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Review Article

How to Convert Thar Desert into Fertile Land

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Abstract

Rajasthan is western arid state of India covers 342200 km area. Agriculture is almost impossible in dry waterless and high Temperature during summers. Temperature reaches 49 °C during summers. Drip irrigation, Sewage treatment plant (STP) Can provide water for growing trees, Forest and trees save from sand drift, forest provide timber, medicinal plants, fire wood, timber to build houses, more than 50,000 hacters deserts can be filled with plants. forests also create jobs. This gives sand particles clay coating and alters physical properties of sand and allow them to bind more water. This new technology Clay Nanoparticles Technology (CNT or LNC) changes desert soil into fertile soil in 24 hours. It also reduces water demand by 80%. CNT or LNC (Liquid Nano Clay) is capable of changing.... sand soil into larger yielding arable soil (Kristian Morten Olesen, Noeway, 2020).

Keywords: Thar Desert; Agriculture; Sand

Image 1: Map of arid Rajasthan Aravallis from Sirohi to Alwar dividing Rajasthan into two parts Eastern Semiarid Zone and Western Arid Zone.

Increasing deserts of the world

Global warming, climate change, increasing water demand, increasing human populations, industrialization, increasing vehicles use, increasing pollution, cutting down trees, removing forest for human use, increasing carbon di oxide, risk of desertification, more than 50% of earth' s surface.

Every year area equal to half of Rajasthan becoming desert. South America more than 15% is having risk of becoming desert. More than 235000 km². Have become desert in the Northeast.

This desert control Technology can be useful not only South America, but also west India, Central Asia (Aral sea became desert), Middle and North Africa West America, West Australia, and other deserts, Chihuahuan Desert, Sonoran Desert, Mojave Desert, Colorado Desert, Great Basin Desert, Colorado Desert, Arizona Desert, New Mexico Desert, Grand Canyon Desert, White Sand National Park, Mojave Desert, Saguaro Desert, Guadalupe Mountains Texas, Painted Desert. Petrified National Park, Black Rock Desert, Baja Desert, Snake River Plain, Wyoming Desert, Thompson Okanagan Plateau. Sierra Nevada Desert, Great Victoria Desert, Great Sandy

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Desert, Tanami Desert, Simpson Desert, Gibson Desert, Little Sandy Desert, Strzelecki Desert, Sturt Stony Desert, Tirari Desert, Pedirka Desert.

Middle east

UAE is dry desert, Temperature exceeds 50°C, Agriculture is very difficult in these high Temperature and arid regions.

The mixture saturates soil 70 cm. The dry sand turns into spongy fiber that retains moisture.

This soil holds nutrients and crop grows much better. The poor desert sand soil is changed to high yielding and high earning agriculture soil in 24 hours.

Polylactic acid sand barriers for Thar Desert help landscape resource. Thin starch when mixed with sand, PLA sand barriers, polymerized entangled, spin and spray, bonding and barrel process, give stable soil structure. 3 type of sand barriers can be used, Salix sand barriers (4-5 years stability), Grass square (1-3 years stability), PLA sand barriers (7-8 years stability).

No chemical fertilizers and chemical pesticides used instead decaying plant and animal waste were used. Sand plus cellulose plus water paste prepared which is added to sand membrane micronano structure changes desert into wetland. Less nutrients and water is required. Now this sand is resistant to wind erosion. Sand storm do not destroy at 70°C temperature. Interlinking of Rivers and Conservation of water and Revival of Traditional water resources [1-10].

Conclusion

Sand plus cellulose plus water paste prepared which is added to sand membrane micronano structure changes desert into wetland. Less nutrients and water is required. Now this sand is resistant to wind erosion. Sand storm do not destroy at 70°C temperature.

Interlinking of Rivers and Conservation of water and Revival Of Traditional water resources can also help changing desert into wetland. Availability of water increase flora, fauna, avifauna, Arthropod fauna, Annelid fauna, even Protozoan fauna, Porifera fauna, coelenterate fauna, microbial fauna, Mollusk fauna, Echinoderm fauna, Fish fauna, Amphibian fauna, Mammal fauna. Size and Diversity of Mammals is also directly proportional to availability of water. Size of Fish is also inversely proportional to Temperature.

Bibliography

1. Akinremi OO., *et al.* "Evaluation Of Palmer drought index on Canadian prairies". *Journal of Climate* 9 (1996): 897-905.

- Ali Z., *et al.* "A Novel multi scalar drought index for monitoring drought index for monitoring drought. The standardized precipitation temperature index". *Water Resources Management* 31 (2017): 4957-4969.
- Alley WM. "The Palmer Drought Severity Index Limitations and assumptions". *Journal of Applied Meteorology and Climatology* 23 (1984): 1100 -1109.
- Zhang MX. "Dynamic changes of wetland resources Based on MODIS and Landsat image data fashion". *Eurasip Journal on Image and Video Processing* (2018).
- Mann HB. "Spatial –temporal variation and protection Of wetland resources in Xinjiang". *Econometrica* 13 (1945): 245-259.
- 6. Mao DH., *et al.* "China 's wetlands loss to urban expansion". *Land Degradation and Development* 29 (2018c): 2644-2657.
- Mao DH., et al. "Conversions between natural wetlands and farmland in China: A multiscale geospatial analysis". Science of the Total Environment 634 (2018a): 550-560.
- Sheffield J., *et al.* "Little change in global drought over past 60 years". *Nature* 491 (2012): 435.
- Zhao K. "Chinese Marsh Chronicle". Doctoral dissertation, Science press (1999).
- Zou YC., et al. "Water use conflict between wetland and agriculture". Journal of Environmental Management 224 (2018): 140-146.

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