

# Genome sequencing

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## Why in news?

In the form of an indigenous genetic mapping project, the Council for Scientific and Industrial Research (CSIR) will sequence almost 1,000 rural young people from all over the world.

## What is the sequence of genomes?

- **Genome:** It is a complete set of DNA of an organism including all its genes.
- All information necessary to construct and maintain that organism is contained in each genome.
- Genome sequencing is figuring out the order of DNA nucleotides, or bases, in a genome—the order of As, Cs, Gs, and Ts that make up an organism's DNA.
- **The human genome is made up of over 3 billion of these genetic letters.**

## What is the approach?

- Blood samples are used for sequencing.
- A report shall be given to each individual whose genomes are sequenced.
- It would be revealed to participants if they bear gene variants that made them less susceptible to certain therapeutic types. For example, having a certain gene reduces susceptibility to clopidogrel, a major medicine that prevents strokes and heart attack.
- It will help to map the demographic composition and help to measure the distribution of different traits or diseases across the country.
- Assists in mapping genetic traits in population and genetics.

