R21 / Matrix M vaccine

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In news: A malaria vaccine candidate tested on children in West Africa has shown an efficacy of around 77 per cent.

About the vaccine-

- The **R21/Matrix-M vaccine**, is developed by the **Clinical Research Unit of Nanoro (CRUN), Burkina Faso and** their partners at the **University of Oxford in the UK**.
- It is the **first malaria vaccine to reach the 75 per cent efficacy** target set by the WHO.
- The subjects in the study reported no serious side effects from the vaccine, which was found to be safe and can be manufactured at low cost on a large scale.
- The **Serum Institute of India has manufactured the vaccine** and will deliver more than 200 million doses of the vaccine once it is approved by regulators.
- It is a **modified version of RTS,S** which is another candidate against malaria that has been in development for more than 30 years.
- RTS,S is developed by Walter Reed Institute of Research, GlaxoSmithKline and Bill and Melinda Gates Foundation with the PATH Malaria Vaccine Initiative.
- This vaccine is designed to stop the **Plasmodium falciparum malaria parasite** from entering the liver and preventing the subsequent deadly blood stages.
- It targets the liver stage protein of the Plasmodium falciparum life cycle.
- **RTS,S is the first, and to date the only, vaccine to reduce malaria in children** but is not highly efficacious.

Statistics-

- Children under the age of 5 in sub-Saharan Africa accounted for approximately two-thirds of global deaths.

- Between 2000 and 2020, 24 countries reported zero indigenous cases of malaria for 3 or more years.
- This is the benchmark for the WHO certification of a country as malaria-free.
- Globally, 39 countries have achieved the milestone.
- In 2019, India had an estimated 5.6 million cases of malaria compared to about 20 million cases in 2020 according to WHO