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Policy Watch - DNA Technology-Use & Application

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Recently, Lok Sabha has passed DNA Technology (Use and Application Bill), 2019. This bill allows the use of DNA Technology for establishing the identity of persons in matters of crime, parentage disputes, immigration and transplantation of human organs.

Provisions of the Bill

- The Bill regulates DNA testing for identification of persons under the Indian Penal Code, 1860, the Immoral Traffic (Prevention) Act, 1956, the Medical Termination of Pregnancy Act, 1971 and the Motor Vehicles Act, 1988.
- **The Bill allows for DNA testing in certain civil matters as well.** This includes matters such as parentage disputes; issues related to ancestry, immigration, assisted reproductive technologies, transplantation of human organs, and for the

establishment of individual identity.

- Written consent is required for DNA samples to be collected, processed and included in the database except for those **who have committed crimes with punishment of seven years.**
- **DNA Regulatory Board:** This Bill envisages the establishment of DNA Regulatory Board that will set standards for the proper storage of DNA samples collected. It will be chaired by Secretary of Government of India, Department of Biotechnology.
- **Any laboratory that conducts DNA testing and analysis to establish the identity of an individual** (in respect of matters listed in the Schedule) is required to obtain accreditation from the DNA Regulatory Board.
- **DNA Databanks will be created at national and regional levels.** DNA laboratories will have to share DNA data prepared by them with DNA Data Banks.
- In criminal cases, the laboratory is required to return the biological sample to the investigating officer after depositing the DNA profile with the DNA Data Banks. In all other cases, the laboratory will destroy the sample and inform the concerned person.
- **Punishment:** The penalty for various offences such as unauthorized disclosure of information from the Data Bank or obtaining information from the Data Bank without authorization is imprisonment up to three years and fine of up to One Lakh Rupees.

DNA Technology

- The Deoxyribonucleic Acid (DNA) is a set of instructions found in a cell. These instructions are necessary for the growth and development of an organism.
- The DNA of a person is unique, and variation in the sequence of DNA can be used to match individuals and identify them.
- A DNA test is an ultimate test for deciding the cases on parentage, inheritance, unidentified bodies and thus also useful in identifying victims of natural and man-made disasters.
- Use of DNA Technology in criminal investigations was first started in the U.K. in 1984.

In India, the first conviction with the help of DNA Technology was made in Rajiv Gandhi's murder case.

Concerns

- **Inadequate Resources:** Currently, laboratories are able to assess only one or two samples at a time. This results in delayed investigations.
- **Shortage of such investigators** who either are trained forensic scientists or know the art of collecting and preserving the requisite DNA sample.
- **The possibility of misuse of DNA samples:** Through DNA, not only the identity of a person can be known but also other characteristics like if she/he is suffering from any disease etc. There is a possibility that people having access to DNA samples, blackmail

the person who has submitted his/her DNA sample.

- **Single Use:** Bill envisages the use of a DNA sample for a particular specified purpose only. For any other purpose, the DNA sample will have to be processed again.

Way Forward

- **Laboratories need to be modernized** so that around 40 to 50 samples can be processed at the same time. This will help in the quick resolution of various cases and thus will strengthen India's Justice Delivery System.
- **Use of DNA cannot be restricted to a particular purpose.** A series of situations may arise that can demand usage of a DNA sample again and again.
- **Effective implementation of the provisions mentioned in the bill** is required to ensure the proper storage and usage of DNA bills. Privacy of individuals anyhow cannot be compromised.