

24 – 12 – 2021

News: Spice Statistics

- Recently, the Minister for Agriculture and Farmers Welfare has released the book '**Spices Statistics at a Glance 2021**'.
- The book **highlights the growth achieved in the production of spices and increase in area** during the last seven years from 2014-15 to 2020-21 in the country.

Spices

- Spices are aromatic **flavorings from seeds, fruits, bark, rhizomes and other plant parts.**
- They are used to **season and preserve food and as medicines, dyes and perfumes.**
- Spices have been **highly valued as trade goods** for thousands of years.
- The word spice comes from the Latin species, which means merchandise, or wares.
- The **demand of spices has tremendously increased** due to the recognition of spices as a health supplement especially during the pandemic period.
- This can be clearly seen from the growing export of spices like turmeric, ginger, cumin, chilli etc.

Spices Production In India

- India is the world's largest producer, consumer and exporter of spices.
- Due to the varying climates - from tropical to subtropical to temperate-almost all spices grow splendidly in India.
- In reality almost all the states and union territories of India grow one or the other spices.
- Under the act of Parliament, a total of 52 spices are brought under the purview of the Spices Board.
- Spices Board (under the Ministry of Commerce and Industry) is the flagship organization for the development and worldwide promotion of Indian spices.
- It was established by the Spices Board Act, 1986.
- In India, there are some states which grow the spices that have very high value in both national and international markets.
- The best example is Kashmiri saffron which is the world's best saffron.

Spices Trade

- The export of spices contributes 41% of the total export earnings from all horticulture crops in the country.
- It ranks fourth among agricultural commodities, falling behind only the marine products, non basmati rice and basmati rice.

News: Pralay missiles

- Recently, the Defence Research and Development Organisation (DRDO) has successfully conducted **maiden flight test of a new indigenously developed surface-to-surface missile 'Pralay'**. The missile was **tested from the Dr A.P.J. Abdul Kalam Island off the coast of Odisha.**

Pralay Missile

- Pralay' is India's **first conventional quasi-ballistic missile** and is an answer to any conventional missile attack from northern or western borders.
- A quasi-ballistic missile has a **low trajectory, and while it is largely ballistic, it can maneuver in flight.**
- The missile has been developed in a way that it **is able to defeat the interceptor missiles and also has the ability to change its path after covering a certain range mid-air.**
- It is powered with a **solid propellant rocket motor** and many new technologies.
- The missile guidance system includes **state-of-the-art navigation** system and integrated avionics.
- It is a **derivative of the Prahaar missile programme**, which was first tested in 2011.
- Prahaar is a **surface-to-surface missile** with a range of 150 km.

- Primary objective is to bridge the gap between the unguided Pinaka multi-barrel rocket launcher and the guided Prithvi missile variants.
- The missile has a range of 150-500 kilometre and can be launched from a mobile launcher.
- Pralay will be the longest-range surface-to-surface missile in the inventory of the Army.
- The Army also has the BrahMos supersonic cruise missile in its arsenal, with a stated range of 290-plus kilometres.
- It will completely change the tactical battlefield dynamics and India will have two conventional missiles with long range.
- The BrahMos will be a cruise option and this one will be the ballistic option.

News: Turtle trail to get a boost with mass tagging mission

- Scientists have resumed tagging of Olive Ridley turtles at Rushikulya rookery along the Odisha coast, which would help them identify the migration path and places visited by the marine reptiles after congregation and nesting.
- The Riddley turtles are being tagged along the coast of Odisha through three mass nesting sites – Gahirmatha, Devi River mouth and Rushikulya.
- The exercise was undertaken in Odisha in January 2021 after a span of about 25 years and 1,556 turtles had been tagged.

- The metal tags affixed to turtles are **non-corrosive and they do not harm their body**. It can be removed later.
- The tags are **uniquely numbered containing details such as the name of the organisation, country code and email address**.

Olive Ridley Turtles

- Olive Riddley turtles are also known as **Pacific ridley sea turtle**.
- Olive ridley turtles are the **smallest and most abundant and are best known for their behavior of synchronized nesting in mass numbers, termed arribadas**.
- **Females return to the same beach from where they hatched**, to lay their eggs. They lay their eggs in conical nests about one and a half feet deep, which they laboriously dig with their hind flippers. In the Indian Ocean, the majority of olive ridleys nest in two or three large groups near Gahirmatha in Odisha. The coast of Odisha in India is one the largest mass nesting site for the olive ridley, along with the coasts of Mexico and Costa Rica.
- The **480-km-long Odisha coast has three arribada beaches at Gahirmatha, the mouth of the Devi river, and in Rushikulya**, where about 1 lakh nests are found annually.
- Olive Riddleys are distributed **throughout tropical warm waters of Indian Ocean, Atlantic Ocean and Pacific Ocean**.

- IUCN Status is **Vulnerable** whereas **Schedule I of Wildlife Protection Act** and **Appendix I of CITES** Convention protects the turtle.
- Major threats faced include **heavy predation of eggs by dogs and wild animals, indiscriminate fishing with trawlers and gill nets, accidental collision with boats, slaughtering of nesting females by human and loss of arribadas** due to beach soil erosion.
- **Operation Kachhapa** was launched to conserve Olive Ridley Turtles. It was launched by **Odisha state forest department in collaboration with Wildlife Society of Odisha and other local NGOs.**
- **Operation Olivia** has been conducted annually since 1980s by **Indian Coast Guard** to protect the Olive Riddley breeding from November to December.
- Odisha has **half of the world's Olive Ridley turtle population and 90% of India's turtle population.**
- There are five species of turtles in Indian waters — **Leatherback** (Vulnerable), **Loggerhead** (Endangered), **Hawksbill** (Critically Endangered), **Green** (Endangered) and **Olive Ridley**. All these turtles are protected under Schedules of Wildlife Protection Act, 1972.
- With an objective to conserve the Olive Ridley Turtles, the **UNDP Sea Turtle Project** was initiated by **Wildlife Institute of India, Dehradun** as the **Implementing Agency** in November 1999.

- The following species of marine are being covered under this project - **green, hawksbill, loggerhead, leatherback, and olive ridley.**
- One of the main aims of the GOI – UNDP national sea turtle project was to **evaluate the status of and threats to marine turtles along the entire coastline** of India.
- The project is for **10 coastal states in India especially Odisha** where it has contributed towards the preparation of a map of breeding sites of Sea Turtles; identification of breeding places and habitats along the coastline, and migratory routes taken by Sea Turtles.
- The project also helped in the **development of guidelines to safeguard the turtle mortality rate and for tourism in sea turtle areas.** Amongst the major achievements of the project is the **demonstration of the use of Satellite Telemetry to locate the migratory route of sea turtles in the sea.**