



ARCADIA stops deserts to advance  
ARCADIA stops floods landslides  
Be one of the firsts to discover our Green Future

# STOP DESERTIFICATION



## Discover our Green Future

ARCADIA is a natural cement.

To boost the plant growing exploiting the ground stabilization process, We invented and developed ARCADIA, a product capable to grow plants everywhere in the world, even in the harshest desertic areas.

You decide the degree of hardness necessary for your scope and Xegate will make it by our fast fossilization mechanism.

The soil will be ready in three months.

## ARCADIA facts

01

ARCADIA is completely natural.  
We just select and feed the good bacteria that are naturally already living in your local soil.

02

ARCADIA doesn't alterate your ecosystem.  
After feeding these bacteria, they harden the soil and then die following their natural life circle.

03

ARCADIA is easy & quick.  
We study your ground, select the right bacteria, produce Arcadia, spray it on our ground and after three month the soil is as hard as you need.





# ANTI-DESERT ARCHITECTURE

One sixth of the population, three-quarters of dry land and one third of the world's land an area of five billion hectares in 110 countries, it is exposed to the phenomenon of desertification. This reduces the soil production capacity by 47% of the world's

arid regions accounting for unusable 50 to 70 thousands square kilometer of fertile land per year and over 42 Billion USD in annual damage to agricultural products, with its vast and widespread ecological, Social, economic and environmental effects.



## STOP DESERTS

Desertification causes devastation and famine To millions of people. WE STOP IT!

By making the sands more compact we can make the desert regress.



## NATURAL HOUSES

With Arcadia we create natural houses, parks, artworks, oasis, made by the original sand or terrain.

Imagine hotels made out of the same sand of the desert...  
100% ALL NATURAL.



## STOP FLOODS

We stop flooding by solidifying the terrains naturally in just two months.

We make natural roots to anchor the ground and make it stop crumbling.



## NATURAL ROADS

Imagine a road by the sea, made out of sand: same hardness as a real road and no impact for the environment...

That's a dream come true!

# AGRICULTURE RESTORED

The stabilization of fluent sands and the creation of green areas will not only prevent this damage, but it can also affect the climate and the spontaneous regrowth of plants.

With ARCADIA we can cultivate in the desert, developing the best environment for the plants to grow.

It is even possible to create water pitches, above or under the sands, that can be exploited as reservoirs to collect water used for subsequent cultivation.

## NATURAL

Creation of 100% Natural  
Housing, Roads ,Oasis in the  
desert, Artworks

## SAFE

ARCADIA is 100% biological  
and made of natural ingredients

## USEFUL

Build roads, Accommodations,  
restoration of ancient buildings,  
of dams, water pitches





# ADVANTAGES OF ARCADIA



Limited volumes for injection which means high density of urea and calcium chloride to achieve desirable cementation



Low activity time that equal to high reaction rate resulting in high density of urea degrading enzyme



Long injection distances and low injection pressures which means that permeability should be controlled so that it is capable of multiple activities and limit the number of injection wells



Lower cost and lower environmental impact: cut off CO2 emissions, as Arcadia can be used instead of Portland Cement

## Discover our applications

The applications of biocement are thought to be limited to fine grains and coarse materials because of their limited pore size. For the commercial use of bio-cement this process must be reliable and competitive with other soil reinforcement methods. The following requirements are found to be competitive and capable of reinforcing land at large volumes and shallow surfaces without disrupting adjacent urban infrastructure.



XEGATE does and supports Advanced Research & Development around the World since 2012,  
with major focus on the fields of nanotechnology for Energy and the Environment,  
for the sake of the Earth and Mankind.