



Launching “GS Module wise” and “two questions daily courses” soon.....existing students will get option to upgrade

Q.ID 83206

What is the meaning of desertification? Examine the causes of desertification in India. What steps should be taken to minimise it ? (12.5 Marks) (250 Words)

General Tips :

1. In Geography and environment related questions try to draw a map of India and highlight relevant areas. **It will fetch you at least 1 extra marks & IT MATTERS A LOT**
2. Interlink concepts with govt schemes (like here Rastriya Gokul Mission can be mentioned for providing alternative jobs which will reduce population pressure over land and ultimately reduce desertification)

Introduction : (25 to 35 Words) Desertification is a phenomena when land is not having sufficient moisture and productivity to sustain a particular population over that area. (or The process of fertile land transforming into desert typically as a result of deforestation or drought or improper agriculture is called desertification.)

Causes of Desertification in India (Approx 80 to 85 Words)

Desertification in India is essentially a result of soil degradation because of various physical, chemical & biological factors. Hot arid regions of the country which are prone to desertification in India are :

- Major parts of Rajasthan, Gujarat, Southern Punjab & Haryana.
- A small portion of Deccan Peninsula in the states of Andhra Pradesh and Maharashtra.

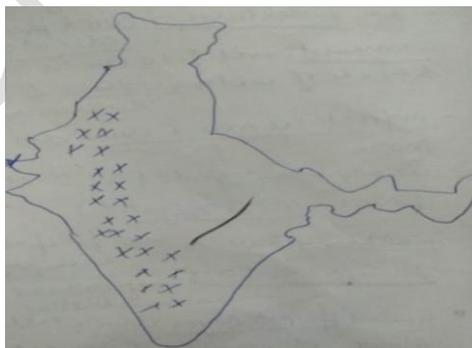


Figure 1 Desertification in India

These regions are characterized by erratic rainfall, frequent droughts, high evaporation, intense heat and high winds which are favourable conditions for the desertification.



Launching “GS Module wise” and “two questions daily courses” soon.....existing students will get option to upgrade

Q.ID 83206

According to a study by United Nations Convention to Control Desertification (UNCCD) about 40% of India’s land area is affected by desertification.

Desertification in India is caused by complex interactions among physical, biological, political, social, cultural and economic factors. Both natural and anthropogenic causes are responsible for the desertification in India.

- Natural causes such as climate change, droughts, and soil erosion are enhancing the pace of desertification.
- Climate change could be one of the reasons for Desertification in India. Climate change is affecting the Indian monsoon. In that affect, the rainfall pattern in the country is changing and frequency of droughts is increasing.
- Anthropogenic causes include flawed and unsustainable practices of agriculture such as shifting cultivation, excessive use of chemical fertilizers, poor irrigation practices, deforestation and expansion of agriculture areas are main causes of desertification.
- Industrial waste, which is full of toxic chemicals, is a major cause of land pollution. This ultimately results in desertification.
- As a result of gross mismanagement of natural resources including land, certain irreversible changes have triggered the breakdown of nutrient cycles and microclimatic equilibrium in the soil indicating the onset of desartic conditions. The once famous Kumaon hills are on their way of degeneration.

Effects of Desertification (Just mention in 25-30 Words)

These are the consequences of desertification :

- Accelerated soil erosion by wind and water.
- Replacement of forest or woodland by savanna grassland or scrub.
- Reduction in species diversity and plant biomass in ecosystems
- The increase in flow variability of rivers and streams.
- Increase in the salt content of previously fresh lakes, wetlands, and rivers.
- Desertification affects the health of the ecosystem and makes them vulnerable to natural disasters.



Launching “GS Module wise” and “two questions daily courses” soon.....existing students will get option to upgrade

Q.ID 83206

How to control Desertification ? (75 to 80 words)

Desertification and the associated loss of agricultural land are not an inevitable and unstoppable process. Good management practices can sustain agriculture even in seemingly arid and hostile environments. The national action plan to control the desertification has suggested the following step to control the desertification in the country.

- Afforestation: Planting trees in the desertification affected areas can help to stop it from the spreading into new areas.
- Windbreaks and shelters: Planting trees and shrubs on the periphery of the agricultural fields can reduce the wind speed and increasing water infiltration into the soil. This practice improves the moisture and fertility of the soil.
- The other practice to stop the spread of deserts is to separate them by planting trees in a long narrow belt. This helps in capturing the advancement of sand dunes
- An increase in the agriculture productivity and dry farming so that need for the farmland can be minimized.
- Grazing of the livestock in arid areas should be done in a controlled way so that land can regain the vegetation cover.
- Activities to improve the quality of life of the local communities so that their dependency on natural resources can be minimized.
- Awareness rising among the masses about the repercussions of the deforestation.
- Drought management, preparedness and mitigation as it is the starting point of deforestation.
- Petroleum jelly of Israel over the soil should be applied to conserve the moisture
- Implement National mission for sustainable agriculture with focus on evergreen revolution including area specific approach crop combination crop rotation mixed farming
- Promote Micro irrigation especially drip, sprinkler and bubbler irrigation
- Promote System of rice intensification (SRI)
- Decrease the pressure over land by providing alternative occupation through allied agricultural activities and development of tier 4 and tier 5 cities
- Implement integrated watershed development programme
- Implement Rashtriya Gokul Mission

Conclusion (25-30 words) 1992 onwards India is part of United Nation convention on combating desertification (UNCCD). Further, guided by FAO and ICAR , the comprehensive strategy should focus on alternative jobs as well as skill development through self help groups, DDUAntyodya Yojna etc