+918988885050
+918988886060
www.vajiraoinstitute.com
info@vajiraoinstitute.com

TODAY'S ANALYSIS

(18 November 2024)

TOPICS TO BE COVERED

- LARGEST CORAL COLONY FOUND IN SOLOMON ISLAND
- MATES SCHEME
- SVASTIK INITIATIVE
- MCQs

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LARGEST CORAL COLONY FOUND IN SOLOMON ISLAND

- In **October 2024**, researchers from **National Geographic's Pristine Seas team** made a major discovery in the **Solomon Islands**, located in the **southwest Pacific Ocean.**
- The team found the **world's largest coral colony**, so big that it can be seen from space.
- **Why it matters**: This discovery shows both the **size** and **age** of the colony, while also highlighting how **fragile coral reefs are, especially with the ongoing threat of climate change**.

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WHAT ARE CORALS?

Corals are marine organisms from the **phylum Cnidaria**, typically found in **warm, shallow ocean waters**. These fascinating creatures are colonial, **meaning they live in groups and build massive underwater structures called coral reefs.**

- **Coral Polyps**: Corals are made up of tiny individual animals known as **polyps**. A polyp has a simple structure:
  - A **mouth** surrounded by **tentacles**.
  - They feed on **zooplankton** (small marine organisms) by capturing them with their tentacles.
- **Symbiotic Relationship**: Many types of corals also have a unique **symbiotic relationship** with **zooxanthellae**, a type of **photosynthetic algae**.
  - The **algae live inside the coral polyps and provide energy to the corals** through **photosynthesis**. **In return, corals provide the algae with nutrients.**
- **Coral Reefs**: Over time, corals accumulate their **calcium carbonate skeletons**, forming large, complex structures known as **coral reefs**.

IMPORTANCE OF CORALS

- **Critical for Marine Life**: Corals create **coral reefs**, which are home to many sea creatures.

- **Threatened by Climate Change**: Corals are at risk because of **warmer ocean temperatures** caused by climate change.
- This can lead to **coral bleaching** and large-scale deaths of coral.
- However, this **specific coral colony seems to have been protected**, likely because it lives at **deeper** depths, where the water is cooler.

Resilience and Protection:

- The survival of this coral is significant **because it has managed to avoid many of the worst effects of warming waters**, possibly due to its location in **deeper waters**, which help shield it from **extreme temperatures.**

WHAT IS CORAL BLEACHING?

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KEY DETAILS

- **Size and Structure**:
  - The coral is about **112 feet by 105 feet** in size.
  - It lies **42 feet** underwater and rises about **16 feet** from the ocean floor.
  - **Age**: It is believed to be around **300 years old**, though it could be even older.
- The **discovery happened just one day before the team planned to move** to a new area for their research.
- A **videographer**, working on documenting the effects of climate change, found the coral by accident.

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GEOGRAPHY & LOCATION

1. **The Solomon Islands** is an archipelago located in the **south-western Pacific Ocean**.
2. It consists of nearly **1,000 islands**, **though only 147 are inhabited.**
3. The islands are spread over an area of **461,000 sq.km**, with **28,446 sq.km** being landmass.
4. The nearest neighboring countries are:
   - **Vanuatu** to the southeast.
   - **Papua New Guinea** to the west.

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MATES SCHEME

In November 2024, Australia has **introduced a new scheme called MATES (Mobility Arrangement for Talented Early-professionals Scheme)** that gives **young professionals from India the opportunity to work in Australia** for a limited time.

WHAT IS MATES?

- **MATES** is a scheme for **Indian university graduates** and **early-career professionals**, allowing them to live and work in Australia for up to **two years**.
- It was created under the **Migration and Mobility Partnership Arrangement (MMPA)**, an agreement signed by **Australia** and **India** on **May 23, 2023**.

- The MMPA aims to encourage **two-way migration and mobility** between the two countries, while **addressing issues like illegal migration.**
- **MATES** will begin in **December 2024** and will be **available to professionals from India.**

WHO CAN APPLY FOR MATES VISA?

To be eligible for the MATES scheme, applicants must meet the following conditions:

- **Age**: Must be 30 years or younger at the time of applying.
- **Education**: Must have graduated within the last **2 years** from a recognized Indian university.
- **Language Skills**: Must have proficient English skills, with a minimum IELTS score of **6** overall and at least **5** in each module.
- **University Eligibility**: Graduates from the **top 100 universities** in India (according to the **National Institutional Ranking Framework (NIRF) 2024**) are eligible. In Punjab, eligible universities include **Panjab University**, **Chandigarh University**, **Thapar Institute of Engineering and Technology**, and **Lovely Professional University**.
- **Eligible Degrees**: Must hold a **Bachelor's degree or higher** in any of the following fields:
  - **Renewable Energy**

- **Mining**
- **Engineering**
- **ICT (Information and Communications Technology)**
- **AI (Artificial Intelligence)**
- **FinTech (Financial Technology)**
- **AgriTech (Agricultural Technology)**

Do You Need an Australian Employer Sponsorship?

- **No**, applicants do **not** need an **employer sponsorship to apply for the MATES visa.**
- The scheme is designed to allow young professionals to find work independently.

ADVANTAGES OF MATES

- **Work and Live in Australia**: Participants can live and work in Australia for up to **two years**.
- **No Strict Work Requirement**: While the visa is intended to support professionals in their field of study, there is no strict requirement to work only in the nominated field.
- **Develop Skills and Network**: The scheme is aimed at helping young professionals expand their skills and professional network, especially in sectors like renewable energy, AI, FinTech, and AgriTech.

- **Pilot Programme**: The scheme will start as a **pilot programme** with **3,000 places per year** for primary applicants.
- **Dependents Can Join**: Participants can bring their **dependents** (spouses and children). Dependents will have the right to work in Australia, and their numbers will **not** count towards the yearly cap.

DURATION OF STAY

- Visa holders must make their **first entry** into Australia within **12 months** of receiving the visa.
- Once in Australia, they can stay for up to **24 months** from their first entry date.
- The visa allows for **multiple entries**, meaning they can leave and return to Australia during the two-year period.
- If eligible, participants can apply for an extension or a different visa for **temporary or permanent residency** after their two years.

How Will the Visa Be Granted?

- The visa will be granted through a **ballot system**. This means that applicants will be randomly selected to apply for the visa.
- There is a **$25 AUD application fee** for the ballot. Once selected, candidates will proceed with the visa application process.

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SVASTIK INITIATIVE

- The **SVASTIK (Scientifically Validated Traditional Knowledge)** initiative was highlighted by the Director of the **CSIR-National Institute of Science Communication and Policy Research (NIScPR)** at the **International Conference on Communication and Dissemination of Traditional Knowledge (CDTK-2024)**.
- The initiative is aimed at preserving, validating, and **promoting India's rich heritage of traditional knowledge** through scientific methods.

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KEY DETAILS

- **Objective of SVASTIK:**
  - **Scientific Validation of Tradition**: SVASTIK seeks to **scientifically validate and verify Indian traditional knowledge practices**, ensuring that they are not only preserved **but also understood in a modern scientific context.**
  - **Promote Scientific Temperament**: By encouraging scientific verification of traditional practices, the **initiative aims to cultivate a rational and scientific mindset in the general public.**
  - **Boost Public Faith**: By demonstrating the validity and relevance of traditional knowledge through scientific methods, the **initiative seeks to instill greater public trust** and respect for India's cultural heritage.
  - **Preserve and Perpetuate Traditional Practices**: The initiative focuses on keeping traditional knowledge alive and relevant in today's rapidly changing world.
- **Collaboration and Participation:**
  - Various **research organizations**, **higher education institutions**, **experts**, and **NGOs** are collaborating under the SVASTIK initiative to document and share scientifically validated stories and knowledge related to traditional practices.

- These **stakeholders help in compiling, validating, and disseminating traditional knowledge.**

- **Dissemination of Knowledge:**
  - SVASTIK uses modern communication tools such as **social media** to reach a broader audience.
  - It has already published content in **17 Indian languages** to ensure accessibility across diverse linguistic groups.
  - **SVASTIK Publications**: Two key publications have been released, which provide scientifically validated stories related to traditional knowledge.
  - These publications **aim to inspire young students to explore science and connect it with their heritage.**

WHAT IS CSIR?

- **India's Leading R&D Organization**: CSIR is a **publicly funded** organization dedicated to the advancement of natural sciences and engineering, with the goal of applying this knowledge for the benefit of society.
- **Organizational Structure**:
  - **President**: The Prime Minister of India **(Ex-officio)**.

- **Vice President**: The Union Minister of Science and Technology **(Ex-officio)**.
- **Governing Body**: Headed by the **Director-General**, with other ex-officio members including the finance secretary.

- **Presence**: CSIR operates through a vast network of **37 national laboratories, 39 outreach centers, 1 Innovation Complex**, and three units spread across India.
- **Headquarters**: Located in **New Delhi**, CSIR plays a key role in India's scientific and technological advancements.

WHAT IS TRADITIONAL MEDICINE?

- **Definition**: Traditional medicine refers to a **wide range of health practices, knowledge, and beliefs that use plant-based, animal-based, and mineral-based treatments,** spiritual therapies, manual techniques, and exercises.
- **Application**:
  - These practices can be used either individually or in combination to **treat** or **prevent** illnesses, as well as **maintain well-being**.
  - Traditional medicine often includes practices passed down through generations and is deeply rooted in cultural and spiritual contexts.

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MCQs

1. Consider the following statements and mark the correct one:

   1. The Solomon Islands are located south of equator.
   2. It is west of Vanuatu & east of Papua New Guinea.

   (A) Only 1

   (B) Only 2

   (C) Both 1 & 2

   (D) Neither 1 nor 2

   Ans. (C)

2. Consider the following and mark ***how many*** of the following can be the reasons for coral bleaching?

   1. Low Tides
   2. Global Warming
   3. Marine Pollution including oil spills.

   (A) Only 1 of the above can be the reason for coral bleaching.

   (B) Only 2 of the above can be the reasons for coral bleaching.

   (C) All of the above can be the reasons for coral bleaching.

   (D) None of the above can be the reasons for coral bleaching.

   Ans. (C)

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3. Consider the following statements wrt MATES scheme and mark the correct one:

1. This scheme is between India & Australia only.

2. It aims to provide temporary employment to young professionals from India.

(A) Only 1

(B) Only 2

(C) Both 1 & 2

(D) Neither 1 nor 2

Ans. (C)

4. Recently launched SVASTIK Initiative is related to which of the following?

(A) Scientific Assessment of Ayurveda

(B) Scientific Validation of Siddha

(C) Scientific Validation of Traditional Knowledge.

(D) None of the above

Ans. (C)

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5. Consider the following statements about CSIR and mark the correct one:

1. The Union Minister of Science is the ex officio President of CSIR.

2. It is headquartered in New Delhi.

(A) Only 1

(B) Only 2

(C) Both 1 & 2

(D) Neither 1 nor 2

Ans. (B)