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Current Affairs - 14 September 2024

CO2 EMISSIONS FROM TRANSPORT SECTOR COULD BE SLASHED UP TO 71% BY 2050: STUDY

- A recent study by the World Resources Institute (WRI) India reveals that India's transport sector has the potential to reduce carbon dioxide (CO₂) emissions by up to 71% by 2050 if key strategies are implemented.
- These strategies include **electrification, improving fuel economy standards, and adopting cleaner modes of transport and mobility.**

Emissions from India's Transport Sector:

- In 2020, India's transport sector contributed 14% of the country's total energy-related CO₂ emissions.
- The study stresses the urgent need for an emission reduction roadmap for the sector to help meet India's net-zero target by 2070.
- The findings are based on an energy policy simulator that models various decarbonization targets and outcomes.
- **Sectoral Breakdown of CO₂ Emissions:**
 - **Road transport remains the most carbon-intensive segment**, accounting for 90% of the transport sector's CO₂ emissions.
 - Two-wheelers contribute 16%, cars 25%, buses 9%, light-duty freight vehicles 8%, and heavy-duty freight vehicles 45%—the highest of any category.
 - Other modes like railways, aviation, and waterways accounted for 6%, 3%, and 1% of energy consumption, respectively.

Key Findings of the Study:

- The report highlights that a high-ambition strategy involving electrification, fuel economy improvements, and modal shifts could significantly reduce CO₂ emissions.
- According to the study, **implementing these strategies at their maximum potential could cut CO₂ emissions and fossil fuel consumption by 71% by 2050**, compared to a business-as-usual (BAU) scenario.



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- The study also notes that integrating a carbon-free electricity standard, where 75% of electricity comes from renewable sources, could lead to a 75% reduction in emissions by 2050 compared to BAU levels.

Least-Cost Policies for Decarbonization:

- The study emphasized that decarbonizing India's transport sector can be achieved through cost-effective policies.
- The simulation suggests that **shifting to low-carbon transport for both freight and passenger segments is the most economical long-term solution**, with an estimated saving of Rs. 12,118 per tonne of CO₂ abated.
- **Electric Vehicles and CO₂ Reduction:**
 - One of the most effective strategies for reducing CO₂ emissions is the expansion of electric vehicle (EV) sales.
 - The study estimates that the annual abatement potential for CO₂ emissions from EV adoption could reach 121 million metric tonnes (MtCO₂e).
 - Additionally, decarbonizing electricity generation could further enhance the effectiveness of EV electrification targets.

Risk of Business-As-Usual (BAU) Scenario:

- If India follows a BAU scenario, the transport sector will continue to rely heavily on fossil fuels until 2050.
- **The study warns that fossil fuel consumption, including LPG, diesel, and petrol, is expected to quadruple over the next three decades.**
- This rise will be driven by a surge in passenger and freight travel demand, which are projected to triple and increase sevenfold, respectively, between 2020 and 2050.

Conclusion:

- The WRI study highlights the need for ambitious policies and strategies to decarbonize India's transport sector, emphasizing the importance of electric vehicles, fuel efficiency, and cleaner transportation modes. Without these measures, India risks remaining heavily dependent on fossil fuels, further driving CO₂ emissions in the coming decades.



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PORT BLAIR RENAMED AS SRI VIJAYA PURAM



Why in news?

The Centre has decided to rename Port Blair as Sri Vijaya Puram. This move is aimed at shedding the colonial legacy associated with the former and to recognise Andaman and Nicobar Islands' contribution to the Indian freedom struggle.

The decision to give an Indian name to the Andaman and Nicobar capital follows nearly six years after the Centre, in a move to honour Netaji Bose, renamed three islands of the Union territory. While **Ross Island** was rechristened as **Subhash Chandra Bose Dweep (island)**, **Neil Island** was renamed **Shaheed Dweep** and **Havelock Island** as **Swaraj Dweep**.

Process to rename a state (the term 'state' is inclusive of states and union territories)

- **Constitutional provision**
 - The Parliament has the power to change the name of a state.
 - The Constitution of India gives the parliament power to alter the name of a state under Article 3.
 - Article 3 of the Constitution explicitly lays down a procedure to alter the area, boundaries, or name of a state.
- **Origins of Port Blair: Named After Lieutenant Archibald Blair**
 - The city of Port Blair is the entry point of the Andaman and Nicobar Islands.
 - Originally a fishing hamlet, it was named after Lieutenant Archibald Blair, a British naval officer who served in the early 18th century.
- **Establishment of a Penal Colony in 1789**
 - In 1789, the Government of Bengal founded a penal colony on Chatham Island, in the Great Andaman southeast bay, naming it after Blair.
 - This was part of a broader British strategy to control the region.

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- However, the British had abandoned by 1796 because of disease.
- **Establishment of new penal colony**
 - The Revolt of 1857 resulted in a large number of prisoners for the British, prompting the immediate renovation and resettlement of Port Blair as a penal colony.
 - The first batch of 200 prisoners arrived in March 1858.
- **Cellular Jail**
 - The British built the Cellular Jail, also known as Kala Pani (Black Waters), to house Indian convicts, mostly political prisoners, in solitary confinement.
 - With the strengthening of the Indian Independence Movement in the late 19th century, a huge cellular jail was established here by 1906.

Port Blair's connection with the imperial Cholas and Srivijaya

- **Used as a strategic base by the Chola emperor**

Historical records suggest that the Andaman Islands were used as a **strategic naval base by the Chola emperor Rajendra I** in the 11th century.

- It was used to launch an attack on the Srivijaya Empire, located in present-day Indonesia.

Inscription at Thanjavur and the name of Nicobar Island

- As per an inscription found at Thanjavur dated to 1050 CE, the Cholas referred to the island as **Ma-Nakkavaram** land (great open/ naked land), which possibly led to the modern name of Nicobar under the British.

A Tribute to Independent India

- Renaming Port Blair to Sri Vijaya Puram is seen as a fitting recognition of the city's contribution to the making of a new Independent India, moving away from its colonial past.
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RANGEEN MACHHLI APP



Rangeen Machhli App is designed to meet the growing needs of the **ornamental fisheries sector**, providing crucial knowledge resources for hobbyists, aquarium shop owners and fish farmers.

- It is developed by the **Indian Council of Agricultural Research (ICAR)-Central Institute of Freshwater Aquaculture (ICAR-CIFA)** with support from the Pradhan Mantri Matsya Sampada Yojana (PMMSY).

Features

- It provides **multilingual information** on popular ornamental fish species in **eight Indian languages**, making it accessible to a wide audience.
- The app offers comprehensive details on care, breeding, and maintenance practices to both farmers and hobbyists.
- One of its key features is the "**Find Aquarium Shops**" tool, which allows users to locate nearby aquarium shops through a dynamic directory updated by shop owners, promoting local businesses and connecting users with reliable sources for ornamental fish and aquarium-related products.
- In addition, the app **includes educational modules** for both newcomers and professionals in the ornamental fish industry.

What is Indian Council of Agricultural Research (ICAR)?

- It is the **apex body** for coordinating, guiding and managing research and education in agriculture in the entire country under the aegis of **Department of Agricultural Research and Education (DARE), Ministry of Agriculture and Farmers Welfare**.
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WHAT IS OPENAI O1?



OpenAI o1 is a new **Large Language Model (LLM)** trained with reinforcement learning to perform complex reasoning.

- It **thinks before it answers**—it can produce a long internal chain of thought before responding to the user.
- This model can reason through complex tasks and solve harder problems than previous models in science, coding and math.
- According to the company, the model is a progressive step toward achieving human-like AI.
- It also demonstrates tangible improvements in key areas, such as **generating code and tackling complex**, multistep challenges with greater proficiency than its predecessors.
- It has trained these models to spend **more time thinking** through problems before they respond, much like a human would.

The **o1 model scored 83 per cent** on the qualifying exam for the International Mathematics Olympiad, OpenAI said in its blog post. This is a vast **improvement from the 13 per cent** scored by its predecessor, GPT-4o.

- OpenAI's previous GPT models were simply taught to provide answers by detecting patterns in training data.
 - But, in the case of o1, researchers at the organisation first taught the model using a system of rewards and penalties.
 - Then, o1 was taught to process user queries by breaking them down and going through them one step at a time.
 - Currently, the o1 **can neither browse the internet nor process** files and images. It also lacks factual information about recent world events.
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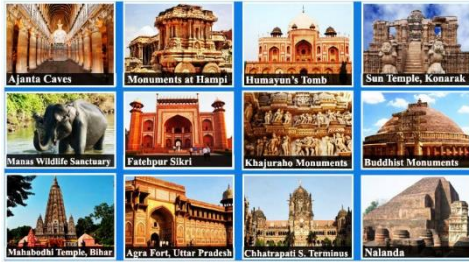


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WHAT IS A WORLD HERITAGE SITE (WHS)?

WORLD HERITAGE SITES IN INDIA



- World Heritage Sites are **cultural and/or natural sites with legal protection inscribed** on the United Nations Educational, Scientific, and Cultural Organization (UNESCO) World Heritage List.
- These sites are designated by UNESCO for **having cultural, historical, scientific, or other forms of significance.**
- The sites are designated as having **“outstanding universal value”** under the Convention Concerning the Protection of the World Cultural and Natural Heritage (**World Heritage Convention**).
 - This document was adopted by UNESCO in 1972 and formally took effect in 1975 after having been ratified by 20 countries.
 - It provides a framework for international cooperation in preserving and protecting cultural treasures and natural areas throughout the world.

Designating WHS: There are **three types** of sites: **cultural, natural and mixed.**

- **Cultural heritage** sites include hundreds of **historic buildings and town sites, important archaeological sites and works of monumental sculpture or painting.**
- Natural heritage sites are restricted to those natural areas that
 - **furnish outstanding examples of Earth’s record of life or its geologic processes,**
 - **provide excellent examples of ongoing ecological and biological evolutionary processes**
 - **contain natural phenomena** that are rare, unique, superlative, or of outstanding beauty, or

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- furnish **habitats for rare or endangered animals** or plants or are sites of exceptional biodiversity.
 - **Mixed heritage sites contain elements of both natural and cultural**
- As of July 2024, a total of **1,199 World Heritage Sites** (933 cultural, 227 natural and 39 mixed properties) exist across 168 countries.
- The countries with the most sites are Italy (59), China (57), Germany (52), France (52), Spain (50), India (42), Mexico (35), the United Kingdom (33) and Russia (31).

Key Facts about World Heritage Committee:

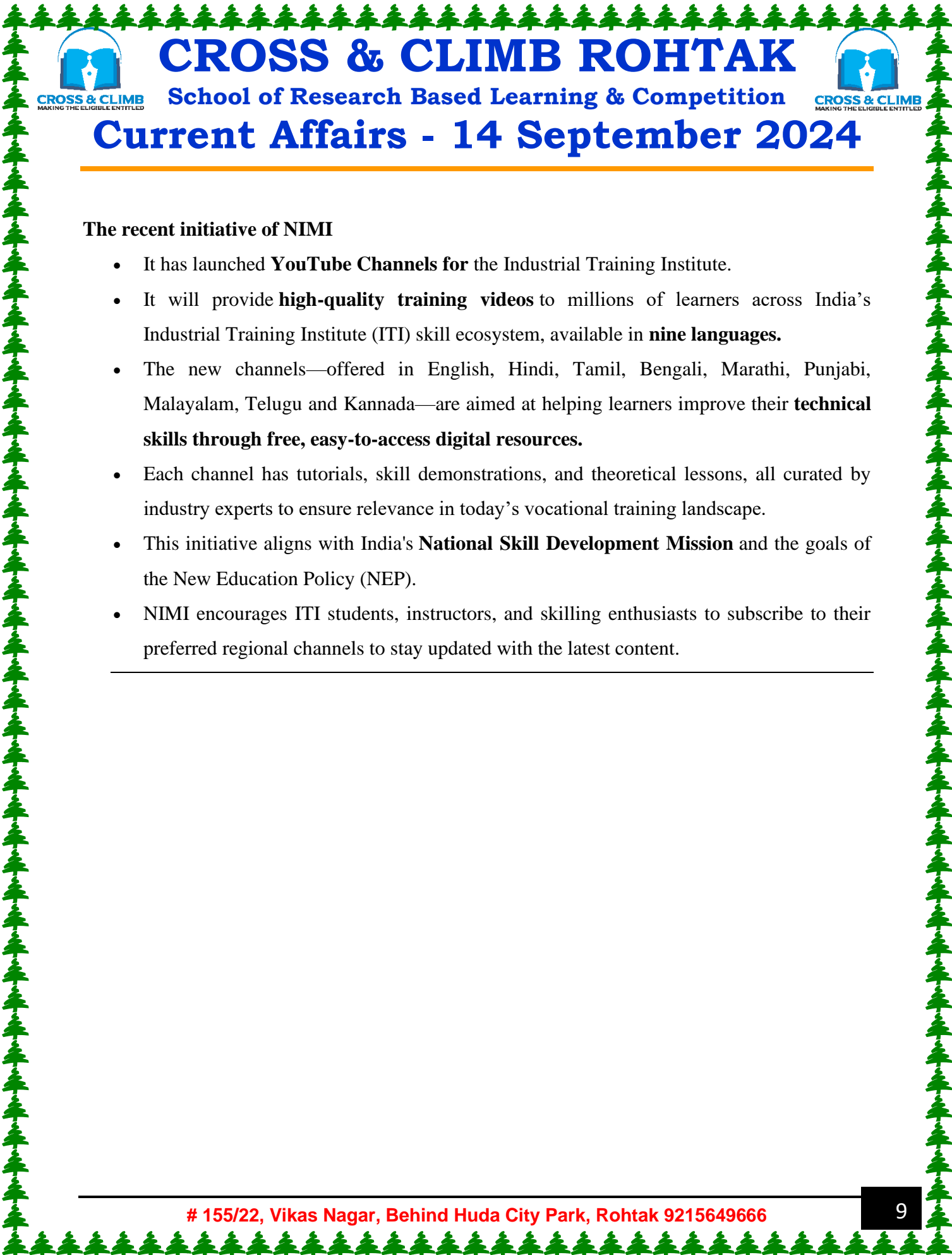
- It is a **committee of UNESCO**.
- The Committee is responsible for the **implementation of the World Heritage Convention, defines the use of the World Heritage Fund**, and allocates financial assistance upon requests from States Parties.
- It has the **final say on** whether a property is inscribed on the **World Heritage List**.

NATIONAL INSTRUCTIONAL MEDIA INSTITUTE



National Instructional Media Institute (NIMI) was formerly known as **Central Instructional Media Institute (CIMI)** and was established in December 1986 by the Government of India as a Subordinate Office under the **Directorate General of Employment and Training (DGE&T)**, Ministry of Labour & Employment.

- Presently, NIMI is functioning as an autonomous institute under the Directorate General of Training (DGT), **Ministry of Skill Development & Entrepreneurship (MSDE)**, the Govt. of India.
- It is the nodal organization for the development of **Instructional Media Packages (IMP)**, including digital content and Question Banks for assessment, for **different Vocational courses**.



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The recent initiative of NIMI

- It has launched **YouTube Channels** for the Industrial Training Institute.
 - It will provide **high-quality training videos** to millions of learners across India's Industrial Training Institute (ITI) skill ecosystem, available in **nine languages**.
 - The new channels—offered in English, Hindi, Tamil, Bengali, Marathi, Punjabi, Malayalam, Telugu and Kannada—are aimed at helping learners improve their **technical skills through free, easy-to-access digital resources**.
 - Each channel has tutorials, skill demonstrations, and theoretical lessons, all curated by industry experts to ensure relevance in today's vocational training landscape.
 - This initiative aligns with India's **National Skill Development Mission** and the goals of the New Education Policy (NEP).
 - NIMI encourages ITI students, instructors, and skilling enthusiasts to subscribe to their preferred regional channels to stay updated with the latest content.
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