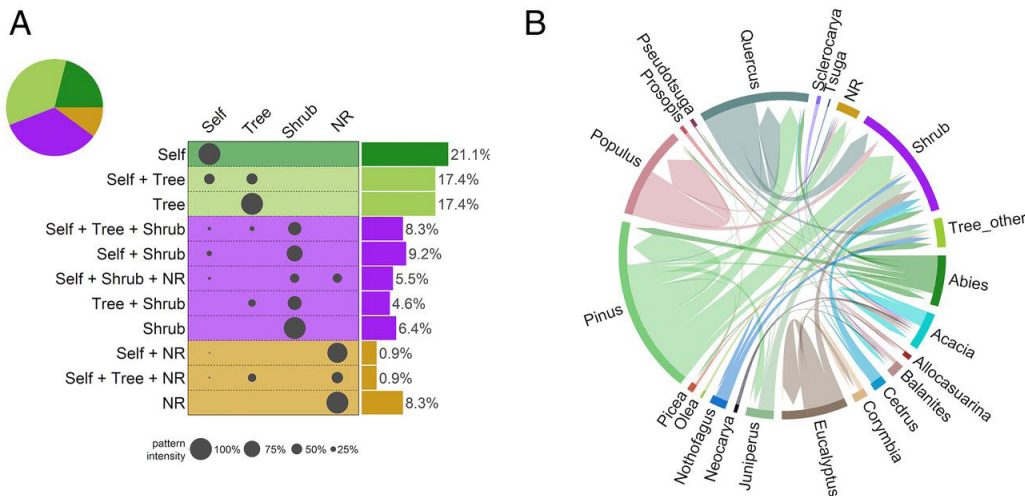
In recent decades, numerous cases of forest dieback and mortality have been reported in every part across the world. Reported increases in tree mortality point toward accelerating global forest vulnerability under hotter temperatures and longer, more intense droughts associated with increased climatic variability with a significant impact on the landscape, biodiversity and the dynamics of the succession of ecosystems.

The scientific community is focused on this aspect, with international collaborations with an increasingly global perspective. The prestigious international journal "Proceedings of the National Academy of Sciences of the United States of America" has just published a scientific article "Forest and woodland replacement patterns following drought-related mortality" by E. Batllori a researcher of CREAM (a Spanish Forest Ecology Research Center). This work involved scientists and researchers from the 5 continents, among the greatest international experts on issues concerning the impacts of climate change on forests.

The pool of researchers also included prof. Francesco Ripullone and Dr. Michele Colangelo of the University of Basilicata who, in recent years, have been carrying out numerous research projects on issues related to the vulnerability of Mediterranean forests due to climate change.

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Modelli di sostituzione post-siccità (Battlori et al. 2020)

The study was carried out in 131 field sites, in different biomes on a global level, characterized by forest declining and high level of tree mortality, where unfortunately some Italian forests are also reported. Numerous questions have been raised by researchers regarding the future dynamics of vegetation succession due to mortality induced by climate change, which

species will be able to adapt to the new conditions and which are destined to succumb or to be replaced by more resistant and resilient species.

The aim of the research is to understand, based on a series of indicators collected in the field, what are the future ecological scenarios that we will find in the forests affected by severe drought. The study is based on the application of advanced statistical modeling techniques to obtain information on post drought ecological trajectories of vegetation.

Results show that in study sites tree mortality due to drought is leading to a short-term change in the type of vegetation, with the likelihood that a major reorganization may occur in the future decades, leading to major changes in some ecosystems. Early change in community composition indicates that forests dominated by mesic species generally shifted toward more xeric communities, with replacing tree and shrub species exhibiting drier bioclimatic optima and distribution ranges.

However, changes have also occurred towards more mesic communities and for some species situations have been observed where the forest has disappeared, therefore completely replaced by other types of plant communities. Finally, it should be noted that the replacement was also influenced by the intensity of management and the predominance of shrubs after extreme droughts was greater when the pathogens acted as co-responsible for the mortality of the trees.

The great variability of the observed changes shows us how important are the impacts caused by the increase of drought, raising many concerns about the future of the ecosystems that we will bequeath to future generations. Furthermore, the strong interconnection of these impacts with the dynamics related to land use, management and disturbances of the past must be considered. This scenario determines a change in the turnover of species linked to drought and, consequently, to all potential implications for forest biodiversity and future ecosystem services.





## The New European Bauhaus and the green future of Europe

*Maria Giuseppina Ferrulli*

A new project to combine climate change and the ability to safeguard the environment through a new way of building and living



The New European Bauhaus is part of the NextGenerationEU, the 750 million euro plan launched by the European Union to promote recovery, especially in consideration of the effects of the pandemic on the territory.

Based on the principles of Gropius's Bauhaus, the New European Bauhaus is an environmental, economic and cultural project that will have the task of changing the face of the European Union; the idea is to act in an interdisciplinary perspective, promoting the dialogue of science with technology and, more generally, between culture and art, as the Bauhaus had already taught us.

It aims to be the beginning of an aesthetic and urban planning revolution in a green key, in the name of eco-sustainability, in line with what was expressed in the past by the architects and designers of the Bauhaus; even if the main objective of the European strategy remains to reduce emissions and energy poverty, generating multiple benefits from an economic, environmental and social point of view.

The legacy of that movement, in fact, did not go unheard and continues to influence architecture and town planning even today. Among other things, one should not underestimate the revolutionary significance of Bauhaus thought thanks to modernist aesthetics, internationalism and social progressivism. Recovering the work of architects such as Mies van der Rohe and Marcel Breuer is equivalent, in some ways, to a recovery of European identity as a spur towards future change.

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The Bauhaus was not simply a school of architecture, as it also had the role of a school of applied art. The basic aim was to look for a method by which you could come to the project and design with rigorous functional analysis of objects and buildings. The priority, therefore, was not style, but the search for rationally functional solutions.

The school's motto, taken up by Ernesto Rogers in the Athens Charter in 1952, was "From the spoon to the city", which indicated how the Bauhaus method was applicable both to the design of small objects and to the design of entire cities, on all levels of scale. In fact, the spoon referred to the smallest scale and, at the same time, to the private and intimate sphere, while the city indicated the larger scale, but also the public sphere.

The project consists of three phases. In the first phase of the design there is a dialogue and a comparison between designers, architects, artists, digital experts, scientists, entrepreneurs, engineers and students with the aim of evaluating new ideas and giving life to a real movement.

In a second moment, five projects will be delivered to different states of the Union and will have to be carried out with the aim of bringing together art, culture and sustainability, in accordance with digital innovation, energy efficiency, natural building materials and local conditions.



The last phase concerns the dissemination of ideas beyond the European territory, but also among the people. Sustainability, reconnection with nature and the construction of buildings and cities in harmony with the green will have to become a new way of feeling the environment and conceiving the landscape.

In fact, construction is a sector that needs greater sustainability, given the fact that it causes 40% of CO<sub>2</sub> emissions on the entire continent. The only way to go is to build with the least possible impact, focusing on the renovation of the existing building stock and increasing investments in clean energy.

Being inspired by the Bauhaus means, ultimately, having an interdisciplinary approach to urban planning and construction and giving importance to functionality and sustainability. A great lesson that finds its double in what we have learned from the pandemic: improving our relationship with the environment will prove to be the best possible solution to all our current problems.





# Sustainable investments: three myths to dispel

Ingrid Leka

Performance, longevity and interest:  
these are the false myths to dispel  
in relation to sustainable investments



Although we hear more and more talk of sustainable investments, there is still a lot of work to do, especially in terms of information on the subject. Today I want to dispel 3 myths concerning this category of investments that are increasingly in demand.

### Performance myth

One of the myths about sustainable investing is that they have historically had lower returns than traditional investments. Choosing sustainable funds or ETFs is expected to have a negative impact on performance. A study by the Morgan Stanley Institute for Sustainable Investing on the performance of nearly 11,000 funds between 2004 and 2018 shows that there is no substantial difference in return between sustainable investments when compared with traditional ones; on the other hand, the former have a downside risk of around 20% lower (ie when the market goes down, sustainable investments go down less than traditional ones).

### Myth of longevity

There are those who think that sustainable investments are a fad, a sort of bubble from which it is better to stay away. The numbers show the opposite: the trend is growing and is only just beginning. The Green Bond market was almost non-existent in 2010, while in 2019 it amounted to about 257.7 billion dollars. According to a Morningstar research, sustainable investments as a whole have now exceeded 1 trillion dollars. Below a graph taken from Climate Bonds Initiative – First Half 2020 Report: despite the pandemic underway, the numbers for the first half are encouraging.

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## Myth of interest

Have you ever heard someone say that “it is mainly women and young people who are interested in sustainable investments”? I do, and I tell you it is false. The reality is that 80% of investors are allocating more resources to improve their ESG knowledge and 91% of sophisticated investors integrate ESG variables into their investment process. This is demonstrated by an “ESG Study: How Institutional Investors Adopt Responsible Investing” by Franklin Templeton in 2020.

Sustainable investments will continue to accompany us for a long time as more and more people understand that a new approach to finance is needed and expect more attention on sustainable practices from businesses.

## Joe Biden's priorities: environment and the fight against climate change



Joe Biden's victory is the victory of the environment. One of the first steps of the newly elected president will be the re-entry of the United States into the Paris climate agreement, signed by Obama in 2015. In his first speech as president, Biden inextricably linked the economy and climate action. The major coordinates of Biden's action are already known. He illustrated them last July: USA immediately into the Paris agreement on climate and the promise of achieving climate neutrality by 2050, aligning the States with the European Union. All this, creating 10 million 'green' jobs, mainly thanks to the expansion of renewables and research and development functions.

The first executive orders will instruct federal agencies to decide new limits for methane for oil and gas wells, to restore and strengthen fuel economy standards and to strengthen efficiency standards for household appliances and buildings. But they could also push for more transparency from finance on climate change risks. Among the most anticipated steps is the dismantling of a Trump flag measure, in which all federal agencies were ordered to freeze all their climate policies. Biden also said that on the first day of his administration he will sign an executive order to restore the conservation of 30% of the US land and water by 2030. That would stifle the possibility of new offshore drilling, especially in the Arctic.

But it doesn't stop there. Among the measures announced are the abandonment of fracking, but only from federal land, and the push for carbon capture and storage (CCS), an aspect that is seen by many as a lifesaver for fossil companies. The biggest obstacle is Congress. The Senate remains in the hands of the Republicans and all the bills must pass through that chamber.

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I think having Land and not ruining it  
is the most beautiful form of art  
you could wish for.  
(Andy Warhol)

Protect our environment.

**SmartRicicla**

The App for waste collection.

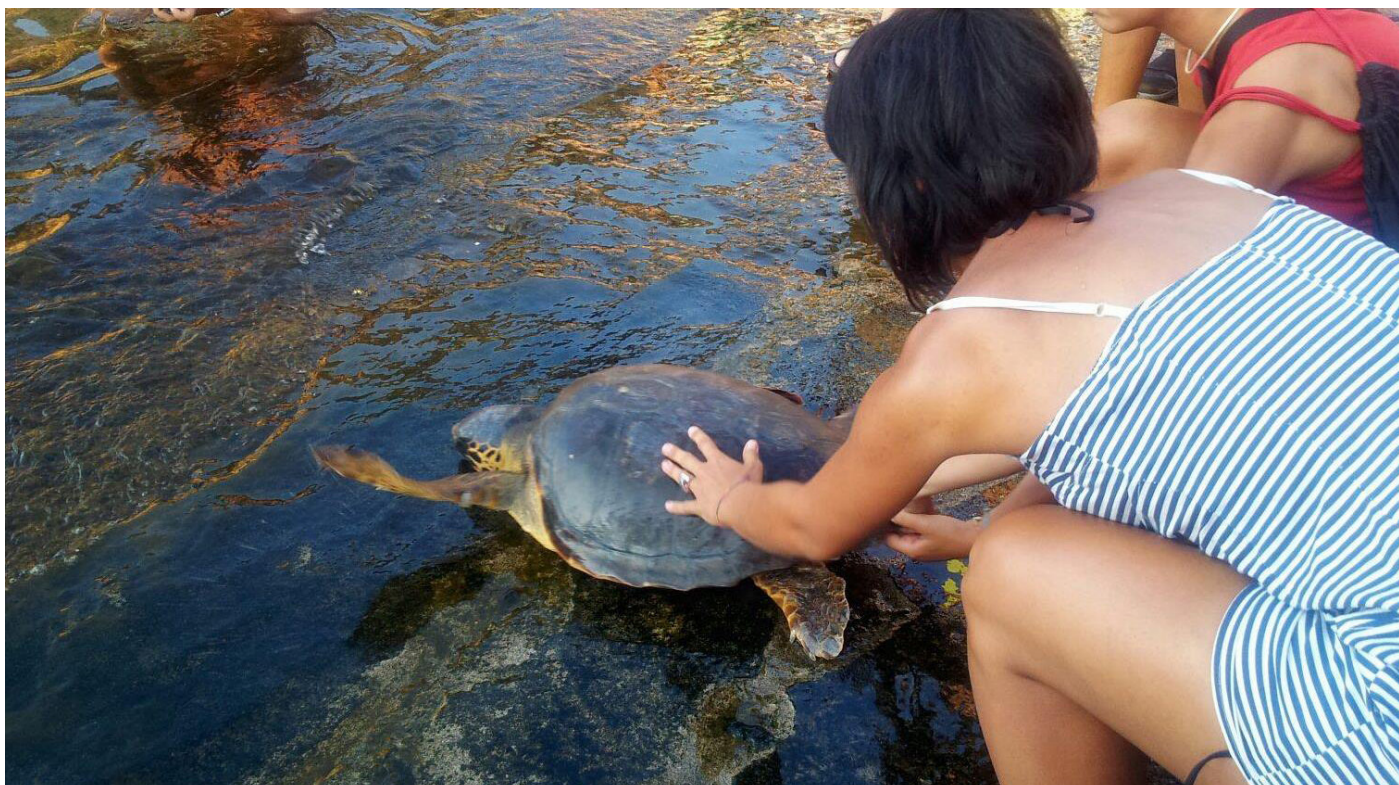




# From engineer to environmental guide: my eco-friendly life

*Claudia Lippi*

A turtle changed my life: while I was freeing it, I realized that I wanted to dedicate myself to nature and I started traveling on a sailboat, combining sea and trekking



When I turn back I smile: I am proud of my change, leaving a life that no longer represented me to create my project in line with (My) true Nature: Lasca la Randa – Eco-sustainable and aware sailing and trekking.

In this first article I want to tell you my story, then I will take you on a journey with me by sea and by mountains. Graduated with a master's degree in Biomedical Mechanical Engineering, after 12 years of work in my sector, I decided to change my life to create a project that combines being an Environmental Hiker Guide with the awareness of the negative impact of man on nature, including the sea and its inhabitants. Despite my accomplishments as an Engineer and dedication to that job, I felt my path was elsewhere.

Now as an Environmental Hiker Guide I am proud to participate in eco-sustainability projects, mainly aimed at raising awareness and protecting the sea. I accompany groups on walks and trekking, and create exclusive combined eco-sustainable sailing and trekking trips, which are plastic-free, with solid soaps and detergents on board, plates, dishes and glasses in ceramic and steel. I have banned the disposable and garbage collection is strictly differentiated.

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On board we cook exclusively organic and zero-kilometer food, produced on the island where we go or in the region from which we depart. Awareness also passes from the plate. In our travels, we never miss an appointment with “Mani in Pasta”, to share the experience of preparing fresh pasta on board with ancient grains of our production.

To launch myself into this project, it took enormous determination and the desire to get back into the game. That push that makes the positive aspects weigh much more on the scales: discovering your true nature by working in Nature, surrounding yourself with people who think like me, people who feel normal in their “madness”, free without having to appear.

It was a personal journey as well as a working one. An uphill journey, like when you climb a mountain you reach the top and finally, between one labored breath and the next, you also see all the splendor in front of you. The breathlessness subsides and you begin to breathe. The thoughts calm down, you feel the fresh wind on your face, you distinguish the colors of nature, and with a smile you show gratitude to your legs, to your willpower.

“My time will come” I repeated to myself for years, after having had my first volunteer experience at the Linosa Sea Turtle Recovery Center. This was the first step towards my choice; being slapped in the face of the sad reality of man’s negative impact on the sea and its inhabitants made me aware.

The memories of that first year are alive in my mind, each time I get moved thinking about the moment I first released a turtle into the sea and the suffering I saw in other turtles and cetaceans.

I turn back and smile again.

“Be the Change you would like to see in the World”, Gandhi said.



# Breast cancer prevention and nutrition: foods that help women

Food plays an essential role in breast cancer: it modulates the risk of cancer onset; minimizes the side effects of treatments and maximizes the positive effects of the same; prevents relapses

*Maria Carmela Padula*



Breast cancer is the most diagnosed cancer in women and the leading cause of cancer mortality in women. On the other hand, it is one of the cancers with the highest cure rates. The chances of a cure are higher the earlier the diagnosis is. Hence the importance of prevention, both primary and secondary.

Primary prevention aims to identify and remove the causes that contribute to the development of a tumor, that is, the modifiable risk factors, which have to do with the lifestyle of each individual and, to a significant extent, with the 'supply. Secondary prevention is expressed through participation in screening programs, or periodic examinations on women without signs of disease, with the aim of intercepting any cancer at an early stage.

Focusing on the role of nutrition, it is clearly reported by the scientific community that food plays an essential role in breast cancer at multiple levels: 1) first, in a disease-free phase, to modulate the risk of cancer onset; 2) during the therapies, as an adjuvant to minimize the side effects of the treatments (eg inflammation of the mucous membrane of the mouth, loss of appetite, nausea, vomiting, diarrhea) and to maximize the positive effects of the same; 3) later, for the prevention of relapses. The most general and important preventive measures, in the context of a correct lifestyle, common to each phase, aim to combat the main "friends" of the tumor, namely overweight, high levels of insulin, glucose, factors related to inflammation



and growth factors, parameters that have a common denominator, the contribution of food. It is therefore essential:

- 1) **Maintain an adequate body weight:** the risk of breast cancer is higher in women who are overweight or obese, especially due to the contribution of visceral fat to the inflammatory state of the body.
- 2) **Practicing physical activity:** regular exercise reduces the risk of developing breast cancer, helping to keep body weight and fat mass within the optimal percentage ranges.



3) **Regularly consume fruit and vegetables** (seasonal and zero kilometer), in order to provide the body with phytochemicals, that is, beneficial and protective molecules. Not insignificant is the role of vegetables in modulating the glycemic peak and the absorption of sugars, as well as contributing to the health of the intestine and the proper balance of the intestinal microbiota. Also prefer the consumption of whole grains, richer in fiber.

4) **Limit the intake of refined sugars**, including sugary drinks, in order to keep blood sugar and insulin levels under control. Give preference to fresh and not very refined foods, avoiding, on the contrary, processed foods, characterized by high energy density, low satiating power, as they are very rich in sugar, as well as fat.

5) **Limit dietary sources of saturated fat**, especially the consumption of red and processed meats and cheeses which, when consumed in excess, can modify the composition of cell membranes and their ability to absorb glucose, as well as stimulate growth factors such as IGF-1. Give preference to fish and legumes as protein sources, specifying that it is recommended to avoid excess food sources of soy, in any case not to be consumed at the same time as hormone therapy for breast cancer.

6) **Limit alcohol consumption:** There is evidence that the risk of breast cancer increases in proportion to the amount of alcohol consumed.

7) **Do not smoke:** the risk of breast cancer increases in women with a tobacco habit.

8) **Breastfeed**, if possible, as exclusive breastfeeding for up to six months can play a protective role for both the mother and the unborn child.

Eight points, one goal: to prevent. And it's possible to prevent at the table!



## Renewable energy sources to minimize the impacts of electric cars

*Claudio Ventura*

Electricity transport sector have to become more sustainable and less polluting



The use of electric means of transport can ensure a reduction in polluting emissions attributable to traditional vehicles. Furthermore, as the share of electricity produced from renewable energy sources increases, the impacts of electric vehicles would be further minimized. This was demonstrated by a Life-Cycle Assessment study carried out by the European Environment Agency.

In order to comply with the objectives set by the Paris Agreement, by 2030, the countries of the EU will inevitably have to invest more decisively in renewable energy sources to encourage decarbonisation.

Therefore, foreseeing a future physiological growth in the share of electricity produced from renewable sources, it is clear that the electricity transport sector will also become more sustainable and less polluting.

However, in order to be able to establish with certainty whether an electric car may be able to pollute less than a traditional car, it is necessary to carry out a study capable of evaluating the impacts of vehicles considering their entire life cycle. In this regard, the European Environment Agency has carried out a Life Cycle Assessment study with the aim of comparing the impacts between a traditional vehicle and another electric vehicle, at every stage of their life.



## Traditional car vs electric car: which one pollutes less?

In order to analyze the results of the study, it must first be remembered that a Life Cycle Assessment study allows you to analyze the flow of materials and energy in all phases of the life of a product, process or service (extraction of resources, production of materials, manufacture of products, consumption / use and “end of life” of the product).

Since every good, service or, in general, every product has its own “life”, characterized by various phases, which produce polluting emissions, the LCA methodology allows to identify the most impacting phases, intervene on them and reduce the environmental load.

It is also useful to compare two different types of products to understand which is more or less polluting, as in the case of the study conducted by the European Environment Agency.

From the EEA’s Report “Electric vehicles from life cycle and circular economy perspectives”, it emerges that, in Europe, electric cars, during their entire life cycle, guarantee a reduction in greenhouse gas emissions ranging from 17% to 30%, compared to a similar model powered by petrol or diesel.

This estimate was obtained considering the European mix of renewable and non-renewable energy sources used to produce electricity.



If we consider only the phases of raw material extraction and production, it is clear from the Report that greenhouse gas emissions are higher for electric cars than for traditional cars. This is due to both the emissions associated with the extraction and processing of metals (lithium, cobalt, nickel, etc.) and those attributable to coal-fired power plants to produce electricity.

However, during the use phase, electric cars can potentially offset the major impacts attributable to the previous two phases, making them much less polluting than traditional cars. This obviously depends on the energy mix used to produce electricity.

Assuming, for example, to be able to produce electricity in a totally sustainable and clean way, using wind energy, the emissions of the electric car’s life cycle could be reduced by 90% compared to the traditional car. While for the final phase of the life of the cars, the impacts are minimal compared to the previous phases of the LCA study, but we can still obtain from it, ideas to improve the results of the study.

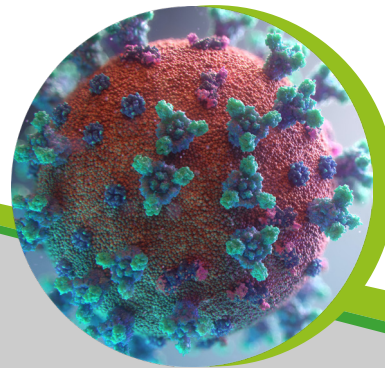
Electric cars, therefore, are able to greatly reduce greenhouse gas emissions and local air pollution, but still have important negative impacts related to the ecosystem and human toxicity.

However, to make an electric car much more efficient, it is necessary to invest more in the circular economy.

Starting, for example, from the construction of the batteries. They need to be designed in such a way as to make recycling and reuse easier. In this way, the impacts could be reduced in the first phase (less raw materials used) and also in the final phase (much easier disposal).

To further reduce production impacts, cars and batteries should be manufactured with materials and components that allow for an effective maintenance process in order to increase the useful life of the vehicle.

Furthermore, with the reduction of the use of fossil fuels and the increase in the percentage of use of renewable energy sources for the production of electricity, the disadvantages that emerged from the LCA study could be limited. With the production of electricity from renewable sources, in fact, the environmental impacts of electric cars, during the entire span of their life cycle, would become minimal.



## **Covid and pollution, why the virus is faster and more aggressive in the cities**

The more the city is gripped by smog and fine dust, the faster the virus runs, increasing the number of infections and virulent load. To support the dramatic connection between Covid and PM 10 are two researches conducted by an Italian-French team that has developed an innovative algorithm capable of analyzing the data of three main cities in France (Paris, Lyon and Marseille), one Italian (Milan) and several Indians, discovering the inseparable link between levels of fine particles and the aggressiveness of the virus.

The studies have shown for the first time how, once the threshold value of Pm10 and Pm 2.5 is exceeded, a mechanism is triggered that facilitates aggravation and death from Covid-19. A relationship that, through the complex modeling of Machine Learning, links together economic growth, pollution and deaths due to Covid-19. The algorithm would thus help explain why in some parts of Italy the virus spreads faster and is, at the same time, more aggressive, seriously engaging the local health system.

It will therefore not be a coincidence if the virulent load of Covid is stronger in some countries than in others. Because a few hours ago the news of the conviction by the European Court of Justice against Italy for having violated "in a systematic and continuous" the maximum concentration values of Pm 10.

"Covid 19 - explains Marco Mele, professor at the Niccolò Cusano University - mainly affects the respiratory tract. The powders in oil Pm 10 and Pm 2.5 could have created, through the adverse effect on the lungs, a fertile ground on which the virus has amplified an inflammation process, probably already existing".



Il momento migliore per piantare un albero è vent'anni fa.  
Il secondo momento migliore è adesso.  
(Confucio)



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# CAP, Li Rosi: a damage to biodiversity and small farmers

The president of Simenza explains why the new European agricultural policy is bad for the environment and biodiversity

*Piera Vincenti*

More and more often we hear about PAC. The acronym is now known by public opinion but few really know what the Common Agricultural Policy of the European Union implies. The first consideration to be made is that the CAP reform weighs heavily, about a third of the seven-year budget put on the table by the EU, an amount equivalent to about 350 billion euros. This reform is central to putting the Union's climate policies on the right track but is in contrast with the great green guidelines of the EU.



With the Green Deal, in the first place, above all with two guidelines issued after the end of the first lockdown: the Farm to Fork Strategy (which concerns the agri-food chain) and the Biodiversity Strategy. Two documents that provide for cutting 50% of pesticides used in fields and 25% of antibiotics used in intensive livestock farming; at least 10% of the cultivated area intended for hedges and ponds to shelter wild fauna and flora; 25% of fields converted to organic. All this by 2030.

To take sides as openly as the CAP reform is Giuseppe Li Rosi, president of Simenza, Sicilian Cumpagnìa Sementi Peasant, a cultural association founded in 2016 to defend one of the most precious assets of Sicily, biodiversity.

### Is a CAP friendly to the environment and biodiversity?

The CAP is a proposal born in 2018 and many things have changed since then. What worries us, however, is not only the CAP but the incompetent management of the agricultural sector by those who govern us. Let me give you an example: our Minister of Agriculture, Teresa Bellanova, claimed to manage rotations so as to make me have only two wheat crops in five years, justifying this proposal as a measure in support of biodiversity. For millennia we Sicilian farmers have made a two-year rotation and it has always worked. Proof of this is the fact that Sicily has one of the richest biodiversity assets in Italy.





## GREEN ECONOMY >



If we talk about the CAP, however, this reform contradicts other European strategies. Farm to Fork represents a leap forward because it encourages agricultural production while respecting the environment and biodiversity. Not so the Common Agricultural Policy. There is pressure from the lobbies, pushing the EU to ensure that the funds reach the chemical and oil industries, which produce fertilizers that are enemies of biodiversity. In a sense, multinationals are waging war on small farmers, without thinking that they are the ones who hold the keys that establish the connections between man and the planet and that make the latter productive. We farmers are the ones who safeguard the environment and biodiversity.

### **So does the CAP damage the environment but also the farmers?**

The damage is already there, so only the effects are exacerbated. Those who legislate forget that climate change is taking place, that we need variety, both in agriculture and in the animal kingdom, and that what is produced by humans – super-performing plants and hybrids – are unhealthy for humans and 'environment. The erosion of biodiversity began about 120 years ago and continues today due to those who have not understood that we must preserve it. Nature has the great ability to adapt to changes, including climate change, activating resilience and allowing the planet to continue to be productive. With the CAP, the chances of producing healthy and tasty food will decrease because this reform undermines small businesses, true guardians of biodiversity.

### **The CAP has not yet been approved. What do you ask as Simenza?**

We are too small an association to have a say in the matter but we join the appeal of those who are older than us, such as Federbio and Slowfood, who are asking for the proposal to be withdrawn and the commitments made with the Farm to Fork Strategy to be respected. The funds are intended for those who defend nature, those who fight climate change, those who reduce antibiotics on farms, those who reduce pesticides, those who convert farms. With Simenza, for about five years we have been concretely committed to safeguarding biodiversity through the creation of a new economy, cultivating and preserving local grains, the so-called ancient grains, giving small processing industries an exclusive product. But again, we plant trees and hedges, we try to stop erosion and preserve humus, to ensure the survival of our land and our species.

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## What is the difference between natural, organic and eco-friendly cosmetics

Ste Vi

How to recognize if a cosmetic product is really green? Follow these simple rules



The consumption of natural and organic cosmetics is part of the ethical and supportive choices that the consumer makes. The choice of organic cosmetics fits into a social context that directs companies towards the production of products that first of all respect the skin. 19.6% of the Italian population purchases certified organic cosmetics, almost double (33.7%), prefers certified natural cosmetics: these are therefore important numbers, destined to guide the research and development of these products (source Cosmetica Italia year 2018).

A first step in choosing our cosmetic is to know the difference between the different meanings of the terms “natural”, “organic” and “eco-friendly” that are offered daily by the media, by advertising and by the labels of products on the market.

The term “**natural**” usually applies to those products that are proposed as alternatives to “traditional” ones. Unfortunately, there is still no Community regulation for the use of the term “natural” as a characteristic of consumer products. However, it is possible to consider as natural those products that have natural active ingredients in their composition.

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The term “**organic**”, on the other hand, is used to indicate agri-food products derived from crops and farms that do not involve the use of synthetic chemicals and genetically modified organisms. All organic products must be strictly controlled and certified by bodies authorized by the Ministry of Agriculture.

Finally, the term “**eco-friendly**” describes a product that has been formulated and developed in such a way as to have a low environmental impact. The term refers to the entire supply chain: from raw materials to manufacturing and distribution processes, from waste disposal to the choice of biodegradable and recyclable packaging, all in compliance with ecological criteria.



Reflecting on the meaning of the terms “natural”, “organic” and “eco-friendly”, the ideal cosmetic for the skin and the environment is a bio-eco-cosmetic.

### What is a bioecosmetic?

We can define a bio-eco-cosmetics as a completely new, but also ancient, way of making cosmetics, based on fundamental characteristics such as respect for the person and the environment. Bioecosmetic is characterized by a high percentage of natural ingredients, mainly of vegetable origin, which must possibly come from organic farming or certified spontaneous harvesting. In its composition there are no substances derived from petroleum or from industrial chemicals.

Unfortunately, recognizing it is not easy if we do not go into the reading of the composition. Fortunately, this “critical” reading is simpler than what is believed.

The first rule is to forget the brand as a “guarantee of safety”. Large and established cosmetics houses, whether they call themselves “Green” or not, do not put the composition on their official website. This omission does not favor the consumer as it does not put him in a “critical” condition but in the condition of giving unconditional trust to the brand. Clearly if I go to the physical store (distribution, pharmacy, perfumery, herbalist’s shop, etc.) I can read the composition while in the online store I cannot read it. In my opinion, this is a valid reason to exclude the brand.

Having made this first selection, I evaluate whether the company is certified for the use of organic products within its cosmetics. Some certification bodies of organic cosmetic products are: ECOCERT, COSMEBIO,



ICEA, CCPB, COSMOS and NATRUE. Each of these bodies has its own specification which, if applied, will allow the product to be certified.

## The cosmetic biodictionary

Finally the most important evaluation: let's analyze the composition. If we are not experts, we can use the online bio dictionary. For more than 15 years, the bio-dictionary has been collecting and cataloging cosmetic substances, classifying them with the color of traffic lights according to a "bio" and "eco" logic. Just copy / paste the composition on their site and for each individual substance a traffic light will appear next to it with its classification and a possible link on the forum with more detailed explanations and details.

I invite you to give it a try with brands that claim to be "Green": you will find that often alongside the "Green" there is a majority of chemicals.

- The brand does not influence;
- Product information also available online;
- Organic certifications;
- Reading and evaluation of the composition;
- Anything that matches your specific needs.

Clearly your purchase choice will include other factors but a good basis, in my opinion, for a critical choice is the one just described. The reasons for choosing a bio-eco-cosmetics are essentially two: the protection of our skin (hair, nails, etc.), the protection of our environment understood not only as nature but also as a social one.







## The Vulture Mountain, a volcano on the wrong side of Italy

Angelo Rosiello

Mount Vulture, located north of Basilicata, stands out imposingly on the surrounding valley and gives rise to the volcanic lakes of Monticchio



The Vulture is pleistocenic volcano localized in the north of Basilicata and it is the highest mountain of the southeastern sector of the Apennines with its 1327 m a.s.l., and also the easternmost volcanic centre of the whole Italian magmatic province. Indeed all the Italian volcanoes are located along the perythyrrenian sector of the peninsula, where crustal thinning favour the uprising of magmas and deep fluids from the terrestrial mantle; while the Vulture Mt. is located at the front of the chain-foredeep-foreland system where there are conditions of strong crustal thickening that would not favour volcanic manifestations fed by magma uprising.

Several geophysical, structural and geochemical studies permitted to hypothesize, with a good agreement of the data, that the Vulture is located in correspondence of an important transfer fault at a regional scale cutting transversely the whole Italian peninsula along a direction from Paestum to Trinitapoli (although with a complex geometry); the extensive cinematic of this fault have permitted the magma uprising and the feeding of the Vulture volcanic activity.

In addition, recent geochemical researches performed on the numerous thermal springs and gas emissions located along this tectonic structure highlighted the mantle origin of these gases, supporting the idea that this fault represent a preferential way of uprising for deep fluids and magma. The volcanic products erup-

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ted by Vulture are mainly characterized by pyroclastic flow deposits and fall-out deposits of ashes, lapilli and, subordinately, by lava flow deposits, supporting the idea of a complex eruptive story mainly with an explosive style.

The whole volcanic sequence were divided in two super-groups (named super-synthem of Monte Vulture and of Monticchio), incorporating not only the primary volcanic products but also the epiclastic deposits due to erosion, during extended phases of volcanic stasis (in order from hundreds to thousand of years). Several erosive surfaces and alluvial river structures are visible around Rionero in Vulture and Barile centres, cutting the pyroclastic sequences for all the volcanic area. The first eruptive deposits were dated around 674 kiloyears at Foggianello and then the major volcanic products were erupted from a central cone, building the whole volcanic structure.

These are the products grouped in the super-synthem of Monte Vulture, representing the most extended and voluminous sequence of the volcano. The most recent of these were dated around 557 kiloyears and are relative to the Haüynofiro of Melfi. This is another peculiarity of the Vulture volcano, because it's constituted by a lava dome (the hill where raises the Frederick II Castle) erupted in lacustrine environment (Melfia lake) by a decentralised volcanic centre and it's characterized by the abundance of Haüyna, a particular blue colour mineral, present in determined condtions only in few volcanoes in the world. In general, in almost all mineralogy books were reported Haüyna lava samples from Melfi, with big phenocrysts visible to naked eye (photo 2).

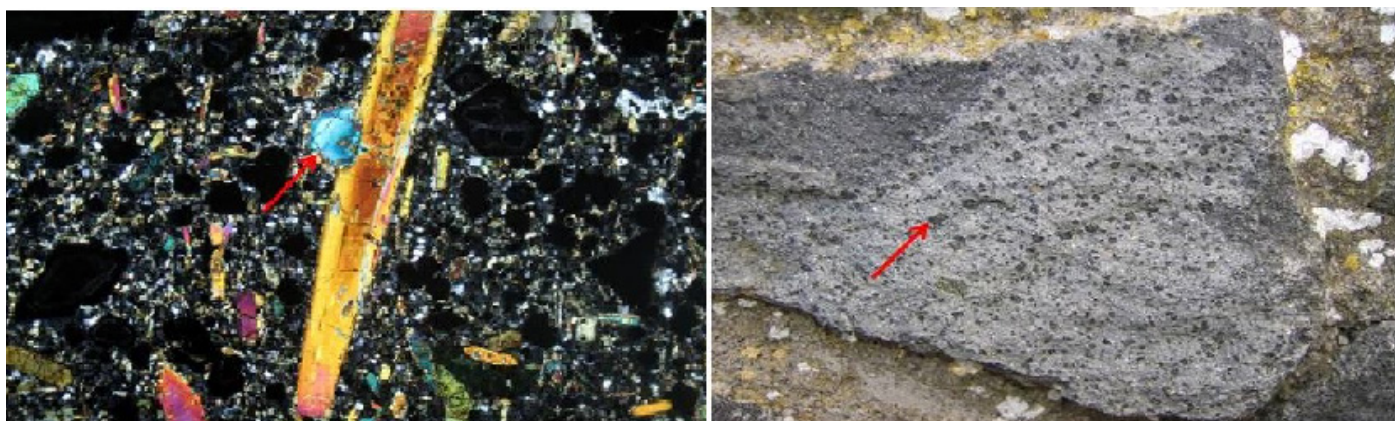


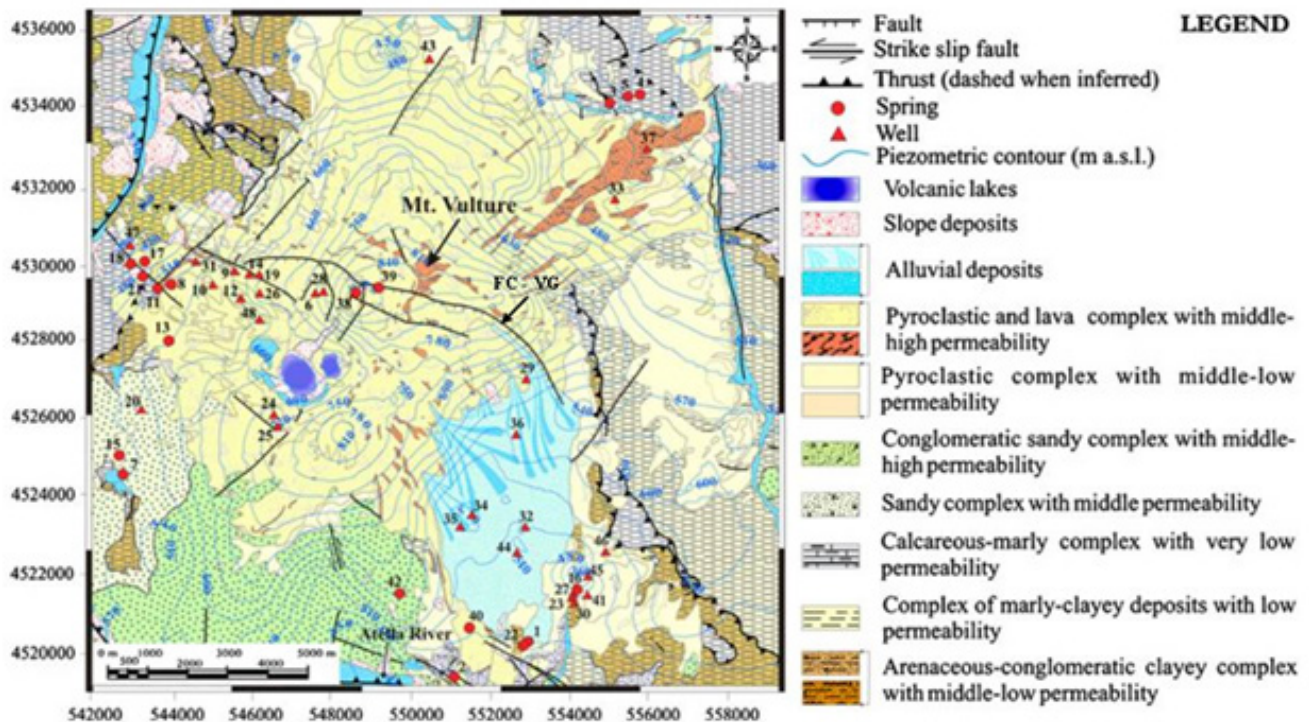
Fig. 1-2 – Phenocrysts of Haüyna of lavas near the Castle of Melfi (fig. 1 thin section at microscope; fig. 2 phenocrists in a hand sample; photos from <http://www.alexstrekeisen.it/vulc/hauynofiro.php>).

The first eruptive phase of the Vulture volcano ended with the Melfi lava dome eruption and reprised after an extended period of volcanic stasis, during that erosive processes significantly consumed the vulcanites. The reprise of the volcanic activity formed several craters in decentralized position respect to the volcanic cone, in an environment characterised by some small lakes, which deposits resulted coeval to the new vulcanites.





The products of this second volcanic phase are grouped in the Monticchio super-synthem, which highlighted a limited areal dispersion and erupted by secondary independent centres all around the volcano and also in external position. In detail, there were two volcanic phases forming several craters (including the two maars of the Monticchio lakes), aligned along a tectonic structure which determined the volcano-tectonic collapse of the southern sector of the volcano.



Hydrogeological map of the Mt. Vulture (Spilotro et al., 2006). (FC – VG) Faglia Fosso del Corbo – Valle dei Grigi.

This fault, named Fosso del Corbo – Valle dei Grigi (FC – VG in the map above) strongly influenced: the morphology of the area, the eruptions (exclusively characterised by explosive events, that laterally demolished the western and the south-western portion of the central cone) and, ultimately, the groundwater circulation enriched in gas and mineral content, forming an hydro-mineral basin exploited by several water bottling industries, located at the tips of this important tectonic structure.

In the final stages of the volcanic activity of the Mt. Vulture, were erupted carbonatites, volcanic rocks derived by crystallization of magmas mainly with a carbonatic composition highlighting a mantle contamination (silicate magmas source) with carbonatic lithologies belonging to the Apulian plate, in subduction above the Apennines. At the end, the geological peculiarities of this volcano reflect the particular geodynamic conditions in this sector of the Apennines, and more in general of the Mediterranean region, the understanding of which is an important research goal both for simply academic point of view and for practical applications.



# Separate collection: what to throw in the unsorted waste

Here is a list of all those non-recyclable waste that must be thrown into the bin of mixed waste



Making a correct separate collection is very important to reduce our impact on the environment. Recycling is the key word for many objects that we use daily however, unlike plastic, metal, paper etc., the waste that ends up in the bin of the unsorted can not be recycled.

Their fate is the landfill. Often they are brought to storage sites or disposed of in incinerators or waste-to-energy plants, plants capable of exploiting the caloric content of the waste itself through combustion to generate heat, heat water and produce energy. This process, although less polluting than in the past, still has a negative impact on the environment and human health.

For this reason, it is essential to differentiate well, giving everything that is recyclable and recoverable in the appropriate bins and throwing into the unsorted dry only those objects that are impossible to recycle.

Below, in collaboration with SmartRicicla, we will offer you a list of all those wastes that should be thrown into the unsorted waste, remembering that there may be small variations from municipality to municipality.

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## TIME TO RECYCLE >

### The waste to be thrown into the unsorted waste:

- Packaging and waste dirty of food residues
- Broken toys
- CDs and DVDs
- Sanitary pads and diapers
- Plastic cutlery
- Animal droppings and bedding
- Ash and cigarette butts
- Polystyrene for packaging
- Waste composed of mixed materials
- Brushes, toothbrushes, razor blades
- Markers and ballpoint pen
- Nylon
- Incandescent and halogen lamps (Led ones are considered WEEE)
- Rubber objects
- Powder
- Leather
- films
- Cosmetics
- Synthetic sponges

Unsorted urban solid waste can also be transformed into a secondary solid fuel thanks to a series of special physical and mechanical treatments, which take place downstream of the separate collection and increase the value of the waste, which can be used to produce something different.

The secondary solid fuel is used for energy recovery purposes (electrical and / or thermal energy) in cement factories, incinerators, thermoelectric power plants, lime production plants in steel and gasification plants, in district heating plants for district heating.

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