Today's Topic- Diversity for Restoration

Inside Story of the Diversity for Restoration (D4R) tool - India's eco-restoration initiative:

- Recently, researchers have devised **a Diversity for Restoration (D4R) tool that enables appropriate agroforestry and aids systematic ecosystem restoration.**
- **Diversity for Restoration (D4R) tool, devised by Biodiversity International, was later modified by another team of researchers to adapt it to the Indian context.**
- **The team from Ashoka Trust for Research in Ecology and the Environment (ATREE), with the help of Biodiversity International, modified it to promote restoration programmes in India.**
- **The tool is developed with information on 237 socio-economically important native trees from the Western Ghats and the numbers and geographies will increase over time.**

Features of Diversity for Restoration (D4R):

- The researchers have claimed the tool will help improve the effectiveness of restoration programmes by providing manifold benefits to interested stakeholders while promoting sustainable development.
- Non-profits, nature lovers and others working on plantations and increasing forest cover often face the challenges in identifying the tree species to plant and their ecological benefits.
- **The online tool precisely aims to help better decision-making and bring the best outcome for those plantation programmes.**
- It could improve socio-ecological perspectives and help stakeholders in decision-making.
- The tool helps the user in identifying species that match their restoration objectives.
- It further helps identify species that can resist local stresses and adapt to evolving environmental conditions.
- It also helps pinpoint areas and regions to procure the seeds for the required species.
- **The tool has information about 100 plant functional traits that have been considered to offer the best possible solution.**
- Functional traits include information on economic and ecological uses from the tree species chosen for plantation.
- The tool informs the user whether the tree species offers timber, fruit, manure, or other commercial benefits.
- It also informs if the tree is resilient to physiological stresses such as extreme high or low temperatures, salinity, or acidity tolerance in the soil among others.
- The tool could also identify windbreakers — the trees can act as a barrier against high winds.
- The user can also know if the species offers better nitrogen fixing and whether it serves as a good pollinator for birds and bees.
- The tool is already being used in countries such as Malaysia, Ethiopia, Columbia, Peru, Burkina Faso, Cameroon etc.
- It provides a score of a particular tree species for plantations.

- This score helps determine and decide how well the species match the given site conditions and restoration objectives.
- **The tool also provides varied recommendations that help in maximizing the chances of restoration along with propagation information and monitoring suggestions.**
- The user could also access species-specific information related to its threat status, its benefits for the local communities and its ecological role, among other factors, making it a holistic tool crucial for socio-ecologically responsible restoration.

Source: https://www.downtoearth.org.in/news/wildlife-biodiversity/this-new-tool-can-drive-india-s-eco-restoration-initiatives-here-s-how-90335

; https://www.diversityforrestoration.org/

; https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/1365-2664.14079