

Next Generation DNA Sequencing

December 22, 2024 • vajiramandravi.com



About Next Generation DNA Sequencing:

- It is a revolutionary technology that enables the rapid **and high-throughput decoding of entire genomes**, analyzing millions of DNA sequences simultaneously.
- This allows researchers to gain deeper insights into **genetic diversity, evolutionary relationships, and population health**.
 - In wildlife conservation, NGS plays a pivotal role in **identifying population genetic health** with respect to genetic diversity, information on genetic barriers and their effect on populations, unique adaptations and species with unique evolutionary histories, **understanding disease outbreaks**, detecting illegal wildlife trade, and studying the **effects of climate change on biodiversity**.
- This cutting-edge NGS facility positions the Wildlife Institute of India as a leading centre for molecular and genetic research in wildlife conservation.

Key points about the Pashmina Certification Centre

- It was established under a **Public-Private Partnership** (PPP) model between **WII and the Export Promotion Council for Handicrafts (EPCH)**.
 - It was set up to
 - To streamline the Pashmina Trade.
 - To provide a one-stop testing facility to **certify genuine Pashmina Product** free from any prohibited fibres to the associated manufacturers, exporters, and traders.
 - All the tested products will be labelled with a **traceable unique id tag with individual e-certificates**, enabling a seamless trade of such products in national and international markets.
 - The upgraded Advanced Facility for Pashmina Certification now includes a dedicated Scanning Electron Microscope (SEM) with Energy Dispersive Spectroscopy (EDS), which enhances the precision and reliability of wool testing and certification.
 - The upgraded facility offers:
 - **Advanced Fiber Analysis:** SEM-EDS technology to accurately identify and authenticate Pashmina fibers.
 - **Streamlined Certification:** Unique ID tagging and e-certificates for traceability and quality assurance.
 - **Global Trade Facilitation:** Hassle-free movement of certified products, eliminating delays and financial losses due to fibre scrutiny at exit points.
-

Q1:What is the Genome India project?

The Genome India Project is a gene mapping project sanctioned by the Department of Biotechnology. It was launched with the goal of creating a comprehensive database of genetic variations among the Indian population.

Source: Union Minister for Environment, Forest and Climate Change Shri Bhupender Yadav Inaugurates Advanced Facility for Pashmina Certification and Next Generation DNA Sequencing Facility at Wildlife Institute of India, Dehradun

Source: <https://vajiramandravi.com/current-affairs/next-generation-dna-sequencing-2/>

© Vajiram & Ravi. For personal use only.