

**06-04-2022****Mission Integrated Bio-refineries****Why in Newspapers?**

Recently, the Union Minister of State for Science and Technology has launched a major initiative towards the future in PPP (Public Private Partnership) mode for 'Clean Energy' with the full commissioning of 'Mission Integrated Bio-refineries'.

Quick Issue?

- Material Acceleration Platforms (MAP) set up by the Department of Science and Technology (DST) was also launched, which will leverage the emerging capabilities in next generation computing, Artificial Intelligence (AI) and machine learning and robotics to enable material processing. Search speed can be accelerated up to 10 times.
- Greenhouse gas emissions from the transportation and chemical sectors are already responsible for about a third of global emissions, of which the transport sector is responsible for a quarter, and the transport sector in particular is projected to increase further by 2050.
- There is therefore a need for low-carbon and renewable alternatives to fossil-based fuels, chemicals and materials, especially in difficult sectors such as long-distance transport and industry.
- Develop and demonstrate innovative solutions to accelerate the commercialization of integrated bio-refineries with the goal of replacing 10% of fossil-based fuels, chemicals and materials with bio-based alternatives by 2030.

Historical Background?

- Mission Integrated Bio-refinery - The mission is led by India and the Netherlands. Apart from this, Brazil and Canada are included as main members and the European Commission and

OTHER IMPORTANT FACTS?**Mission Innovation**

- Mission Innovation is a global initiative to catalyze action and investment in research, development and demonstration to make clean energy affordable, attractive and accessible throughout this decade.
- It was started with the Paris Agreement in the year 2015.
- It is the main intergovernmental forum addressing clean energy innovation through action-oriented collaboration.
- The 23 members of Mission Innovation include Austria, Australia, Brazil, Canada, Chile, China, Denmark, Finland, France, Germany, India, Italy, Japan, Republic of Korea, Morocco, Netherlands, Norway, Saudi Arabia, Sweden, United Arab Emirates, UK, USA and European Commission (on behalf of EU).



the United Kingdom as subsidiary members.

- This is the sixth mission launched by Mission Innovation and is included in initiatives focused on clean hydrogen, green energy systems, net zero shipping, carbon dioxide removal and urban transition.
- It will support the development and commercialization of bio-based fuels, chemicals and materials by considering process energy demands, as well as advance pathways and technologies for sustainable bio-refining.
- It will support new and emerging technology while improving the cost-competitiveness of bio-based alternatives, particularly biofuels.
- Mission Integrated Bio-Refinery brings together countries, international organizations, the corporate sector, academic institutions and civil society for a dynamic and results-oriented partnership to accelerate innovation for low-carbon renewable fuels, chemicals and materials for the future.
- It will accelerate clean energy solutions through public-private alliances.
- Functions of Members:
 - Members will promote research, development and innovation in the bio-refining supply and value chain.
 - Demonstration of advance pilot-level projects for sustainable biorefining technologies.
 - Collaborating with industry and standards-setting organizations to support regulatory development for new products manufactured.

Likely Question Asked in Preliminary Exam

Question: Consider the following statements:

1. The Material Acceleration Platforms (MAP) set up by the Department of Science and Technology (DST) was also launched, which will leverage the emerging capabilities in next generation computing, artificial intelligence (AI) and machine learning and robotics to enable The speed of material discovery can be accelerated up to 10 times.
2. Greenhouse gas emissions from the transportation and chemical sectors are already responsible for about one-third of global emissions, of which the transport sector is responsible for one-fourth, and the transport sector in particular is projected to increase further by 2050.
3. Mission Integrated Bio-refinery - The mission is being led by India and the Netherlands. In addition, Brazil and Canada are included as principal members and the European Commission and the United Kingdom as subsidiary members.

Code:

- (A) 01 and 02 (B) 02 and 03
(C) 01 and 03 (D) All of the above

Answer - (D) All of the above



Raja Ravi Varma

Why in Newspapers?

Commonly known as the father of modern Indian art, Raja Ravi Varma is widely known for his realistic depictions of Indian gods and goddesses.

On 6 April, one of his important paintings 'Draupadi Vastraharan' has been put up for auction for the first time. The canvas depicts the dismemberment of Draupadi in a scene from the Mahabharata, and is estimated to fetch between Rs 15 and 20 crores from auction.

Quick Issue?

- Raja Ravi Varma, through his lithographic press, carried the 'humanistic depiction' of Hindu gods and goddesses from the surfaces of expensive canvases to the prayer and residence halls of working-class homes.
- He is remembered for giving Western and classical representations of his Hindu gods and goddesses to Indians.
- He accomplished this task by making 'affordable raids' / lithographs accessible to the poor as well.
- Ravi Varma, first started a printing press in Mumbai and later shifted it to a place near 'Lonavala'.

Historical Background?

- His painting 'Nair Lady Adorning Her Hair', made in 1873, won several prestigious awards including the Governor's Gold Medal of the Madras Presidency, and the 'Certificate of Merit' at an art exhibition in Vienna.
- In the year 1904, the Viceroy Lord Curzon on behalf of the British colonial government honoured Raja Ravi Varma with the Kaiser-i-Hind Gold Medal.
- In the year 2013, a crater on the planet Mercury was named after him in honour of Raja Ravi Varma.

OTHER IMPORTANT FACTS?

Raja Ravi Varma

- Raja Ravi Varma was born on 29 April 1848 in Kilimanur, a small town in Kerala. At the very young age of five, he started painting the walls of his house with incidents from daily life. His uncle, artist Raj Raja Varma, recognized his talent and gave him an early education in the arts. At the age of fourteen, he took him to Thiruvananthapuram where he was taught oil painting in the palace. Later he traveled to Mysore, Baroda and other parts of the country for proficiency in various aspects of painting. The credit of Raja Ravi Varma's success goes to his systematic art education. He first majored in traditional Tanjore art and then studied European art.



- His major works include: A Family of Beggars, A Lady Playing Swarbat, Arjuna and Subhadra, Damayanti talking to a swan, Jatayu (a bird devotee of Lord Rama), Lady Lost in Thought, and Shakuntala etc.
- Raja Ravi Varma is often criticized for being too pretentious in his paintings. His paintings are also criticized for belittling traditional Indian art forms, especially those depicting Hindu gods and goddesses.
- His approach is said to lack the dynamism of expression seen in traditional paintings.
- She has also been criticized by critics for using prostitutes for modeling gods and goddesses, saying that their representations of deities have raised the deities from indestructible to mortal.

Likely Question Asked in Preliminary Exam

Question: Consider the following statements:

1. 'Raja Ravi Varma' raised 'human depictions' of Hindu gods and goddesses from the surfaces of expensive canvases, through his lithographic press, to the prayer and residence halls of working-class homes.
2. He is remembered for giving Western and classical representations of their Hindu gods and goddesses to Indians.
3. He accomplished this work by making 'affordable raids' / lithographs accessible to the poor as well.

Code:

(A) 01 and 02

(B) 02 and 03

(C) 01 and 03

(D) All of the above

Answer - (D) All of the above

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