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Forests

The best trees to improve the face (and air) of cities



Trees to clean city air



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Trees play an important role in reducing emissions and smog in big cities. There are species that are more suited for this purpose, here are a few.

FORESTS POLLUTION
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From **Chinese metropolises** to **European cities**, most urban centres have been fighting the problem of **pollution** for decades. Some, like **Paris**, have put forward a draconian plan to reform **mobility**, proposing a future ban on the most polluting cars. Nevertheless, there's another key element to solve this problem: increasing the space dedicated to **urban forests** or **green areas**. Relying on the role of trees in cities is vital not only for **air quality** at the local level but also in order to fight **climate change**, in an attempt to fulfil the objectives set by the **Paris Agreement**.

An avenue lined with trees in Paris © K.G.Hawes/Flickr

Green spaces are a source of wellness for all living beings, including humans. In conurbations they can have many functions, including the reduction of “heat islands” with consequent **decreases in temperature and pollutants**, and their ability to **absorb**



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purposes due to their physical and physiological characteristics. It's recommended to opt for them when expanding urban forestry in big cities.



Read more:

Urban forests,
cities' answer to
climate change
(and much more)



Trees that reduce air pollution

Bologna's Institute of Biometeorology in Italy, led by Doctor Rita Baraldi, compiled a list of trees that can reduce air pollution. "This study, a cooperation between Bologna Municipality and the **European Life+ project**, set out to find out which plants are best suited to a city like Bologna," Doctor Baraldi explains. Considering a life cycle of 30 years, researchers evaluated the **ability of each plant to absorb CO2** and subsequently transform it into biomass, as well as its **ability to fix chemicals such as benzene, nitrogen oxide**, dioxin and others through its cuticles and plant hairs, parts that have a detoxifying function because they filter air pollutants.



compounds (so-called VOCs, odorous substances perceived by humans as well as animals) that can increase the concentration of **ozone** in the atmosphere. Therefore, these should be limited especially in densely populated areas.

“We categorised the plants according to their CO₂ accumulation mechanism, at least 2 tonnes in 30 years, and in every category we included subcategories concerning the reduction of pollutants and particulate matter,” professor Baraldi explains. **These assessments resulted in a list** that public administrations as well as citizens can consult.

Mediterranean hackberry (*Celtis australis*), cleans the air

A hackberry in Paris' Jardin Des Plantes © Chris Waits/Flickr

A fast-growing plant that can grow up to 20-25 metres. It's particularly suited to absorbing **carbon dioxide** (3,660 kilos in 20 years) and effectively capturing pollutants.

Field elm (*Ulmus minor*), absorbs CO₂

Common elm © Manuel/Flickr

This **columnar** tree is also large and can grow up to 30 metres. It too can transform thousands



Common ash (*Fraxinus excelsior*), the grand

A majestic specimen of common ash in the countryside ©
AJC/Flickr

A large deciduous tree that can exceed 30 metres in height. It is fast-growing especially in its early years and can store over **3 tonnes of CO₂** in 30 years. This is also an excellent plant to reduce pollutants.

Littleleaf linden (*Tilia cordata*), typical of urban centres

An avenue lined with small-leaved lime, or lindens in autumn © Pablo Flores/Flickr

A tall variety, one of the ancestors of the common linden. Lindens are typically planted in cities and gardens. This variety is excellent in capturing CO₂ and effectively reducing smog.

Norway maple (*Acer platanoides*), 5 tonnes of CO₂ in 30 years

A maple in a park in Vancouver © Wendy Cutler/Flickr


A tall, fast-growing tree, that can grow up to 25 metres. It has a high CO₂ storage capacity (4,807 kilos in 30 years).



A beautiful specimen of Turkey oak in the southern UK ©
 Rockman of Zymurgy/Flickr

A tall tree of the **Fagaceae** family that can even reach 35 metres in height. It absorbs large amounts of carbon dioxide (4,000 tonnes) both if planted in a city or park.

Ginkgo (*Ginkgo biloba*), the “dinosaur” of trees

Ginkgos in autumn become yellow, creating beautiful
 landscapes © Luca Boldrini/Flickr

The last specimen of an ancient group of plants now gone extinct, a living **dinosaur**. It grows slowly, has an excellent capacity of cleaning the air and absorbing CO₂.

Largeleaf linden (*Tilia platyphyllos*), a faithful ally

A majestic specimen of largeleaf linden


A fast-growing plant that is widely used to line the avenues of cities and **parks**. This is another species highly capable of reducing urban smog.

Translated by [Francesca Clemente](#)

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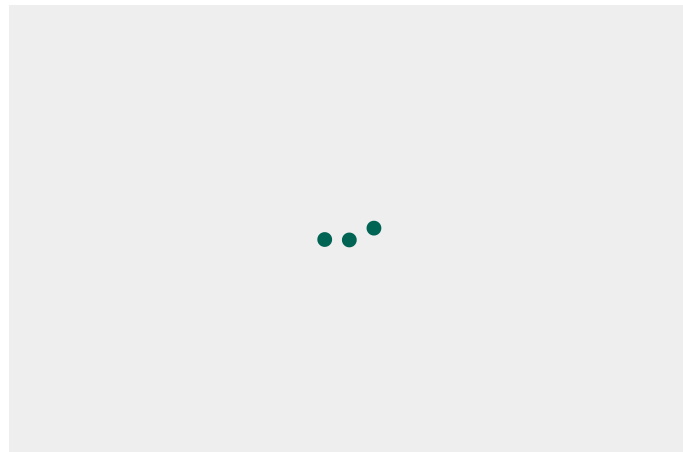




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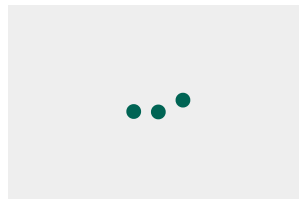
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Sharon Lavigne wins the Goldman Prize for fighting against industrial pollution in Louisiana

Sharon Lavigne, one of the six winners of the 2021 Goldman Environmental Prize, is fighting to protect her community from plastics corporations.

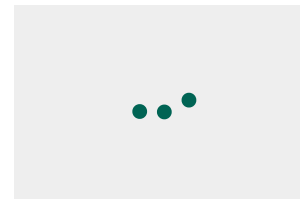
Pollution • 23 June 2021
by [Laura Loguercio](#)



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Levels of particulates in New Delhi in 2020 were once again far above safety thresholds, with extremely serious health consequences for its citizens.

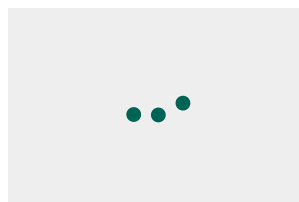
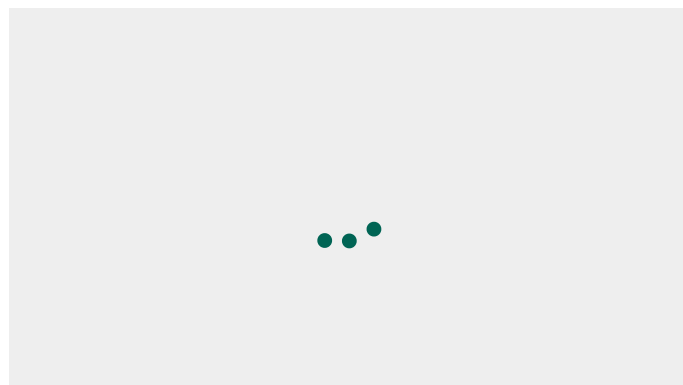
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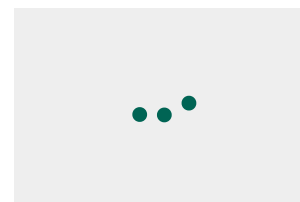
Months after an oil spill in the Ecuadorian Amazon, the Kichwa's water remains polluted

A major oil spill in the Ecuadorian Amazon in April has left the Coca River polluted. The indigenous Kichwa are suing the companies whose pipelines broke.

Pollution
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A super PET-eating enzyme could become a



Carmen Medaglia's battle against



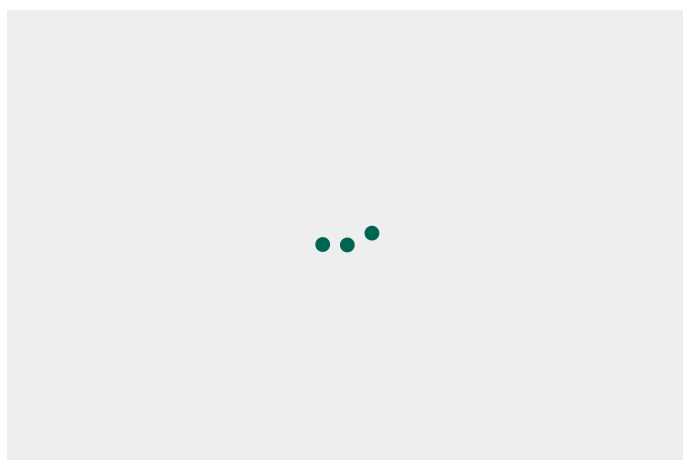
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Microplastics spiral around the globe travelling through the air

Plastic pollution is airborne too. Microplastics are being carried across continents by the wind, as a recent study reveals.

Pollution • 2 June 2021
by Roberta Fabbrocino



Celebrate the Lungs of the Earth on 21st March, the International Day of Forests

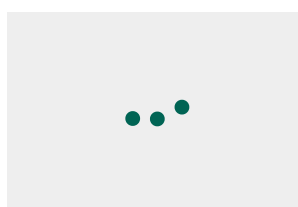
Our species took its first steps in a world covered in trees. Today, forests offer us sustenance, shelter, and clean the air that we breathe.

Forests • 20 March 2021 by Editorial Staff

pollution

Molecules that eat up plastic waste, including PET bottles, may soon become widely used as scientists leap ahead in developing new super enzymes.

Pollution
• 20 November 2020



Kamchatka, an ecological disaster is causing mass death of marine wildlife

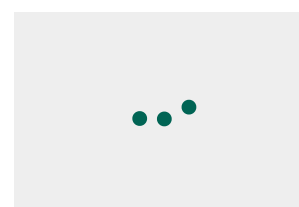
Toxic substances in Kamchatka's waters have killed 95% of marine fauna and caused health problems for surfers. The causes, however, are still unknown.

Pollution
• 13 October 2020

Italy's Land of Fires

In Italy's Land of Fires between Naples and Caserta, activists like Carmen Medaglia are fighting to promote new ways of managing waste.

Pollution
• 27 October 2020



Penguin dies on a Brazilian beach after swallowing a face mask

A Magellanic penguin was found lifeless on a Brazilian beach: in its stomach, an N95 face mask. Researchers believe the animal died from ingesting it.

Pollution
• 25 September 2020



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Many believe sustainability is becoming an urgent need, whilst others see it first and foremost as a duty. Often it is brandished as an accessory, sometimes it is used as a gateway, others still it is considered merely a credential. To us, environmental and human sustainability represent an authentic lifestyle that defines our way of being in the world; an attitude centred around conscientiousness and concrete actions. For 20 years we have operated to catalyse social change, to awaken and feed a new state of ecological awareness, to inspire and promote new business and consumption models for people as well as companies. We are the space in which education becomes determination, feeling becomes action, the goal becomes solution and result. We favour those who choose to be guided by ethical values, who respect ecosystems and all their life forms. We are on the side of those who decide to live with passion and purpose, acting to make the world a better place.

