



## Preston Curve

[Source: TH](#)

The Preston curve refers to the **empirical relationship** between [life expectancy](#) and per **capita income** in a country, proposed by **American sociologist Samuel H. Preston** in 1975.

- The curve shows that **people in richer countries generally have longer life** spans compared to those in poorer countries, likely due to **better access to healthcare, education, nutrition, etc.**
- As a poor country's per capita income rises, its life expectancy increases significantly initially.
  - For example, **India's per capita income** rose from Rs 9,000 in 1947 to
- Rs 55,000 in 2011, while **life expectancy increased from 32 to 66 years.**
- However, the positive relationship between per capita income and life expectancy starts to flatten out beyond a certain point, as the **human lifespan cannot be increased indefinitely.**
- The positive relationship shown by the Preston curve applies can also be applied to **other development indicators** like [infant/maternal mortality](#), education, healthcare, etc.

[Read more...](#)

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## Kenya-India Collaboration on Cheetah Conservation

[Source: IE](#)

Recently, a **Kenyan** delegation visited India to discuss collaboration on **wildlife conservation efforts**, with a particular emphasis on the ongoing Cheetah Reintroduction Project ([Project Cheetah](#)).

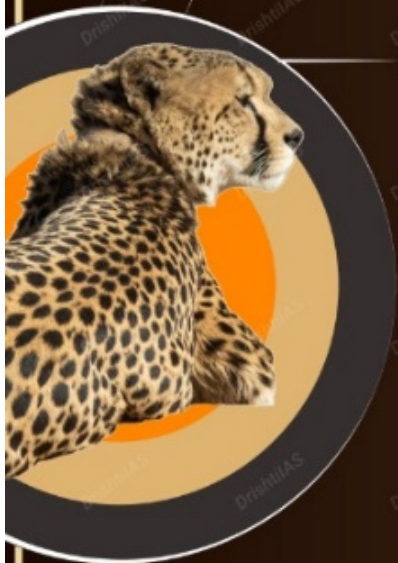
- The delegation presented a draft MoU to the [National Tiger Conservation Authority \(NTCA\)](#) proposing collaboration.
  - It along with **capacity building** and **knowledge sharing**, also included provisions for supplying equipment to Kenyan forest rangers to enhance field patrolling and wildlife preservation efforts.
- **Project Cheetah:**
  - The **Phase-1** of the project started in **2022**, to restore the population of cheetahs, which were declared extinct in the country in 1952.
    - It involves the translocation of cheetahs from South Africa and Namibia to **Kuno National Park.**
    - The project is implemented by the [NTCA](#) in collaboration with the Madhya Pradesh Forest Department, and [Wildlife Institute of India \(WII\).](#)
  - Under **Phase-2** of the Project India is considering sourcing cheetahs from Kenya due to similar habitats.
    - Cheetahs will be translocated to **Kuno National Park** and **Gandhi Sagar Wildlife Sanctuary** (Madhya Pradesh).

# Cheetah

**Common Name** - Cheetah

**Scientific Name** - *Acinonyx jubatus*

- *Acinonyx jubatus jubatus* (African Cheetah)
- *Acinonyx jubatus venaticus* (Asiatic Cheetah)



## Reintroduction of Cheetah to India:

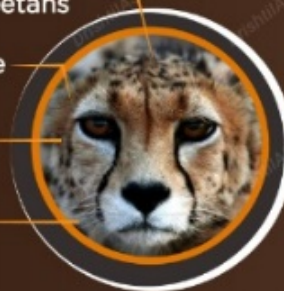
- The "Action Plan for Introduction of Cheetah in India" was released by MoEF&CC at the 19th meeting of the National Tiger Conservation Authority (NTCA) (January 2022).
  - Such a plan was first proposed in 2009.
- In September 2022, eight cheetahs landed in India from Namibia.
  - The 8 cheetahs have been relocated to the Kuno-Palpur National Park, Madhya Pradesh.
- The relocation of cheetahs to India from Namibia is the world's first inter-continental large wild carnivore translocation project.

Slightly brownish and golden skin; thicker than the Asiatic Cheetahs

More prominent spots and lines on the face

Found all over the African continent

**IUCN Red List Status - Vulnerable**



## African Cheetah

Slightly smaller than the African ones.

Pale yellowish fawn coloured skin - more fur under body, belly specifically.

Found only in Iran; the country claims there are only 12 of them left. Year 1952 - Asiatic Cheetah officially declared extinct from India.

**IUCN Red List Status - Critically Endangered**



## Asiatic Cheetah



Drishti IAS

Read more: [One Year of Project Cheetah](#), [Reintroduction of Cheetah](#), [Cheetah Cubs in Kuno National Park](#)

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## Supreme Court Mandates Self-Declaration by Advertisers

Source: [PIB](#)

Recently, the [Supreme Court of India](#) has ordered that all advertisers/Advertising Agencies must submit a '**Self-Declaration Certificate**' before publishing or broadcasting any advertisement.

- This aims to ensure **transparency, consumer protection, and responsible advertising practices**.
- These will apply to all new advertisements from 18<sup>th</sup> June 2024.
- It will also ensure compliance with all relevant regulatory guidelines, including those given in **Rule 7 of the Cable Television Networks (CTN) Rules, 1994** and the **Norms of Journalistic Conduct of the Press Council of India**.
  - **Rule 7 of CTN** provides that advertisements must comply with Indian laws and avoid offending the morality, decency, and religious sensitivities of viewers.
- A certificate signed by an authorised representative of the advertiser can be submitted in **Broadcast Seva Portal** (For TV/Radio Advertisements) and [Press Council of India portal](#) (For Print and Digital Media Advertisements).
- Advertisers need to provide proof of uploading the Self-Declaration Certificate to the relevant broadcaster, printer, publisher, or electronic media platform for their records.

Read more: [Regulating Misleading Advertisements in India](#), [Changes in Cable Television Network Rules](#), [Disclosure of Journalistic Sources](#)

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## PraVaHa Software

Source: [TH](#)

Recently, the [Indian Space Research Organisation \(ISRO\)](#) has developed Computational Fluid Dynamics (CFD) software named **Parallel RANS Solver for Aerospace Vehicle Aero-thermo-dynamic Analysis (PraVaHa)**.

- PraVaHa is a software tool specifically designed to analyse the **aerodynamics and thermodynamics** of aerospace vehicles like launch vehicles and winged and non-winged re-entry vehicles.
- It **simulates how air flows** around aerospace vehicles and **calculates the resulting forces** and heat effects which is essential to design the shape, structure, and Thermal Protection System (TPS) required for these bodies.
- It has been extensively used in the [Gaganyaan program](#) for aerodynamic analysis of [human-rated launch vehicles](#), such as HLVM3, [Crew Escape System \(CES\)](#), and Crew Module (CM).
- Any aerospace vehicle while moving through the [Earth's atmosphere](#) during **launch or re-entry** is subjected to severe aerodynamic and aerothermal loads in terms of **external pressure and heat flux**.
  - **Computational Fluid Dynamics (CFD)** is one such tool to **predict the aerodynamic and aerothermal loads** which solve numerically the equations of conservation of mass, momentum, and energy along with the equation of state.

## Colombo Process

[Source: IE](#)

### Why in News?

Recently, India has **become chair of the regional grouping Colombo Process** for the **first time** since its inception in 2003.

- India would lead the grouping for the **period 2024-26**.

### What is the Colombo Process?

#### ▪ About:

- The **Colombo Process comprises 12 Asian member states** and serves as a regional consultative forum. It aims to promote the sharing of best practices related to overseas employment for **countries in South and Southeast Asia** that send [migrant workers](#) abroad.
- The 12 member states include Afghanistan, Bangladesh, Cambodia, China, India, Indonesia, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand, and Vietnam.
  - **The founding states include** Bangladesh, China, India, Indonesia, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand, and Vietnam.
  - In the past, it has been **chaired by** Afghanistan, Nepal, Sri Lanka, the **Philippines, Indonesia**, and Bangladesh.
- The **decisions** under Colombo Process are made by **consensus** and are **non-binding**.

#### ▪ Objectives:

- Share experiences, lessons learned and best practices.
- Consult on issues **faced by overseas workers**, and offer **practical solutions**.
- **Optimise development benefits** from organised overseas employment.
- Review and monitor the implementation of the **ministerial recommendations**.

#### ▪ Secretariat: The [International Organisation for Migration \(IOM\)](#) provides technical and administrative support to the Colombo Process.

- The Colombo Process Technical Support Unit (CPTSU), based in Sri Lanka, **provides technical support** to the Colombo Process in its thematic areas of focus.

#### ▪ Five Thematic Priority Areas:

- Skills and Qualification Recognition Processes
- Fostering Ethical Recruitment Practices
- Pre-departure Orientation and Empowerment
- Promote Cheaper, Faster and Safer Transfer of Remittances
- Labor Market Analysis

#### ▪ Achievements:

- A **regional workshop for employment agencies** in Asia on placing workers in Europe and ethical recruitment was held in Manila (2006).
- A feasibility study to establish an **Overseas Workers Resource Centre (OWRC)** in one of the contractual labour destination countries in the [Gulf Cooperation Council \(GCC\)](#) has been completed.
- Organised the first "**Asia-EU Consultation on Labour Migration**" held in Brussels in 2008 attended by Colombo Process countries and 16 EU member states.

## International Organisation for Migration (IOM)

- It is part of the [United Nations System](#) as the leading inter-governmental organisation promoting since 1951 humane and orderly migration for the benefit of all, with 175 member states and a presence in 171 countries.

## UPSC Civil Services Examination Previous Year Questions (PYQs)

### Prelims

**Q. India is a member of which of the following? (2008)**

1. Asian Development Bank
2. Asia-Pacific Economic Cooperation
3. Colombo Plan
4. Organization for Economic Cooperation and Development (OECD)

**Select the correct answer using the code given below Code:**

- (a) 1 and 3 only
- (b) 2 and 4 only
- (c) 1, 2 and 3 only
- (d) 1, 2, 3 and 4

**Ans: (a)**

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## Tonga Volcano Impacting Weather

**For Prelims:** [Hunga Tonga-Hunga Ha'apai](#), Pinatubo, Krakatoa, Tambora, Samalás, Greenhouse Gases, [El Niño](#), [Paris Agreement](#), IPCC, Cooling credits, Sun dimming.

**For Mains:** [Effect Of Volcano On Global Warming](#), Types of volcano

[Source: TH](#)

### Why in News?

A recent study published in the Journal of Climate revealed that the eruption of the **Hunga Tonga-Hunga Ha'apai Volcano** in January 2022 has had significant implications for global weather patterns.

## Hunga Tonga-Hunga Ha'apai Volcano

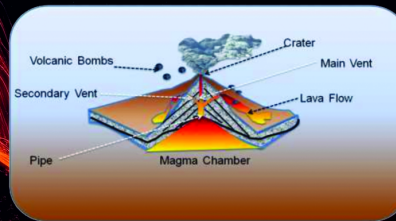
- It is an [Undersea Volcanic Eruption](#) consisting of two small uninhabited islands, **Hunga-Ha'apai** and **Hunga-Tonga**.
  - The volcano has **erupted regularly** over the past few decades.
- This is one of the massive explosions the volcano is capable of producing roughly every thousand years.
- One of the reasons for it being highly explosive is the **Fuel-Coolant interaction**.
- The Hunga Tonga eruption's unique characteristic of injecting **massive water vapour** into the stratosphere.
  - Usually, volcanic smoke, which mostly contains **sulphur dioxide**, leads to a **temporary cooling** of the Earth's surface.
    - The sulphur dioxide turns into **sulphate aerosols, which reflect sunlight into space**, causing the surface to cool down until the sulphate settles back on the surface or is washed out by rain.

## What are the Effects of the Hunga-Tonga Volcano on the Climate?

- **Extraordinary Ozone Hole in 2023:**
  - Since, Hunga Tonga is an **underwater volcano**, it produced 100-150 million tonnes of **water vapour** during its eruption, **raising the amount of water in the stratosphere by around 5%**.
    - This water vapour in the stratosphere contributes to the **destruction of the ozone layer and acts as a potent greenhouse gas**.
  - The study found that the **large ozone hole** observed from August to December 2023 was at least partly due to the Tonga eruption.
  - This **ozone hole was almost two years in advance**, as the water vapour from the eruption **had enough time to reach the polar stratosphere over Antarctica**.
- **Wet Summer of 2024 in Australia:**
  - The model predicted a positive phase of the **Southern Annular Mode** during the summer of 2024, leading to a higher chance of a wet summer in Australia.
  - This was **contrary to the expected El Niño conditions**, and the model was able to forecast this two years in advance.
- **Regional Weather Disruptions:**
  - The study **predicts colder and wetter than usual winters** for the northern half of **Australia up to around 2029**.
  - **North America may have warmer than usual winters**, while **Scandinavia can have colder than usual winters**.
  - These regional weather patterns are attributed to the Tonga eruption's impact on the way **atmospheric waves** travel, which directly influences local weather conditions.
    - This emphasises the **need for region-specific climate predictions and adaptation strategies**.
- **Minimal Impact on Global Temperatures:**
  - The impact of the eruption on **global mean temperatures was very small, around 0.015°C**.
  - The **incredibly high temperatures observed for about a year** cannot be attributed to the Tonga eruption.

# VOLCANOES

A volcano is a vent or a fissure in the crust from which lava (molten rock), ash, gases, rock fragments erupt from a magma chamber below the surface



## Types: On basis of -

### Periodicity of Eruption:

- **Active volcano:** Recently Erupted
- **Dormant Volcano:** Potential for eruption, no imminent signs
- **Extinct:** No recent eruptions, low possibility in future

### Nature of Eruption:

- **Hawaiian:** Calmest types (low gaseous content)
- **Strombolian:** Formation of large gas bubbles in magma
- **Vulcanian:** More explosive
- **Plinian eruptions:** Magma's volatile gases rise via a narrow conduit
- **Icelandic:** Often build lava plateaus

### Shape of Volcanoes:

- **Shield volcanoes:** Composed of basaltic lava, low slope
- **Cone volcanoes (Cinder Cones):** Most abundant
- **Composite cones (stratovolcanoes):** Formed by layers of diverse materials.

## Volcanic Features:

### Extrusive :

- **Crater:** Cone-shaped vent for magma
- **Caldera:** Large, crater-like depression
- **Volcanic Plateaus:** Levelled areas from fissure eruptions

### Intrusive:

- **Batholiths:** Central core of a volcanic mountain.
- **Dyke:** Vertical intrusion cutting across country rock bedding.
- **Sills:** Tabular intrusions along sedimentary bedding.
- **Laccoliths:** Magma injection along horizontal sedimentary bedding.

### Minor:

- **Geysers:** Underground water above 100°C, powered by magma, results in powerful eruptions with steam and diluted minerals.
- **Hot Springs:** Heated water flows quietly along fault zones

## Distribution of Volcanoes:

- **Subduction zones (Circum Pacific Belt)**
- **Divergence zones (Mid Atlantic Ridge)**
- **Intra-plate oceanic volcanism (Hawaiian chain)**
- **Mid-continental belt and volcanoes in Mediterranean region**

## Volcanoes in India:

- **No volcanoes in Himalayans**
- **Barren Island (Only active volcano)**

## Products of Volcanic Eruption:

- **Gases:** H, C, O, S, N, CH<sub>4</sub>, NH<sub>3</sub>
- **Solid:** Pyroclastic materials
- **Liquid:** Lava



## Undersea Volcano

- The undersea volcanic **eruption happens in a volcano** which is located **under the ocean surface**. There are an estimated one million undersea volcanoes, and most of them are **located near the tectonic plates**.
- Apart from lava, these **openings also spew out ash**. These deposit on the ocean's floor and lead to the formation of **sea mounds (underwater mountains** that are formed on the **ocean floor but do not reach the water surface**).

## Fuel-Coolant Interaction

- If **magma rises into seawater slowly**, even at temperatures of about 1200 degrees Celsius, a **thin film of steam forms between the magma and water**. This provides a **layer of insulation** to allow the **outer surface of the magma to cool**. But this process doesn't work when magma is **blasted out** of the ground full of volcanic gas.
- When **magma enters the water rapidly**, any steam layers are **quickly disrupted, bringing hot magma in direct contact with cold water**. It is akin to **weapons-grade chemical explosions**.
  - Extremely violent blasts tear the magma apart.
- A **chain reaction begins**, with new magma fragments exposing **fresh hot interior surfaces to water**, and the explosions repeat, **ultimately jetting out volcanic particles and causing blasts with supersonic speeds**.

# Volcano Facts

## The Bad

- ● ● ● ● **Ash**
  - Causes respiratory problems
  - Triggers **lightning**
- ● ● ● ● **H<sub>2</sub>O (water vapour)**  
Largest contributor to **greenhouse gas** effect on earth
- ● ● ● ● **CO<sub>2</sub> (carbon dioxide)**
  - **Toxic** in large amounts >10%
  - Contributes to **global warming**
- ● ● ● ● **SO<sub>2</sub> (sulfur dioxide)**  
Dissolves in water vapour to form damaging **acid rain**
- ● ● ● ● **H<sub>2</sub>S (hydrogen sulfide)**  
**Highly toxic** gas that smells like rotten eggs

## The Good

### Source of materials

Metals, precious gems, and construction material

### Power Generation

Geothermal and hydroelectric opportunities

### Rich volcanic soils

Yay coffee! The best coffee grows in volcanic soils

92,000

People killed in the deadliest volcano in **Indonesia** in **1815**

20

Volcanoes are **erupting** right **Now**

**Supervolcanoes** can plunge the world into an **ice age**

Krakatoa eruption **ruptured** eardrums within **50 KM radius**

**2X** more **ash** by weight erupted from Mt. St Helens (USA) in 1980 than garbage the entire US produces in 1 year

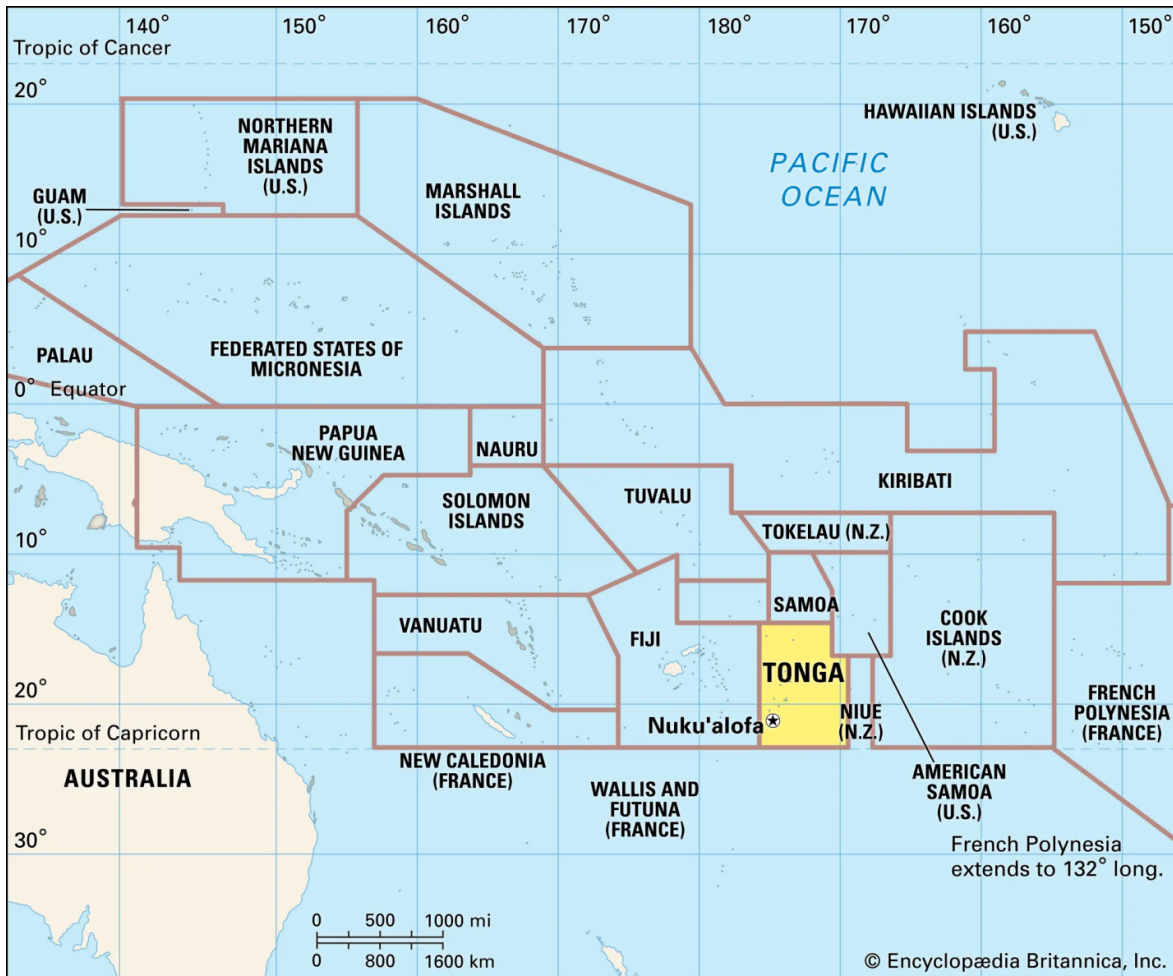
**\$2.2 Billion** worth of electrical energy wasted by Krakatoa volcano in **1883, Indonesia**

## Tonga

- Tonga is an island country in **Polynesia**, part of Oceania, with 171 islands, of which 45 are inhabited.
- The country spans approximately 800 km north-south and is **surrounded by Fiji, Wallis and Futuna, Samoa, New Caledonia, Vanuatu, Niue, and Kermadec**.
- Tonga has a **tropical rainforest climate**. The economy relies heavily on remittances from Tongans living abroad, particularly in Australia, New Zealand, and the United States.



- The **economy focuses on small-scale industries** like handicrafts and agriculture, with efforts to enhance sectors such as tourism and communications.
- The **largest ethnic group in Tonga is Tongan**, followed by a mix of Tongans, Chinese, Fijians, Europeans, and other Pacific Islanders.



### **Drishti Mains Question:**

Discuss the factors leading to volcanic eruptions. Also, suggest mitigation strategies for managing volcanic hazards in India.

## **UPSC Civil Services Examination, Previous Year Question (PYQ)**

### **Prelims**

**Q. Consider the following: (2013)**

1. Electromagnetic radiation
2. Geothermal energy
3. Gravitational force
4. Plate movements
5. Rotation of the earth
6. Revolution of the earth

**Which of the above are responsible for bringing dynamic changes on the surface of the earth?**

(a) 1, 2, 3 and 4 only

(b) 1, 3, 5 and 6 only

(c) 2, 4, 5 and 6 only

(d) 1, 2, 3, 4, 5 and 6

Ans: (d)

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### **Mains:**

Q. Discuss about the vulnerability of India to earthquake related hazards. Give examples including the salient features of major disasters caused by earthquakes in different parts of India during the last three decades. (2021)

Q. Why are the world's fold mountain systems located along the margins of continents? Bring out the association between the global distribution of fold mountains and earthquakes and volcanoes. (2014)

Q. Mention the global occurrence of volcanic eruptions in 2021 and their impact on regional environment. (2021)

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## **Conservation Breeding in Indira Gandhi Zoological Park (IGZP)**

[Source: TH](#)

### **Why in News?**

Recently, the [Indira Gandhi Zoological Park \(IGZP\)](#) in Visakhapatnam has been at the forefront of [wildlife conservation](#) in India, particularly in the successful breeding and nurturing of [Striped hyenas](#) and [Asiatic wild dogs \(Dhole\)](#).

### **What are the Key Points About Indira Gandhi Zoological Park (IGZP)?**

- It is an **ex-situ facility established in 1977**, located amidst **Seethakonda Reserve Forest** in the Visakhapatnam district of Andhra Pradesh.
  - It is surrounded by [Eastern Ghats](#) on three sides and the **Bay of Bengal** on the fourth side.
- It is a large category zoo recognised by the [Central Zoo Authority](#).
  - Due to its close proximity to **Kambalakonda Wildlife Sanctuary** it is also home to many free-ranging animals and birds.
- **IGZP has successfully bred** striped hyenas, [wild dogs](#), [Indian grey wolves](#), [ring-tailed lemurs](#), [Indian bison](#), [blue](#) and [gold macaws](#), jungle cats, and [eclectus parrots](#).

### **Asiatic Wild Dogs (Dhole)**



Photo by: Stan Wood / Flickr

▪ **About:**

- **Dhole (*Cuon alpinus*)** is a wild carnivorous animal and is a member of the family **Canidae** and the **class Mammalia**.

▪ **Habitat:**

- Historically widespread across southern Russia to southeast Asia, they are now mainly found in south and southeast Asia, with northern populations in China.
- In India, they are clustered in the **Western and Eastern Ghats**, central India, and northeast India.

▪ **Conservation:**

- [Wildlife Protection Act, 1972](#): Schedule II
- [International Union for Conservation of Nature's Red List](#): Endangered
- [The Convention on International Trade in Endangered Species of Wild Fauna and Flora \(CITES\)](#): Appendix II
- The creation of reserves under [Project Tiger](#) provided some protection for dhole populations sympatric with tigers.

## Striped Hyenas

▪ **About:**

- The Striped hyenas (*Hyaena hyaena*) are **one of the three hyena species**.
  - Other **hyena species include** Brown hyenas, and Spotted hyenas (the largest).
- They are **smaller and less social than the more well-known Spotted hyena**.

▪ **Challenges to Conservation:** Habitat loss, human-wildlife conflict, poaching, and illegal wildlife trade.

▪ **Protection Status:**

- [IUCN Status](#): Near Threatened
- [Wildlife Protection Act, 1972](#): Schedule I



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## Personality Rights

**For Prelims:** Personality Rights, [Rights to Privacy](#), [Article 21](#), [Artificial Intelligence \(AI\)](#).

**For Mains:** Awareness in the fields of IT, Space, Computers, robotics, **nano-technology**, bio-technology, and issues relating to [intellectual property rights](#).

[Source: IE](#)

### Why in News?

The recent dispute between Hollywood Actress and **OpenAI** highlights the importance of **personality rights** in the context of **Artificial Intelligence (AI)** models.

- The actress accused **OpenAI**, the [artificial intelligence](#) company behind [ChatGPT](#), of using her voice despite having previously declined licensing requests from the company's CEO.
- Earlier, the New York Times (NYT) took legal action against OpenAI and Microsoft, alleging the **unauthorised use of its copyrighted content to train AI models**, including [ChatGPT](#).

### What are Personality Rights?

- **About:**
  - **Personality rights** refer to an individual's **right to protect their personality**, which is a part of the broader right to privacy or property.
  - These rights encompass **various aspects of a celebrity's public persona**, including its name, voice, signature, images, distinctive features, mannerisms, poses etc.
- **Types:**
  - **Right to Privacy:**

- This protects an individual's control over their **personal information and affairs**.
- It prevents **unauthorised disclosure of personal details or intrusion** into one's private life
- It is affirmed by the [Supreme Court](#) judgement on the **Puttaswamy v Union Of India, 2017 Case**.
- **Right of Publicity:**
  - This grants individuals control over the **commercial use** of their **name, image, likeness, or other recognisable characteristics**.
  - They can **choose whether and how these aspects of their identity are used** for product endorsements or advertising.
- **Importance:**
  - These rights are **important to celebrities** as their names, photographs or even voices can easily be **misused in various advertisements** by different companies to boost their sales.

## What is the Status of Personality Rights in India?

- While personality rights are **not explicitly mentioned** in Indian statutes, they are protected through principles related to **privacy** and **property rights**.
- **Key legal Provisions include:**
  - **Article 21 of the Indian Constitution:**
    - While there is no specific statute solely for personality rights, the [right to privacy](#) enshrined in **Article 21** of the Constitution offers the closest legal protection in India.
  - **Copyright Act, 1957:**
    - The [Copyright Act of 1957](#), while not directly addressing personality rights, offers some tangential protection through concepts like "**passing off**" and "**deception**" in [Intellectual Property Rights \(IPR\)](#) cases.
    - "Passing off" occurs when someone misrepresents their goods or services as belonging to someone else.
    - This can be **relevant to personality rights if:**
      - Someone **uses a celebrity's name or image to endorse a product without their permission**, creating the impression that the celebrity is associated with the product.
      - Someone creates a **character or image that is so similar to a well-known personality that it deceives the public** into thinking it's the real person.
    - **Deception** is when someone uses a **person's name or likeness in a way that is deceptive or misleading**, it might be possible to argue copyright infringement, especially if the use harms the reputation of the person.
  - **Indian Trademarks Act, 1999:**
    - Section 14 restricts the use of individual names and representations.
  - **Court Judgments:**
    - Courts have recognized the right of publicity, allowing celebrities to protect their name, likeness, and persona from unauthorised use.
    - In **Krishna Kishore Singh vs Sarla A Saraogi Case, 2021**, the **Supreme Court of India** held that the right to publicity is distinct from the right to privacy.
      - The court emphasised that **public figures have a similar right of publicity**. It affirmed that publicity rights are inheritable and devisable.
    - In its **Arun Jaitley vs. Network Solutions Private Limited, 2011**, the Delhi High Court observed that an **individual's popularity or fame is equally significant on the internet as in real life**.
      - The court also stated that **a name, besides being a personal identifier, can acquire its own distinctive significance**.
  - **Examples:**
    - In May 2024, the Delhi **High Court** upheld **Jackie Shroff's personality and publicity rights**, restraining various e-commerce stores, AI chatbots, and others from using the actor's name, image, voice, and likeness without his consent.
    - Similarly, in **September 2023**, actor **Anil Kapoor also received legal**

### protection for his image rights.

- The Delhi High Court placed restrictions on 16 entities, prohibiting them from using his name, image, or likeness for commercial purposes.
- In the **2010 case of D.M. Entertainment Pvt. Ltd. vs. Baby Gift House**, Daler Mehndi's company emerged victorious in the Delhi High Court. The case **involved shops selling dolls that mimicked Mehndi's appearance** and sang his songs.
  - The court upheld **Mehndi's right to control his public image commercially.**

## What is the Status of AI Regulation in India?

### ▪ No Specific Regulation for AI in India:

- Currently, India **does not** have a specific regulation for **artificial intelligence (AI)**.
- But various **advisories, guidelines, and IT rules** from time to time have **provided legal supervision for the advancement of AI**, [Generative AI](#), and [large language models \(LLM\)](#) in India.

### ▪ NITI Aayog's Leadership:

- In 2018, [NITI Aayog](#) released the "[National Strategy for Artificial Intelligence #AIForAll](#)" outlining responsible development and deployment of AI in healthcare, agriculture, education, and smart infrastructure.

### ▪ Data Protection & Global Collaboration:

- The recently enacted [Digital Personal Data Protection Act \(2023\)](#) empowers the government to address privacy concerns arising from AI use.
- Additionally, India's membership in the [Global Partnership on Artificial Intelligence \(GPAI\)](#) fosters collaboration on **responsible AI** development, data governance, and ethical considerations.



# INTELLECTUAL PROPERTY RIGHTS (IPRs)

*IP refers to intangible assets owned/legally protected by an individual/company from outside use or implementation without consent.*



## NEED FOR IPR

- Encourages Innovation
- Economic growth
- Safeguard rights of creators
- Enhances ease of doing business



## RELATED CONVENTIONS/TREATIES (INDIA SIGNATORY TO ALL)

- WIPO Administered (first recognised IPR under):
  - Paris Convention for the Protection of Industrial Property 1883 (Patents, Industrial Designs)
  - Berne Convention for the Protection of Literary and Artistic Works 1886 (Copyrights)
- WTO - TRIPS Agreement:
  - Ensures adequate standard of protection
  - Argues for incentives for technology transfer to developing countries
- Budapest Treaty 1977:
  - International recognition of the deposit of micro-organisms for the purposes of patent procedure
- Marrakesh VIP Treaty 2016:
  - Facilitate access to published works by visually impaired persons and persons with print disabilities
- IPR also outlined in Article 27 (Universal Declaration of Human Rights)



## INDIA AND IPRS - INITIATIVES

- National IPR Policy 2016:
  - Motto: "Creative India; Innovative India"
  - Compliant with TRIPS Agreement
  - Brings all IPRs to single platform
  - Nodal Dept - Department of Industrial Policy & Promotion (Ministry of Commerce)
- National (IP) Awareness Mission (NIPAM)
- Kalam Program for Intellectual Property Literacy and Awareness Campaign (KAPILA)

**World Intellectual Property Day: 26th April**

Intellectual Property	Protection	Law in India	Duration
Copyright	Expression of Ideas	Copyright Act 1957	Variable
Patent	Inventions- New Processes, Machines, etc.	Indian Patent Act 1970	20 years Generally
Trademarks	Sign to distinguish business goods or services	Trade Marks Act 1999	Can last Indefinitely
Trade Secrets	Confidential Business Information	Protected without Registration	Unlimited time
Geographical Indication (GI)	Sign used on specific geographical origin and possess qualities due to site of origin	Geographical Indications of Goods (R & P) Act, 1999	10 years (Renewable)
Industrial Design	Ornamental or aesthetic aspect of an article	Design Act, 2000	10 years



### Drishti Mains Question:

Discuss the legal framework for personality rights in India. Analyse the challenges in reconciling them with the right to freedom of speech.

## UPSC Civil Services Examination Previous Year Question (PYQ)

**Q.1 'Right to Privacy' is protected under which Article of the Constitution of India? (2021)**

- (a) Article 15
- (b) Article 19
- (c) Article 21
- (d) Article 29

**Ans: (c)**

**Q.2 Right to Privacy is protected as an intrinsic part of Right to Life and Personal Liberty. Which of the following in the Constitution of India correctly and appropriately imply the above statement? (2018)**

- (a) Article 14 and the provisions under the 42nd Amendment to the Constitution.
- (b) Article 17 and the Directive Principles of State Policy in Part IV.
- (c) Article 21 and the freedoms guaranteed in Part III.
- (d) Article 24 and the provisions under the 44th Amendment to the Constitution.

**Ans: c**

**Q1. With the present state of development, Artificial Intelligence can effectively do which of the following? (2020)**

1. Bring down electricity consumption in industrial units
2. Create meaningful short stories and songs
3. Disease diagnosis
4. Text-to-Speech Conversion
5. Wireless transmission of electrical energy

**Select the correct answer using the code given below:**

- (a) 1, 2, 3 and 5 only
- (b) 1, 3 and 4 only
- (c) 2, 4 and 5 only
- (d) 1, 2, 3, 4 and 5

**Ans: (b)**

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### **Mains**

**Q.** In a globalized world, Intellectual Property Rights assume significance and are a source of litigation. Broadly distinguish between the terms—Copyrights, Patents and Trade Secrets. **(2014)**

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## **Many Facets of Truth**

**For Prelims:** [Mahatma Gandhi](#), [Non-violence \(ahimsa\)](#), [Satyagraha](#)

**For Mains:** Dilemmas and Complexity of Truth, Moral dilemmas in Historical Narratives, Ethical Conduct, and Democratic Ethos, [Relevance and Significance of the teaching of Mahatma Gandhi](#)

[Source: IE](#)

**Why in News?**



For millennia, philosophers have wrestled with questions about the **nature of truth**, its knowability, and whether it is **universal or subjective**, leading to **diverse perspectives** on the concept.

## What are the Various Thinkers' Perspectives on Truth?

- **Correspondence Theory:**
  - Thinkers like [Aristotle](#) and **Bertrand Russell** assert that truth is determined by the correspondence between our statements or thoughts and the external world, meaning **a statement is true if it accurately reflects reality**.
  - For example, "The grass is green" is true because the **grass actually** has the property of **greenness** in the real world.
  - This theory doesn't account for **abstract truths (e.g., mathematical theorems)** that don't directly correspond to physical reality.
- **Coherence Theory:**
  - Thinkers like [Immanuel Kant](#) and **Friedrich Hegel** assert that truth is determined by the **internal consistency of ideas**, where a statement is true if it coheres with an **established framework of knowledge**.
  - For example, **scientific theories are considered true if they are internally consistent** and explain a wide range of phenomena.
  - This theory can lead to closed belief systems that **resist new evidence** that **contradicts the existing framework**.
- **Pragmatic Theory:**
  - Thinkers such as **William James** and **John Dewey** argue that the **truth of a statement is determined by its practical usefulness** and its ability to lead to successful outcomes.
  - Example: The **theory of gravity** is considered true because it allows us to predict the movement of objects and build stable structures.
  - This theory makes truth relative to context and **doesn't account for objective facts** independent of human usefulness.
- **Mahatma Gandhi's Quest for Truth:**
  - **Divine Truth and Non-Violence:**
    - Gandhi's **truth wasn't merely factual accuracy**. He equated it with the **ultimate reality, God itself**.
    - Truth is naturally obvious, but it becomes clear only when the ignorance around it is removed. This absolute truth could be understood through [non-violence \(ahimsa\)](#).
    - His **truth is not just a concept but an eternal principle equivalent to God**, making the pursuit of truth and the practice of non-violence inseparable.
    - The unending quest for truth involved introspection, continuous questioning, and the readiness to acknowledge errors, seeing truth as an ongoing journey of self-discovery rather than a set endpoint.
  - **Truth in Action:**
    - Gandhi's commitment to truth extended to his **methods of protest**. He devised [Satyagraha](#), meaning "**truth force**."
    - Satyagrahis, Gandhi's followers, **aimed to awaken the conscience of the oppressor through acts of [civil disobedience](#)** and unwavering truthfulness.

## What are the Dilemmas and Complexity of Truth?

- **The Complexity of Truth:**
  - The **three lions on the [Ashokan pillar](#)**, part of India's national emblem, symbolise **three perspectives of truth**: my truth, your truth, and an observer's truth.
  - **The fourth, unfathomable dimension of truth** often leads to the saying, "**God only knows the truth.**"
  - For example, during an election, the task of the [Election Commission of India](#) becomes challenging.
    - The challenge lies in [political parties](#) often engaging in caste or communal speech by use of clever language which makes it difficult for the [election commission](#) to act.
    - The [Model Code of Conduct \(MCC\)](#) though bans explicit appeals on these grounds,

but loopholes let political parties make divisive statements indirectly.

▪ **The Dilemma of Truth and Deception:**

- Historical and mythological narratives, like **Yudhishtira's half-truth** in the [Mahabharata](#), illustrate the ethical dilemmas faced when truth is manipulated.
- Yudhishtira's declaration of **Ashwathama's death** led to a **misinterpretation** that caused **Dronacharya's demise**.
- This story underscores the moral complexities that arise when truth is bent for strategic purposes, highlighting the potential loss of moral high ground.

## Conclusion

- The principle of "**Satyameva Jayate**" remains a **guiding light** for **India's democratic ethos**.
- However, the practical application of this principle in our day-to-day lives demands a **robust commitment** to ethical conduct by all stakeholders.
- It must be supported by a **collective moral awakening** among political leaders and citizens alike.
- Ensuring that truth triumphs in the democratic process requires **continuous vigilance, introspection**, and an unwavering commitment to [rule of law](#) and ethical values.

### Drishti Mains Question:

Q. In context of effective governance and policymaking, discuss the significance of recognising the diverse dimensions of truth in comprehending societal realities, with examples from contemporary events.

## UPSC Civil Services Examination, Previous Year Question (PYQ)

### Mains:

Q. "Corruption causes misuse of the government treasury, administrative inefficiency, and obstruction in the path of national development." Discuss Kautilya's views. **(2016)**

Q. What does each of the following quotations mean to you? **(2021)**

(a): "Every work has got to pass through hundreds of difficulties before succeeding. Those that persevere will see the light, sooner or later."- Swami Vivekananda

(b): "We can never obtain peace in the outer world until and unless we obtain peace within ourselves."- Dalai Lama

(c): "Life doesn't make any sense without interdependence. We need each other, and the sooner we learn that, it is better for us all."- Erik Erikson

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## Theories of Evolution

# THEORIES OF EVOLUTION

The modification of living organisms during their descent, generation by generation from common ancestors.

## Oparin-Haldane Theory of Origin of Life

- ↳ Also known as Materialistic theory
- ↳ Describes process of origin of life on early Earth as:

*Physio-chemical processes of atoms → Organic compounds → Macromolecules → First living system or cells*

## Theory of Inheritance of Acquired Character (Lamarckism)

- ↳ First theory of organic evolution
- ↳ **Evolutionary ideas:**
  - ↳ Internal forces of life increase the size of organism
  - ↳ New structures appear because of an 'inner want'
  - ↳ Direct environmental effect over living organisms
  - ↳ Inheritance of acquired character
- ↳ **E.g.;** Long neck of giraffe due to gradual lack of surface vegetation

## Theory of Natural Selection (Darwinism)

- ↳ Foundation of evolutionary biology
- ↳ **Elements:**
  - ↳ Universal occurrence of variation
  - ↳ Rapid multiplication
  - ↳ **The struggle for existence** - Intraspecific and interspecific
  - ↳ **Survival of the fittest (Natural Selection)**
  - ↳ Inheritance of useful variations; Elimination of non-useful variations
- ↳ **E.g.;** Survival of more dark-winged moths than white-winged ones in post-industrialisation period

## Neo-Darwinism

Integration of Darwin's theory of evolution with Gregor Mendel's theory of genetics

## Modern Synthetic Theory

- One of the proven theories of organic evolution
- Includes factors such as – Mutation, Variation /Recombination, Heredity, Natural Selection and Isolation

## Mutation Theory (Hugo de Vries)

- ↳ Describes evolution as a jerky process where new varieties of species are formed by mutations (discontinuous variations)
- ↳ **Salient features:**
  - ↳ Mutation appears all of a sudden and becomes operational immediately
  - ↳ Same type of mutation in several individuals of a species
  - ↳ All mutations are inheritable
  - ↳ Useful mutations are selected and lethal ones are eliminated by nature



Drishti IAS

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