

# ENVIRONMENTAL VALUES OF THE VETIVER SYSTEMS IN CHINA

Since 1996, the [China Vetiver Network](#) is working to extend vetiver technology to new area, in particular in southern part of China, where 70% of the land is mountainous and soil erosion is a critical problem.

The vetiver system is low cost and extremely effective for soil and water conservation, infrastructure stabilization, pollution control, waste water treatment, mitigation and prevention of storm damage and many other applications. Vetiver grass, [Chrysopogon zizanioides](#) is central to all vetiver system based bioengineering and conservation applications.

Though it originates in India, *Chrysopogon zizanioides* is widely cultivated in the tropical regions of the world. Vetiver grass will grow in a wide range of climates, survives in areas with average annual rainfall between 200 and 6000 millimetres and with temperatures ranging from 1 to 45 degree C. It can be used in the tropics and semi tropics, and areas outside the latter where there are hot summers, and winters that do not include permanently frozen soil conditions.

In India, vetiver is considered as [the best candidate for earth repair](#) because it is perennial and requires minimal maintenance; It will grow in all types of soil regardless of fertility, pH or salinity; It is highly tolerant to toxic levels of aluminium, manganese, arsenic, cadmium, chromium, nickel, copper, mercury, lead, selenium and zinc; It is a climax plant and therefore even when all surrounding plants are destroyed by drought, flood, pests, diseases, fire or other adversity, vetiver will remain to protect the ground from the onslaught of the next rains; It has a strong fibrous root system that penetrates and binds the soil to a depth of three meters and can withstand the effects of tunnelling and cracking.

The [Vetiver International Network](#), which has been disseminating vetiver technology to the world, resumes the main advantages of the Vetiver System:

- Infrastructure investment: Protect communities and their roads, bridges, dams, railroads, buildings, ports, river banks and levees. Control sedimentation of water bodies. Reduce infrastructure maintenance costs. Rehabilitate lands.
- Social development. Protect water supplies. Clean polluted water. Decrease water born diseases. Treat



wastewater and sewage. Mitigate industrial and mining pollution. Reduce vulnerability to climate change and natural disasters. Protect and provide livelihoods.

- Agriculture and productivity. Stop soil loss. Increase and conserve soil moisture. Protect soil fertility. Increase productivity of agro-forestry and reforestation. Improve small-scale and commercial farming. Sustain hillslope agriculture. Increase forage production. Protect agricultural lands and infrastructure. Reduce pollution from sediments and pesticides.

According to the International Vetiver Network (TVN), created with the support of the World Bank, now there are more than 20 vetiver networks in the world and newer ones are being formed every year.

Recently was also discovered the capacity of vetiver to purify water, and thus to help in wastewater treatment. Vetiver can absorb many heavy metals, nitrogen and phosphorous from water. Using vetiver to purify water bodies is easy. Being hydrophyte, the plants don't require a separate medium to grow in water. The only arrangement required to make vetiver plants survive in water properly is a float to maintain the balance between roots and shoot and to make the plant stand erect. This new function of the vetiver technology opens a wide perspective of use of this plant to solve environmental problems of great impact in all countries. In studies conducted in China using [vetiver to treat effluents from piggery farms](#), the results were quite encouraging.

The China Vetiver Network is playing an important role in disseminating information about the vetiver technology to the institutions involved in engineering subjects, ecology and environment. It has also conducted regional meetings and training courses, providing planting materials and preparing and launching new projects with joint efforts from network members. Many institutions are involved in vetiver research and application at national, provincial and prefecture level and many thousands of extension stations are working at local level involving agriculture, forestry, soil and fertiliser, soil and water conservation.

### To know more

[China Vetiver Network](#)

[China vetiver network](#)

[Vetiver International Network](#)

[International Network in Facebook](#)

[Vetiver.com French page](#)

[Library on vetiver](#)

[Vetiver system manual](#)

[Vetiver system manual](#)

[Vetiver in Indiatogether.org](#)



[Vetiver en agrowingculture.org](http://Vetiver.en.agrowingculture.org)

[Vetiver in plateformesolutionsclimat.org](http://Vetiver.in.plateformesolutionsclimat.org)

[Vetiver Senegal](http://Vetiver.Senegal)

[Vetiver in cocorioko.info](http://Vetiver.in.cocorioko.info)

[Vetiver in asla.org](http://Vetiver.in.asla.org)

