CURRENT AFFAIRS 13th Sep. 2022

2nd ANNIVERSARY OF PRADHAN MANTRI MATSYA SAMPADA YOJANA (PMMSY) CELEBRATED

- Recently, the second Anniversary of Pradhan Mantri Matsya Sampada Yojana (PMMSY) was celebrated. PMMSY was launched (by Ministry of Fisheries, Animal Husbandry and Dairying) in 2020 to bring about Blue Revolution through sustainable and responsible development of fisheries sector in India.

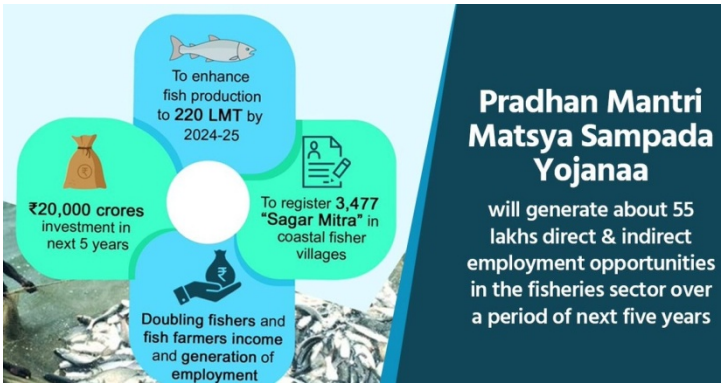
What is PMSSY?

PMMSY was introduced by the Government of India, as part of the 'Atma Nirbhar Bharat' package with the investment of Rs. 20,050 crores, the highest ever investment in the Fishery sector.

Fishermen are provided with insurance cover, financial assistance and a facility of Kisan Credit Card as well.

PMMSY aims towards the purpose of rural development by utilizing rural resources and boosting rural economy in a rapid way.

- The main motto of PMMSY is 'Reform, Perform and Transform' in the fisheries sector.
- The reforms and initiatives in PMMSY scheme have been inculcated in:
- Core & trunk infrastructure development
- Modernization of Indian fisheries by undertaking the efforts such as:
- Push for new fishing harbours/landing centres
- Modernisation and mechanization of traditional fishermen crafts-trawlers-deep sea going vessels
- Provision of post-harvest facilities to reduce post-harvest loss
- Cold chains facilities
- Clean and hygienic fish markets
- Two wheelers with ice boxes



Implementation:

It is implemented as **an umbrella scheme** with two separate components namely:-

1. Central Sector Scheme: The project cost will be borne by the Central government.
2. Centrally Sponsored Scheme: All the sub-components/activities will be implemented by the States/UTs and the cost will be shared between the Centre and State.

Achievements of PMMSY

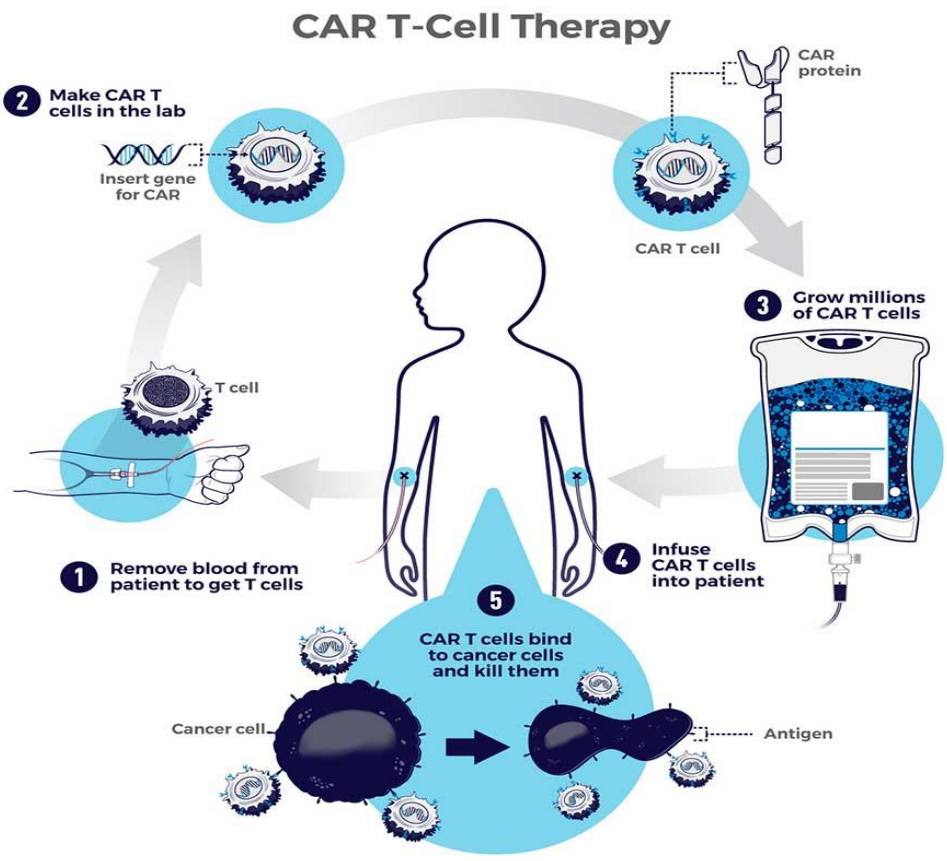
-Fish production has reached an all-time high of 161.87 lakh tons during 2021-22.

-74% of fish production was contributed by inland fisheries and 26% by marine fisheries. Achieved all-time high exports of USD 7.76 bn (2021-22)

CHIMERIC ANTIGEN RECEPTOR (CAR) T-CELL THERAPY

Introduction

- The immune system is the body's defense against infection and cancer. It is made up of billions of cells that are divided into several different types.
- Lymphocytes, a subtype of white blood cells, comprise a major portion of the immune system. There are three types of lymphocytes-
  - B lymphocytes (B cells) make antibodies to fight infection.
  - T lymphocytes (T cells) have several functions, including helping B lymphocytes to make antibodies to fight infection, and directly killing infected cells in the body.
  - Natural killer cells also attack infected cells and eliminate viruses.



CAR T-cell therapy is a type of treatment in which a patient's T cells are genetically engineered in the laboratory so they will bind to specific proteins (antigens) on cancer cells and kill them. (1) A patient's T cells are removed from their blood. Then, (2) the gene for a special receptor called a chimeric antigen receptor (CAR) is inserted into the T cells in the laboratory. The gene encodes the engineered CAR protein that is expressed on the surface of the patient's T cells, creating a CAR T cell. (3) Millions of CAR T cells are grown in the laboratory. (4) They are then given to the patient by intravenous infusion. (5) The CAR T cells bind to antigens on the cancer cells and kill them.

cancer.gov

Immunotherapy

- Is a type of treatment that utilizes the body's own immune system to fight cancer
- Improves the body's ability to detect and kill cancer cells Is based on the concept that immune cells or antibodies can recognize and kill cancer cells.
- Immune cells or antibodies can be produced in the laboratory under tightly controlled conditions and then given to patients to treat cancer. Several types of immunotherapy are either approved for use or are under study in clinical trials to determine their effectiveness in treating various types of cancer.

T cells are collected from a patient. T cells are collected via apheresis, a procedure during which blood is withdrawn from the body and one or more blood components (such as plasma, platelets or white blood cells) are removed. The remaining blood is then returned to the body.

T cells are reengineered in a laboratory. The T cells are sent to a laboratory or a drug manufacturing facility where they are genetically engineered, by introducing DNA into them, to produce chimeric antigen receptors (CARs) on the surface of the cells.

After this reengineering, the T cells are known as "chimeric antigen receptor (CAR) T cells." CARs are proteins that allow the T cells to recognize an antigen on targeted tumor cells.

The reengineered CAR T cells are then multiplied. The number of the patient's genetically modified T cells is "expanded" by growing cells in the laboratory. When there are enough of them, these CAR T cells are frozen and sent to the hospital or center where the patient is being treated.

At the hospital or treatment center, the CAR T cells are thawed and then infused into the patient. Many patients are given a brief course of one or more chemotherapy agents, called "lymphodepletion," before they receive the infusion of CAR T cells. CAR T cells that have been returned to the patient's bloodstream multiply in number. These are the "attacker" cells that will recognize, and attack, cells that have the targeted antigen on their surface.

The CAR T cells may help guard against recurrence. CAR T cells may eradicate all of the cancer cells and may remain in the body months after the infusion has been completed. The therapy has resulted in long-term remissions for some types of blood cancer.

5 PEOPLE DIE IN JUDICIAL CUSTODY EVERY DAY, SHOWS NATIONAL HUMAN RIGHTS COMMISSION (NHRC) DATA

The National Crime Records Bureau (NCRB) is considered the most authoritative repository of crime statistics in the country. However, in its latest report (2021), many wonder about the figures relating to deaths in police custody.

The NCRB adds a clear disclaimer to all its reports: that its data is based on information furnished by state governments. But figures (also furnished by state governments) relating to custodial deaths from other sources, like the National Human Rights Commission (NHRC), for instance, reveal a glaring mismatch.

The NHRC data on this issue is available for 2010-2020. According to this, at least 17,146 people were reported to have died in judicial/police custody - nearly five per day, on average - in cases registered in the decade up to March 2020. Between January-July 2020, the NHRC reported 914 deaths in custody - 53 of these in police detention.

The latest NCRB data relates to two categories: the first category includes persons not on remand. They are not arrested but yet to be produced before court. The second category includes persons in remand, which means those in police/judicial remand.

Former Chief Justice of India, N V Ramana, in August 2021, voiced concerns about custodial deaths. He said: "Police stations pose the highest threat to human rights and dignity as custodial **torture, violence, and police atrocities still prevail, notwithstanding constitutional guarantees."**