Vetrii's



DAILY CURRENT AFFAIRS

25TH JULY 2019

LARGE-SCALE BURNING OF GRASSLANDS DETRIMENTAL TO INVERTEBRATES: STUDY

Prelims: Environment- Bio Diversity & its Threat

Mains: GS-III- Conservation, environmental pollution and degradation, environmental impact assessment.

Context: A recent study on "prescribed burning" of large tracts of grassland in the Eravikulam National Park (ENP) reveals that such burning is detrimental to endemic invertebrates.

What Are Grasslands?

Grasslands are open areas of land where grasses or grass like plants are the dominant species.



- ➤ Other forms of vegetation such as trees are rare in grasslands because they are not suited to thrive in the grassland's dry environment. Grassland ecosystems are influenced over time by the organisms and plants that live there, the local climate, the natural landscape and natural disturbances to the environment such as fires or floods.
- Physical features of grasslands such as wide-open grass-covered plains or scattered trees located next to scarce streams help to create a diverse environment within the grassland ecosystem.

What is Prescribed Burning?

- It is the intentional, controlled application of fire to a forest to accomplish the objectives of forest management.
- ▶ Fire is a natural part of both forest and grassland ecology and controlled fire can be a tool for foresters. Controlled burning stimulates the germination of some desirable forest trees, thus renewing the forest.
- ▶ Some seeds, such as sequoia, remain dormant until fire breaks down the seed coating.

➤ Traditionally, the grasslands of the Eravikulam National Park (ENP) are managed by prescribed "cold" burning (cold season burning) with the help of the local tribal community.

Highlights of The Study:

- Study from Eravikulam National Park says 'prescribed' strategy to conserve threatened ungulates adversely impacts many species.
- ➤ The study on "prescribed burning" of large tracts of grassland for the conservation of threatened ungulates in the Eravikulam National Park (ENP), a biodiversity hotspot in the Western Ghats, reveals that such burning is detrimental to endemic invertebrates, including grasshoppers.
- ➤ Grasshoppers are sensitive to grasslands management and an indicator of grasslands quality, health and restoration success.
- ➤ As grasshoppers represent a major faunal component of grasslands, effects of fire on them can be easily studied in grassland habitats.
- ➤ The endemic and wingless creatures are sensitive to environmental change and exhibit a high extinction risk. Hence, their response to fire management is of high interest.
- Since the target of the management is to improve the status of mammal species, the impact on other groups, especially invertebrates, has been neglected.
- ➤ There are 130 species of grasshoppers reported in Kerala, of which 54 species were found in PKMTR and 18 species were found in the ENP.
- ▶ It is suspected that prescribed burning in the park for the past many decades is a major cause for the decline of grasshoppers.
- ➤ The study suggested that the interval of burning should be extended to more than five years, and the area of burning should be made only in small plots with unburned adjacent areas between plots.