**Syllabus subtopic:** Conservation, environmental pollution and degradation, environmental impact assessment

**Prelims and Mains focus:** about Senna Spectabilis: threat posed by it and measures taken to check its spread

**News:** The Kerala Forest and Wildlife department is gearing up to adopt comprehensive steps to arrest the rampant growth of invasive alien plants, especially tree species like ‘Senna Spectabilis’, in the forest areas of the Nilgiri Biosphere Reserve (NBR), including the Wayanad wildlife sanctuary.

**Threats by invasive species (Senna Spectabilis):**

- The spread of invasive plants, especially Senna Spectabilis, is posing a major threat to the forest areas of the reserve, owing to its quick growth and coppicing character.

- The tree species had been found in nearly 10 km sq area of 344.44 sq km of the sanctuary around five years ago. But now it has invaded more than 50 sq km of the sanctuary in a short span of time. This showed its high invasive nature.

- A recent study of the Ferns Nature Conservation Society with the support of the Forest department recorded the presence of the plant on 78.91 sq km area of the sanctuary.

- The plant started to invade in adjacent tiger reserves, including Bandipur and Nagarhole in Karnataka and the Mudumalai tiger reserve in Tamil Nadu.

- Earlier, it was planted as avenue trees along roadsides in Wayanad. Due to massive flowering and drying of bamboo species in the Wayanad, lots of open spaces were created which were occupied by Senna Spectabilis.
An adult tree grows up to 15 to 20 metres in a short period of time and every year distributes thousands of seeds after the gregarious flowering. The thick foliage arrests the growth of other indigenous species of trees and grass, and causes food shortage for the wildlife population, especially herbivores, during summer. Moreover wildlife would not feed on the leaves of the tree as it was not palatable for them.

How does it hampers the growth of other plant species?

- The ‘vayal’ ecosystem (marshy land) of the forest area now houses this plant in large numbers. The allele-chemicals produced by this plant adversely affect the germination and growth of the native species.

Measures taken up to prevent it from spreading

- The KFRI has developed some physical and chemical measures to tackle the threat of the plant.
- Though physical method was being followed to tackle the issue for the past five years, it was yet to make any desired effect. Hence it is being planned to adopt an integrated method by combining the physical as well as chemical measures to address the issue.
- As the same threat is being faced by the adjacent tiger reserves, managers of the reserves agreed to follow the similar steps to tackle the threat.