IAS WITH DR RAVI
AIM. PREPARE. ACHIEVE

APPSC GROUP I | 1,000 TOPICS IN 100 DAYS

DAY 26

Complete Pictograph Book

Topics 251–260

100 teaching pages + cover and index

Updated 1 November 2026

Complete English / Telugu notes and MCQs supplied separately

Topic-wise index

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Page numbers refer to this complete PDF. Bookmarks open each topic.

No MCQs are mixed into the teaching pictographs.

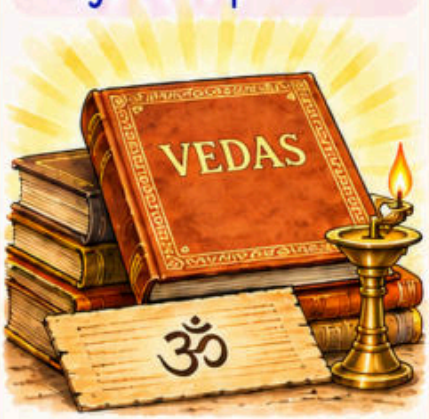
Day 26 | Topic 251 | 251.01

Three movements: reform through different ideas

ARYA SAMAJ

Dayananda Saraswati
1875 | Bombay

Return to the Vedas; challenge caste by birth, child marriage and image worship.



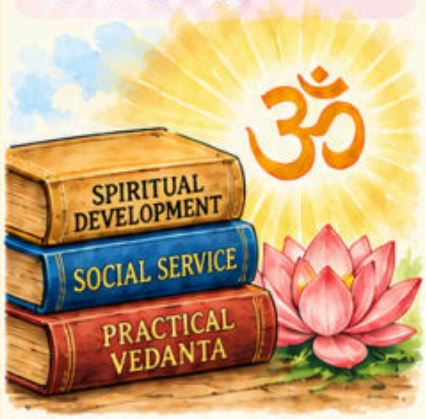
Education: DAV institutions and the Gurukul tradition.



RAMAKRISHNA MISSION

Swami Vivekananda
1 May 1897 | Kolkata

Practical Vedanta: spiritual development joined with organised social service.



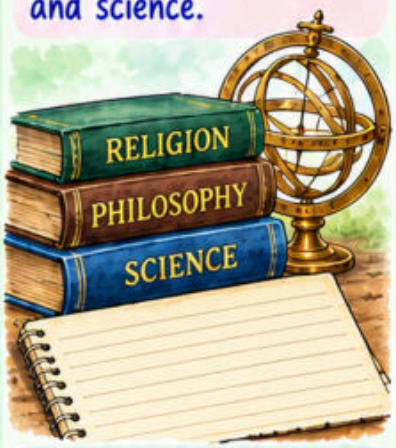
Education, medical care and relief work.



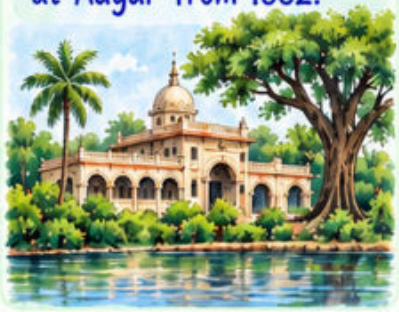
THEOSOPHICAL SOCIETY

Blavatsky, Olcott and Judge
1875 | New York

Universal brotherhood and comparative study of religion, philosophy and science.



Permanent headquarters at Adyar from 1882.





Shared reform setting does not mean identical doctrine.
Compare founder, date, place, ideas and institutions separately.

Buildings are conceptual illustrations.

Day26 | Topic251 | 251.02

Arya Samaj: revival and reform together

Authority: Vedas treated as infallible.

Dayananda: return to the Vedas.



REJECTED	RETAINED
Image worship	Vedic fire offerings
Caste determined by birth	Samskaras
Child marriage	Karma and rebirth











Practical reform:

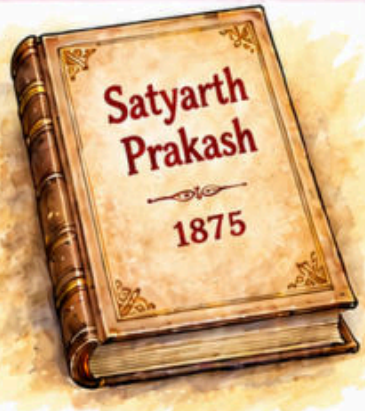
Widow remarriage → **girls' education** → **schools and welfare work**







Key nuance:
A revivalist appeal to ancient texts could support criticism of existing social practices. Revival does not mean acceptance of every inherited custom.



Sources: supplied Day26 notes; NCERT; PIB 2004938.

Day26 | Topic251 | 251.03

Two educational paths within the Arya tradition

Arya Samaj educational work

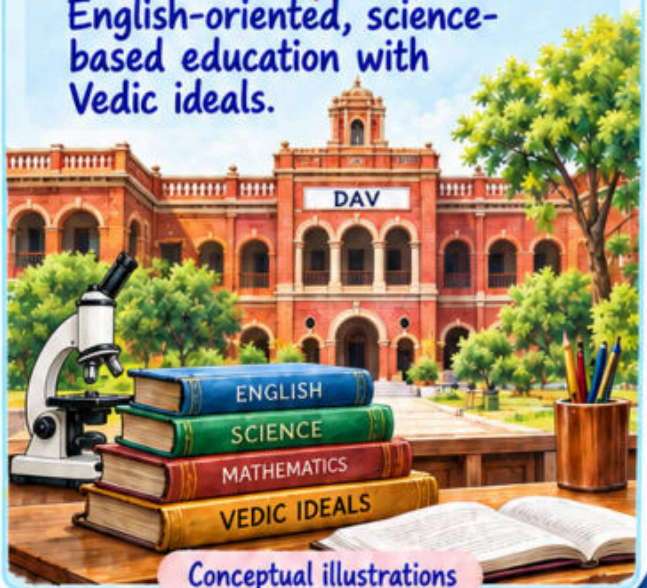
DAV

Lala Hansraj

First DAV school: Lahore, 1886

Hansraj: first headmaster; honorary principal of DAV College, Lahore, from 1889.

Anglo-Vedic approach: English-oriented, science-based education with Vedic ideals.



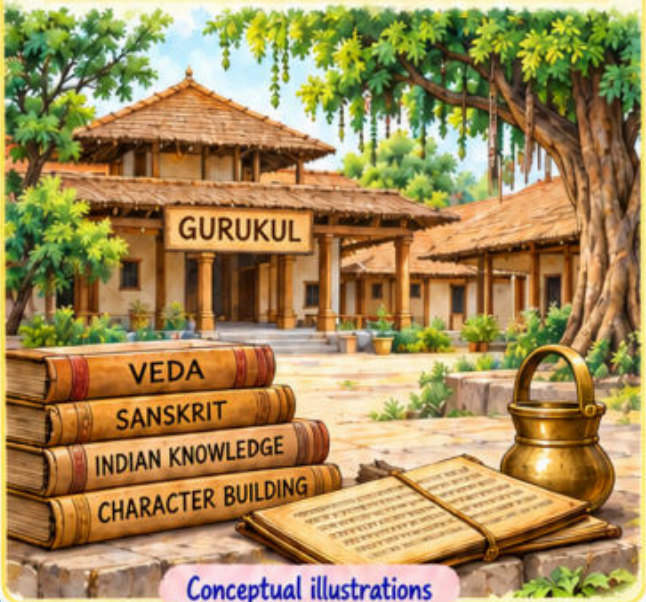
Conceptual illustrations

GURUKUL

Swami Shraddhanand (Munshi Ram)

Gurukul founded: 4 March 1902 Kangri, near Haridwar

Reviving the gurukul system; Vedic studies at the centre.

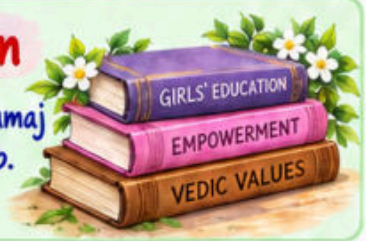


Conceptual illustrations

Shared reform tradition ≠ identical educational method

Girls' education

NCERT records Arya Samaj girls' schools in Punjab.



EXAM CUE:

Hansraj – DAV;
Shraddhanand – Gurukul.
Do not exchange the founders.



Sources: Hansraj College; NBT 2022 brochure p3; supplied NCERT notes.

Day26 | Topic251 | 251.04

Practical Vedanta: service is part of spiritual life

Ramakrishna Mission

Swami Vivekananda founded the Mission in 1897, inspired by Ramakrishna.

Do not reduce the Mission to preaching alone: organised welfare was integral to its purpose.

Illustrative service institutions

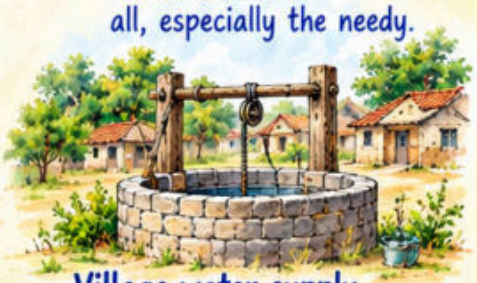


Schools
Education for character and a better future.

Clinics
Healthcare for all, especially the needy.



Relief work
Food, clothing and assistance during natural calamities and emergencies.



Village water supply
Wells and water facilities for healthier communities.

Potential divinity of the soul
Every individual has divine potential that can be realised.

Harmony of religions
All religions are valid paths to the same truth.

Work as worship
Selfless work, done in the spirit of service, is a valid path to spiritual growth.

Vedanta



Personal spiritual development
Discipline, character, compassion and realisation of the divinity within.

They go together and strengthen each other.

Selfless social service
Serving others with love and respect, seeing God in all, as a practical expression of Vedanta.



Spiritual ideal
Vedanta in life: realise the divine and see God in all.

→

Organised institutions
Ramakrishna Mission puts the ideal into action through schools, clinics, relief and other services.

→

Education, health and relief
Concrete service to people, leading to a more just, healthy and compassionate society.

Motto: "For one's own salvation and for the welfare of the world"

Sources: Belur Math: About Us; supplied NCERT notes.

Chicago, Kolkata and Belur: separate milestones

1886: Ramakrishna dies

Sri Ramakrishna passes away on 16 August 1886 at Cossipore, leaving a spiritual legacy and a band of young disciples.



September 1893: Vivekananda at the World's Parliament of Religions, Chicago

Swami Vivekananda represents Hinduism at the World's Parliament of Religions, opening a new chapter of global awareness of Vedanta.



January 1897: returns to India

After an exhaustive tour in the West, Vivekananda returns to India in January 1897, receiving an overwhelming welcome, and begins to organise work.



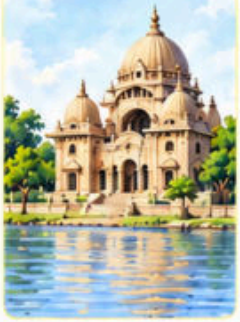
1 May 1897: Mission founded at Balaram Basu's house, Kolkata

Swami Vivekananda founded the Ramakrishna Mission at Balaram Basu's house in Kolkata on 1 May 1897.

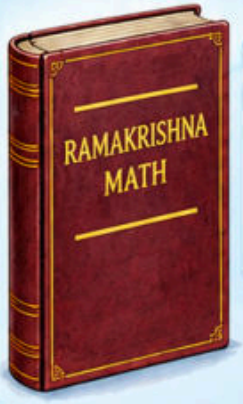


Early 1898: land acquired at Belur

In early 1898, land is acquired on the western bank of the Hooghly at Belur for a permanent headquarters of the twin organisations.



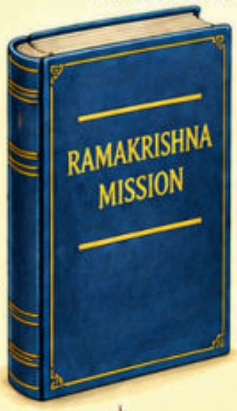
Ramakrishna Math



Ramakrishna Math: monastic organisation.

Twin organisations; legally and financially separate.

Ramakrishna Mission



Ramakrishna Mission: organised spiritual and social service.

Headquarters:

Belur, Howrah, on the western bank of the Hooghly (Ganga).



Buildings are conceptual, not historical reconstructions.

EXAM CUE:

Ramakrishna did not personally found the Mission in 1897. Founding place and later headquarters are not interchangeable.

SOURCES:

Belur Math;
Balaram Mandir institutional history.



Day26 | Topic251 | 251.06

Theosophical Society: follow institutions, not a map

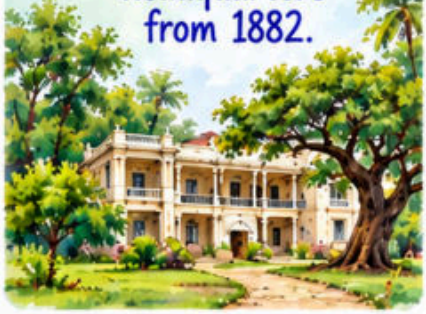
New York
17 November 1875: Foundation Day.



Bombay
founders settle in India in 1879.



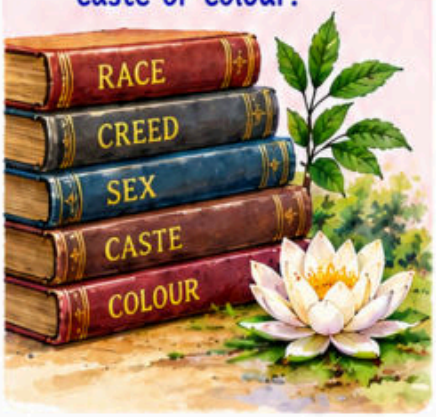
Adyar, Madras
permanent headquarters from 1882.



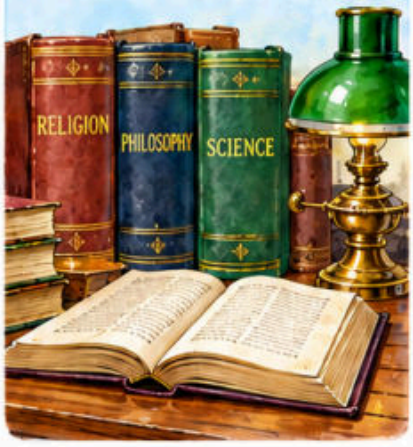
Founders: Helena P. Blavatsky • Henry S. Olcott • William Q. Judge

Stated Objects of the Theosophical Society
(stated objectives)

1. Universal brotherhood without distinctions of race, creed, sex, caste or colour.

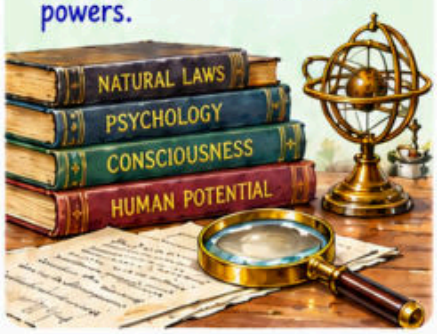


2. Comparative study of religion, philosophy and science.



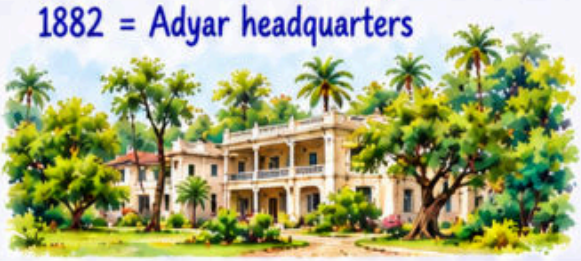
3. Inquiry into unexplained natural laws and latent human powers.

This is an objective of the Society for study and research, not a proof of supernatural powers.



Important dates to distinguish:

1882 = Adyar headquarters



December 1886 = Adyar Library opened



Source: Theosophical Society, Early History; supplied Day26 notes.

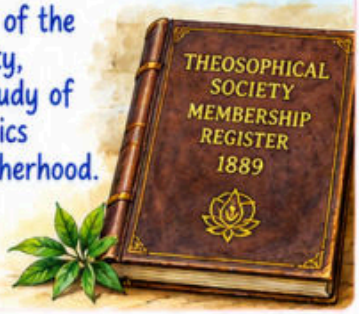
Conceptual illustrations, not historical reconstructions.

Day26 | Topic251 | 251.07

Annie Besant: education and public life

1889: joins the Theosophical Society

Became a member of the Theosophical Society, attracted by its study of world religions, ethics and universal brotherhood.



1893: first arrival in India (institutional histories)

Arrived in India in 1893 (beginning of her close association with Indian public life and educational work, as recorded in institutional histories).



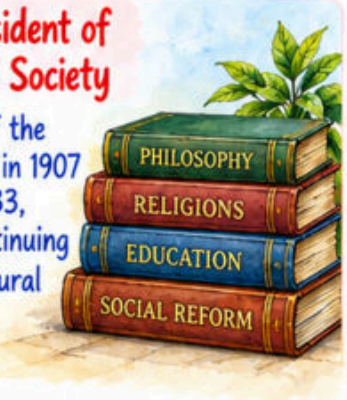
1898: Central Hindu College at Benares

Founded the Central Hindu College in Benares in 1898, with a vision of modern education rooted in Indian culture, combining ancient learning with modern science.



1907–1933: President of the Theosophical Society

Elected President of the Theosophical Society in 1907 and served until 1933, based at Adyar, continuing its educational, cultural and social work.



Central Hindu College → nucleus of Banaras Hindu University

The Central Hindu College, founded in 1898, later became the nucleus of the Banaras Hindu University (BHU), which was established in 1916 as a larger university, drawing on this earlier institution.



Distinguish Besant's college initiative from Malaviya's role in building BHU.

Besant's initiative

- Founded the Central Hindu College in 1898 at Benares.
- Focused on modern education with Indian cultural values.
- The college later became the nucleus of BHU.
- It was her institutional initiative that provided a foundation for the university.

Malaviya's role

- Pandit Madan Mohan Malaviya led the movement to establish the Banaras Hindu University in 1916.
- He mobilised wider support, brought together resources and worked for the university's larger structure and development.
- BHU was a new, expanded university, built on the foundation of the earlier college.

Public life

- Active in the Home Rule movement, working for greater self-government for India.
- In 1917, became the first woman president of the Indian National Congress, marking an important step in women's participation in national politics.



Date caution

First arrival and later residence accounts are different claims. Do not replace 1893 first arrival with an unqualified 1895 date.

Day26 | Topic251 | 251.08

Compare the doctrines before memorising the names

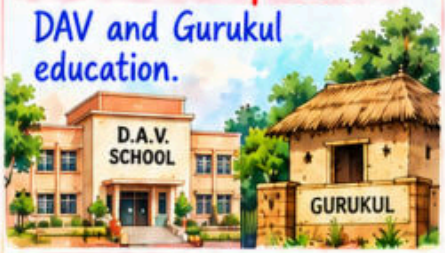
Arya Samaj



Core emphasis
Vedic authority and reform.



Institutional expression
DAV and Gurukul education.



Founder cue
Dayananda Saraswati.



Ramakrishna Mission



Core emphasis
Practical Vedanta and service.



Institutional expression
Schools, hospitals and relief.



Founder cue
Swami Vivekananda.



Theosophical Society



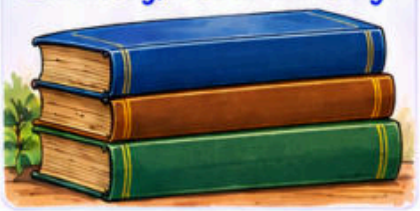
Core emphasis
Universal brotherhood and comparative inquiry.



Institutional expression
Adyar headquarters and educational initiatives.



Founder cue
Blavatsky, Olcott and Judge.



Avoid false equivalence

Vedic revival
≠ rejection of all ritual.



Social service
≠ only preaching.



Comparative inquiry
≠ one identical doctrine for every faith.



Compare ideas → connect institutions → write a balanced explanation.

Sources: Supplied Day26 notes; institutional histories.

Buildings are conceptual illustrations.

Day 26 | Topic 251 | 251.09

Reform, education and national awakening: a balanced answer

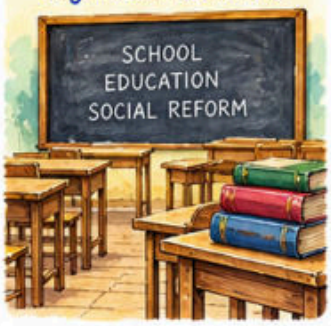
Criticism of harmful customs

Reformers questioned practices such as child marriage, sati, unequal status of women and social discrimination.



Education and associations

Schools, colleges, print culture and reform associations spread new ideas, encouraged social service and built organized networks.



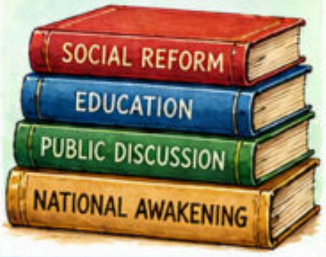
Wider public discussion

Newspapers, journals, public meetings and pamphlets took the debate beyond small circles to a larger reading public.



Social and national consciousness

Reform, education and public debate helped create a more informed society, stronger self-respect and a wider sense of common interests, which fed into national awakening.



This is an analytical relationship, not a claim that one organisation alone caused nationalism.

Contributions

- **Girls' education:** reformers established schools for girls, expanding access to learning.



- **Support for widow remarriage:** reform associations argued for ending the social stigma against widow remarriage and worked for legal and social acceptance.



- **Organised welfare:** they set up schools, hostels, relief funds, orphanages and organised help during famines and natural calamities.



- **Confidence in cultural traditions:** reformers drew on India's ethical and spiritual traditions to argue for dignity, equality and social reform, creating a sense of pride in the past along with a call for change.

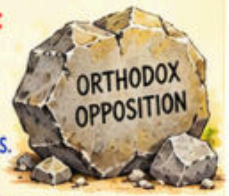


Limits

- **Dominant social base:** many reform associations were led by and mainly drew support from educated upper-caste groups, so their reach among lower castes, Adivasis and the rural poor was limited.



- **Orthodox opposition remained:** conservative groups strongly resisted changes such as women's education, widow remarriage and the attack on caste-based practices.



- **Religious revival and exclusion:** cultural and religious revival could coexist with progressive reform, but it could also encourage exclusionary attitudes, for example towards other religions or certain communities.



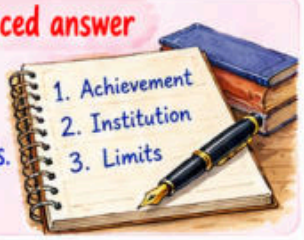
Andhra link

Veeresalingam's reform path is associated with Prarthana/Brahmo traditions. Do not automatically label every Telugu reformer as an Arya Samaj or Theosophical leader.



How to write a balanced answer

Name the achievement, explain the institution, then acknowledge its limits.



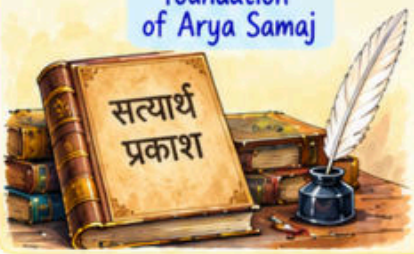
Sources: Supplied NCERT and Day26 notes; PIB 2004938.

Day26 | Topic251 | 251.10

Revision anchors: organise events by movement

ARYA SAMAJ

- **1875** — foundation of Arya Samaj
- **1886** — DAV school at Lahore
- **1902** — Gurukul at Kangri







RAMAKRISHNA MISSION

- **1893** — Chicago speeches
- **1897** — Kolkata 1 May 1897
- **1898** — Belur land acquired

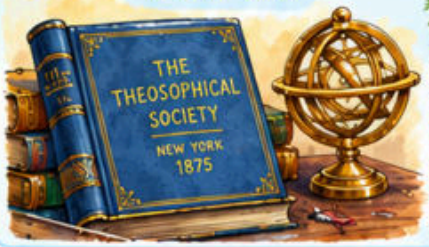






THEOSOPHICAL SOCIETY

- **1875** — founded in New York
- **1882** — Adyar headquarters
- **1886** — Adyar Library







Key connections: people and institutions

Hansraj	→	DAV school
Shraddhanand	→	Gurukul at Kangri
Besant	→	Central Hindu College
Olcott	→	Theosophical Society









Three checks

1. Founder is not always the namesake.
2. Headquarters need not be the founding place.
3. A shared year does not mean a shared movement.





Final anchor

1875 links Arya Samaj and the Theosophical Society—not the Ramakrishna Mission.

Buildings are conceptual illustrations.

Power, service and water: the Kakatiya system

The Kakatiyas ruled from Orugallu (Warangal). The king worked with ministers and appointed chiefs and officers. Their system linked the army, village administration and irrigation. Tanks helped agriculture, which provided revenue to support administration and the military.

King and ministers at Orugallu (Warangal)



The king, with ministers, coordinated the three working levels. Orders, records and resources linked them together.

Military chiefs maintain troops

Chiefs organised and maintained cavalry, elephants, infantry and equipment. They protected the kingdom and helped enforce the ruler's orders.



Cavalry and equipment (conceptual illustration)

Village servants maintain records and services

Village servants kept land records, collected dues, managed local services and organised labour for tank maintenance and other works. They linked the villages with the ruler's administration.



Village ledger and records (conceptual illustration)

Tanks support cultivation

The Kakatiyas built and maintained tanks to store monsoon rainfall. Tanks supplied water to fields, increased agricultural production and stabilised village life.



Irrigation tank and fields (conceptual cross-section)

How the system worked: from water to military support

Stored rainfall

Tanks captured monsoon rainfall and stored water for later use.



Cultivated fields

Irrigation from tanks helped grow crops and increased agricultural production.



Agrarian revenue

Higher production provided revenue in the form of taxes and other dues to the ruler.



Administration and military support

This revenue supported the administration, maintenance works including tanks, and the military.



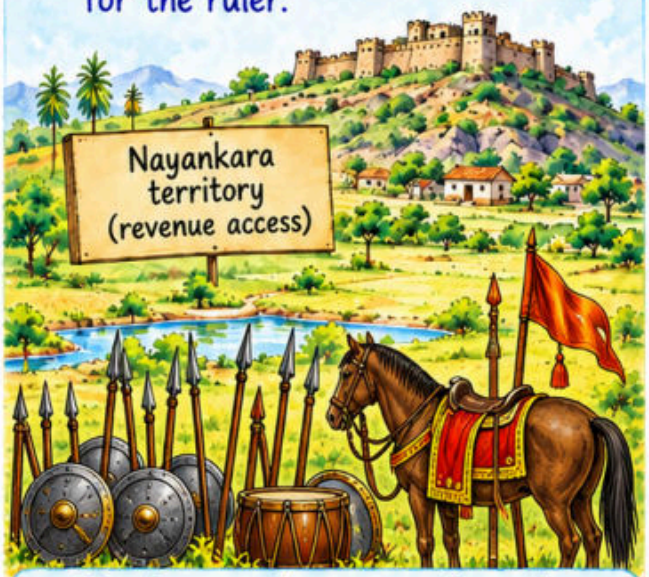
Important: This is a teaching model to show how the Kakatiya system linked irrigation, agrarian revenue, administration and military support. It does not mean that every tank financed a specific army unit.

Conceptual illustrations and diagrams; not historical reconstructions or site surveys.

Two kinds of service—not the same landholding

NAYAKA

- A military chief under the ruler.
- Granted a territory called nayankara.
- Obliged to maintain troops for the ruler.



Nayaka uses the revenue from the nayankara territory to maintain troops for the ruler.

AYAGAR

- Hereditary village service.
- Given tax-free manyam land in return for service.
- Examples: village accountant, village watchman, water distributor.





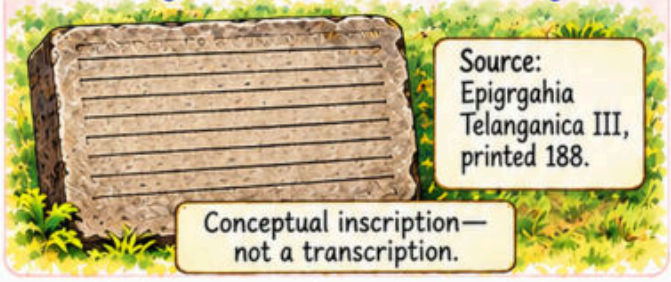
Village accountant (keeps records) | Village watchman (guards the village) | Water distributor (maintains water supply)

Nayankara territory (revenue access) ⟷ **Military service (troops)**

Manyam land (tax-free) ⟷ **Village service (e.g. accountant, watchman, water distributor)**

EVIDENCE FROM A RECORD (1311)

A record dated 1311 in the reign of Prataparudra, mentions Damagatla as the nayankara of Videmu Kommaya.



KEY POINTS TO REMEMBER

- **Nayaka:** military chief; territory called nayankara; obligation to maintain troops for the ruler.
- **Ayagar:** hereditary village service; tax-free manyam land in return for service; examples include village accountant, watchman and water distributor.
- Both are forms of service landholding under the ruler.
- Neither is an elected modern local body.

Conceptual illustrations and diagrams; not historical reconstructions or site surveys.

From nadu to the village: locate the function.

The Kakatiya period organised its territory in nested units. A nadu was a larger territorial unit. It contained one or more sthalas, and each sthala was a group of villages. Village was the basic unit where local administration and land management took place.

NESTED TERRITORIAL UNITS

NADU
(larger territorial unit)
Contains one or more sthalas.

STHALA
(group of villages)
Contains several villages.



VILLAGE
(basic unit)



VILLAGE
(basic unit)



VILLAGE
(basic unit)

HOW THE UNITS WORKED

Nadu
- larger territorial unit
- supervised administration, revenue and defence over a wider area.

Sthala
- a group of villages
- helped in local administration and coordination.

Village
- basic unit
- managed land, irrigation, local resources and daily administration.

KEY COURT OFFICES AND FUNCTIONS

Mahapradhana / Pradhana



Ministerial title. Senior minister who assisted the ruler in administration.

Amatya / Mantrin



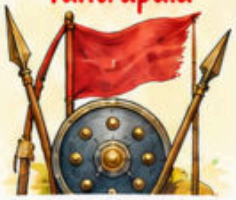
Ministerial title. Assisted in administration and various functions.

Gajasahini



In charge of elephant command and management.

Tantrapala



Army chief. Responsible for the military forces.

Lenkas



Royal bodyguards who protected the ruler and the royal establishment.

INSCRIPTIONAL EVIDENCE



Conceptual inscription–not a transcription

The term **Sabbi-one thousand** appears in inscriptions as a regional name. It is a recognised name in records of the period. It does not refer to a current census count.

REVISION CUES:

- Nadu is a larger territorial unit. It contains one or more sthalas.
- Sthala is a group of villages.
- Village is the basic unit.
- Mahapradhana, Pradhana, Amatya and Mantrin are ministerial titles.
- Gajasahini = elephant command.
- Tantrapala = army chief.
- Lenkas = royal bodyguards.
- Sabbi-one thousand is a regional name in inscriptions; not a modern census count.

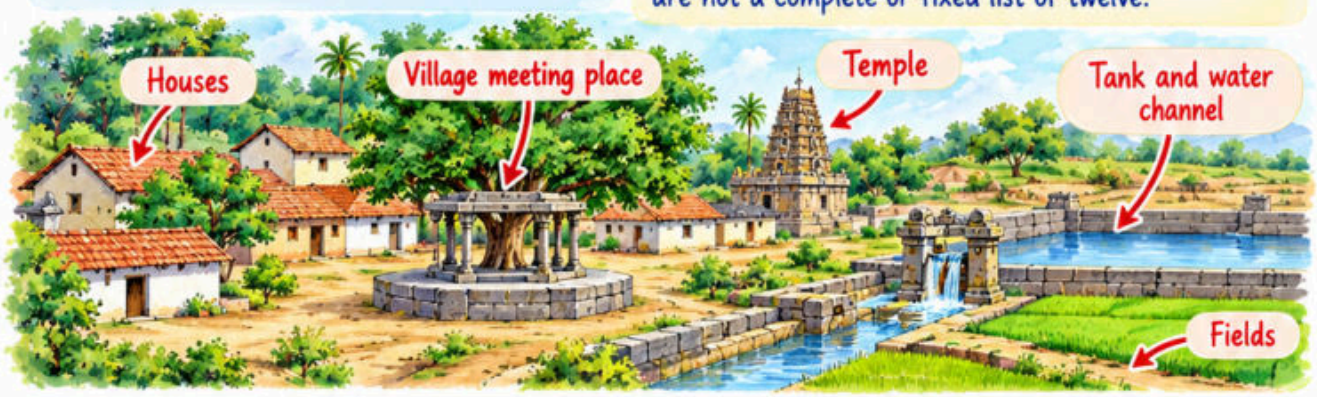
Conceptual illustrations and diagrams; not historical reconstructions or site surveys.

A village works through specialised service

Villages in the medieval period functioned smoothly because many specialised workers and service providers performed different duties. These were part of the village service system.

TEN EXAMPLES OF VILLAGE SERVICE ROLES

These ten roles are examples from the traditional list of ayagars. Each had a specific duty and received support, usually in the form of tax-free manyam land, for their hereditary service to the village. Conventionally there were twelve ayagars, but the list varied from place to place. These ten examples are not a complete or fixed list of twelve.



Reddi
Headman of the village. Settled disputes and maintained order.



Karanam
Kept accounts and maintained land records.



Talari
Night watch. Kept a watch over the village and ensured security.



Neerati
Managed the distribution of tank water to fields.



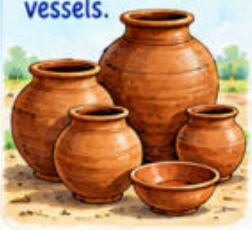
Kammari
Blacksmith. Made and repaired iron tools.



Vadrangi
Carpenter. Made and repaired wooden tools, carts and buildings.



Kummari
Potter. Made earthenware pots and other clay vessels.



Purohita
Provided ritual and religious services for the village.



Chakali
Washed clothes for the village.



Mangali
Barber. Provided grooming services such as hair cutting and shaving.



IMPORTANT POINTS TO REMEMBER

- These services were hereditary, meaning they were usually performed by the same families generation after generation.
- The ayagars were supported by tax-free land grants called manyam.
- Epigraphic records from the time of Rudramadevi mention the ayagamdru, showing that this village service system existed during her reign.

Conceptual illustrations and diagrams; not historical reconstructions or site surveys.

Why a tank fits the Telangana uplands

What is a tank?

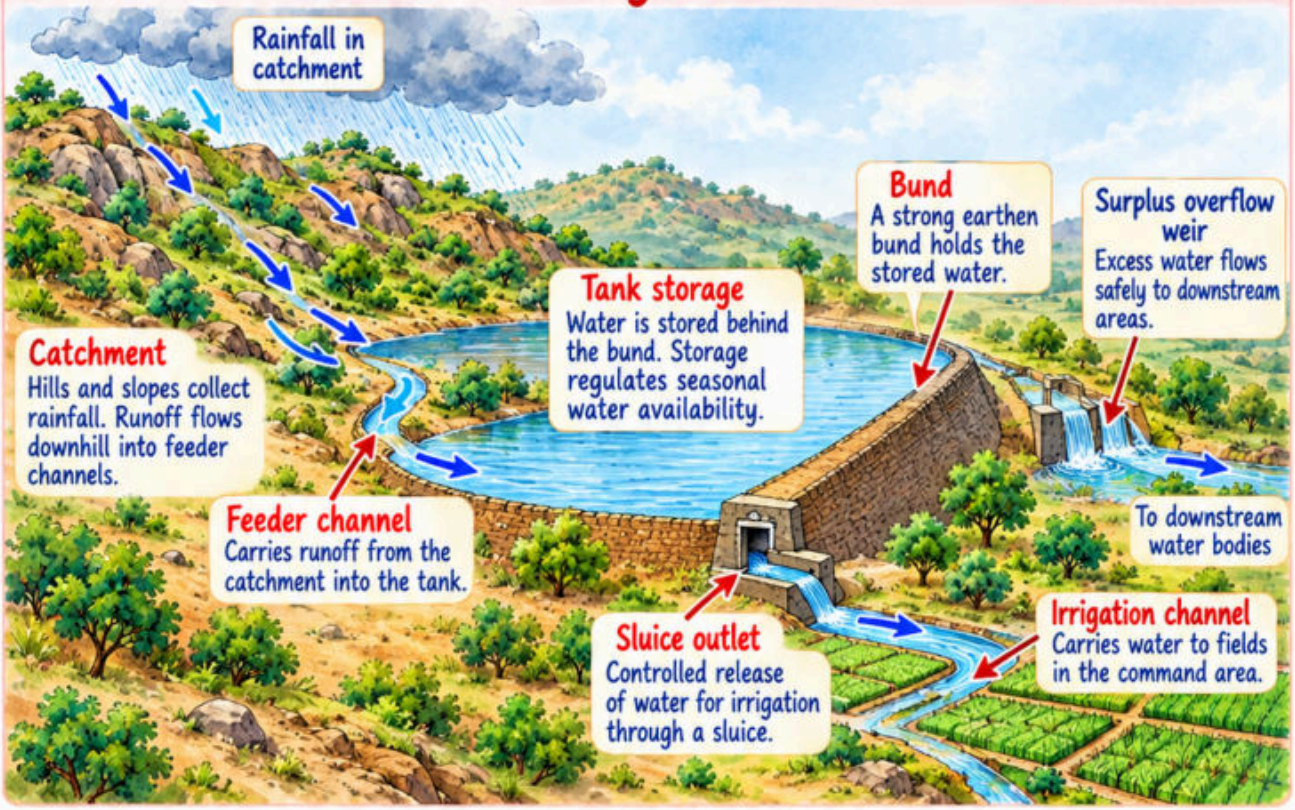
A tank is a man made water storage system that collects rainfall runoff, stores it behind a bund and releases water in a controlled way for irrigation. It also allows excess water to flow safely to downstream areas.



Why it suits the Telangana uplands?

- The region has undulating rocky terrain with seasonal rivers and streams.
- Rainfall is mostly in a few months, so storing water is essential.
- Tanks capture local runoff and reduce fast flow to downstream areas.
- Stored water supports irrigation and recharges groundwater in the surrounding uplands.

How a tank works as one system



Storage regulates seasonal availability

Tanks capture water during the rainy season and store it for use in the dry months. This helps provide a more reliable supply for irrigation, supports groundwater recharge in the surrounding area and reduces the impact of irregular rainfall.



Silt reduces usable storage

Soil and silt from the catchment are brought into the tank with runoff. Over time this silt accumulates on the tank bed and reduces the usable storage capacity. Regular maintenance such as desilting, strengthening the bund and keeping feeder channels clear is important for the tank to work well.

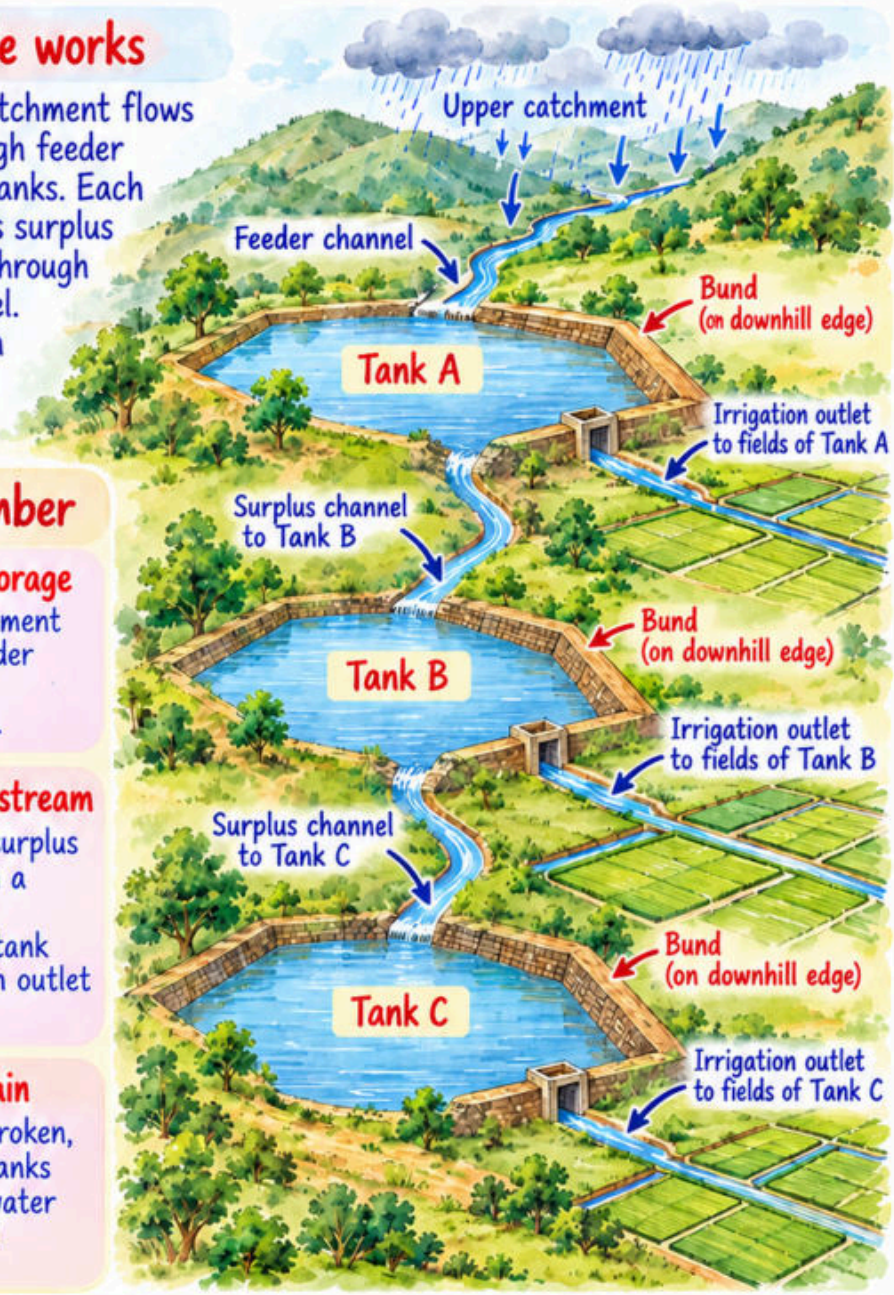


Conceptual illustrations and diagrams; not historical reconstructions or site surveys.

A chain of tanks: use the overflow without confusing it

How a tank cascade works

Rainfall over the upper catchment flows down natural slopes through feeder channels into a series of tanks. Each tank stores water, and its surplus can flow to the next tank through a controlled surplus channel. Each tank also has its own irrigation outlet to supply nearby fields.



Key points to remember

1 Catchment supplies storage

Rain falling on the catchment and flowing through feeder channels supplies water to the tanks for storage.

2 Surplus can feed downstream

When a tank is full, its surplus can be released through a controlled channel to a downstream tank. Each tank has a separate irrigation outlet to its own fields.

3 Breaks weaken the chain

If feeder channels are broken, blocked or silted, or if tanks are silted, the flow of water is reduced and the chain works poorly.

Modern restoration

Mission Kakatiya aims to restore storage by repairing bunds, sluices and feeder channels and removing silt from tank beds and channels. These interventions can improve storage and the use of surplus water in the cascade.



Conceptual cascade—not a site survey.

Keep in mind

- Not every tank is physically linked in a cascade. The actual arrangements vary from place to place.
- Restoration helps tanks store and share water better, but it does not guarantee water in every tank all the time.

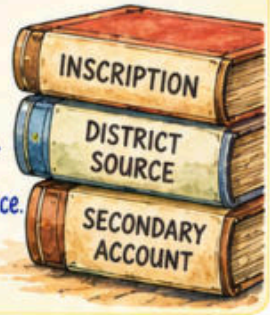
Conceptual illustrations and diagrams; not historical reconstructions or site surveys.

Match the tank to the evidence—not a guessed builder.

Many reservoirs in the Kakatiya period are known from inscriptions, district sources and later accounts. The evidence does not always agree, so we match each tank to the available evidence, not to a guess about the builder. This helps us understand history carefully.

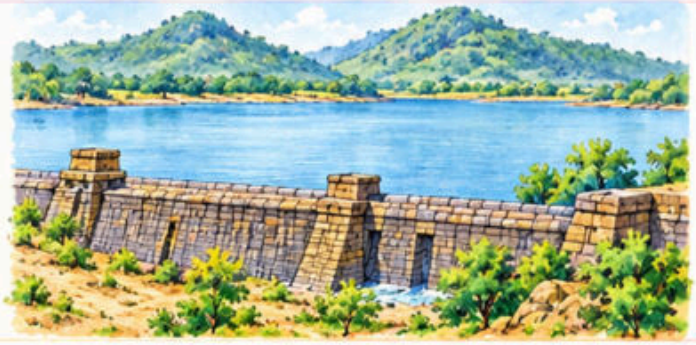
HOW TO COMPARE:

1. Read what each source says.
2. Match the tank to the evidence.
3. If sources differ, note the difference.
4. Do not guess a builder or date.



Pakhal

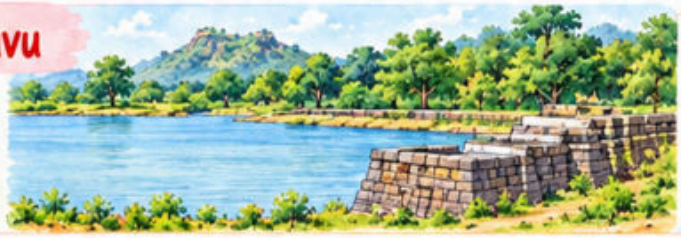
A large reservoir from the Kakatiya period.



EVIDENCE:
Built in the reign of Ganapatideva. The Warangal district official page says around 1213. A supplied secondary account cites 1243, so the exact chronology is disputed and not a quiz key.

Ramappa Cheruvu

A reservoir near Palampet's Ramappa temple.



EVIDENCE:
A Kakatiya reservoir near Palampet's Ramappa temple.

Laknavaram

Located in Govindaraopet mandal, Mulugu.



EVIDENCE:
A Kakatiya reservoir from the 13th century. The district source states that three valleys were closed by short bunds.

Bayyaram

A reservoir associated with Mailama (Mailamba), the sister of Ganapatideva.



EVIDENCE:
An inscription records the name Dharmakirti-Maila-Samudra.

Ghanapuram

A reservoir listed among the Kakatiya tanks by the state government.



EVIDENCE:
Listed among the Kakatiya tanks by the state government. Do not invent a builder or date.

Conceptual illustrations and diagrams; not historical reconstructions or site surveys.

Read Bayyaram as infrastructure and evidence

What is Bayyaram?

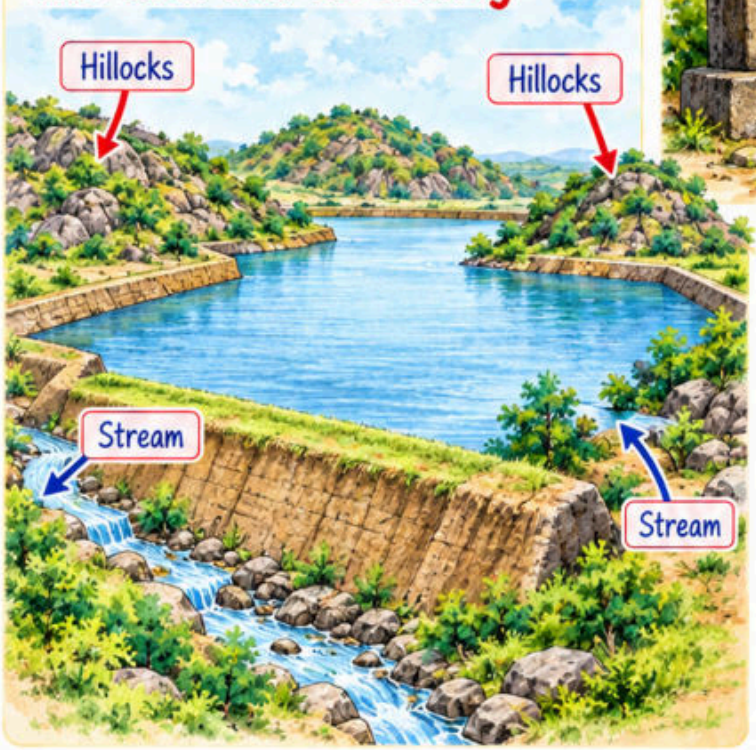
Bayyaram refers to a tank (lake) constructed in the Kakatiya period. An inscription from Bayyaram records the patron, the title of the tank and the Kakatiya genealogy.

The inscription at Bayyaram



- Recorded patron: Mailama (also written Mailamba), sister of Ganapatideva.
- Her title: Dharmakirti.
- Tank name: Dharmakirti-Maila-Samudra.
- The record gives the Kakatiya genealogy.
- The inscription is undated.
- Described in Epigraphia Telanganica II, printed 317–319.

The tank and its setting



How the tank was formed

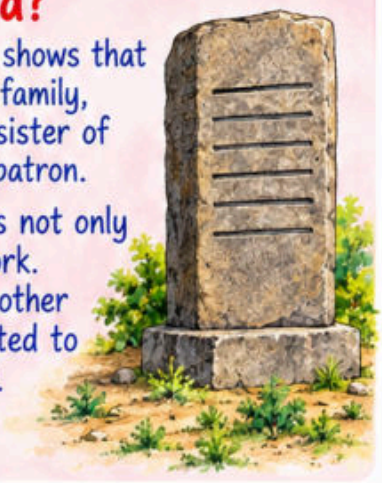
Streams flowing between hillocks were impounded by connecting bunds. By joining the natural valleys with bunds, water was stored to create a tank.



Who contributed?

The Bayyaram record shows that a woman of the royal family, Mailama (Mailamba), sister of Ganapatideva, was a patron.

Tank construction was not only the king's personal work. Women, generals and other patrons also contributed to the creation of tanks.



What we learn from Bayyaram

- Inscriptions are important evidence for understanding infrastructure.
- The Bayyaram record names the patron Mailama (Mailamba), her title Dharmakirti, and the tank Dharmakirti-Maila-Samudra.
- It also gives the Kakatiya genealogy.
- It shows that tank construction involved women, generals and other patrons, and was not only the king's personal work.
- The inscription is undated and is described in *Epigraphia Telanganica II*, printed 317–319.

Conceptual illustrations and diagrams; not historical reconstructions or site surveys.

Ramappa: temple, reservoir and cultivated landscape

The temple at Palampet, the reservoir (Ramappa Cheruvu) and the village with agricultural fields form a connected cultural landscape. They are not just an isolated monument.

A connected cultural landscape

Temple, reservoir and agricultural fields supported each other and functioned as a single landscape.

Temple at Palampet

Built under the patronage of Recharla Rudra. A major temple in the landscape.

Ramappa Cheruvu

A reservoir (tank) that stored water and supported agriculture in the village and surrounding fields.

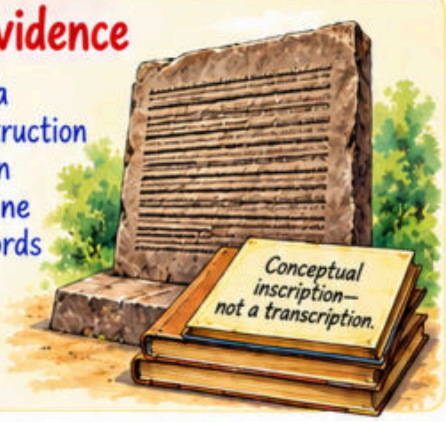


Village and agricultural fields

Fertile fields used water from the reservoir. Agriculture supported the village and the temple.

ICOMOS evidence

Recharla Rudra began the construction of the temple in 1213. A 204-line inscription records this. He also supported Ganapatideva.



Saptasantana idea

In this period, building temples and digging tanks were counted among the meritorious acts (Saptasantana idea).



Ruler and general: different roles

Ganapatideva

The ruler of the Kakatiya kingdom. Recharla Rudra supported Ganapatideva.

Recharla Rudra

A general who began the construction of the temple in 1213, recorded in a 204-line inscription.

World Heritage inscription

The Kakatiya Rudreshwara (Ramappa) Temple was inscribed on the World Heritage List on 25 July 2021.



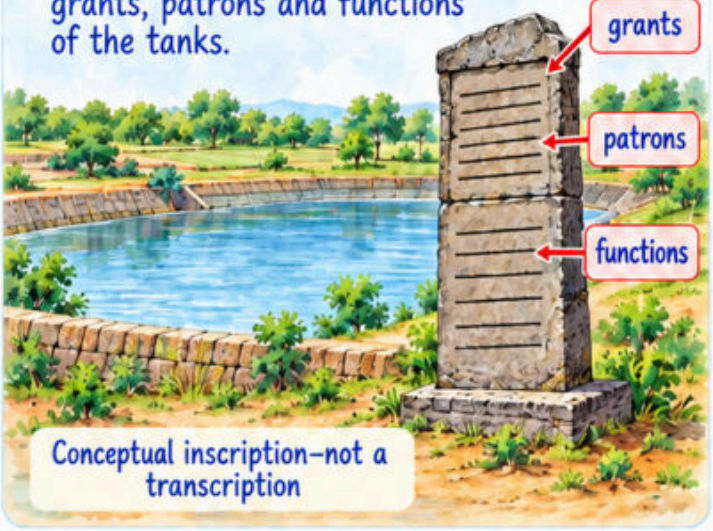
Buildings and landscape are conceptual illustrations, not site reconstructions.

Conceptual illustrations and diagrams; not historical reconstructions or site surveys.

Old infrastructure, modern restoration: keep the dates separate.

Kakatiya era
(c. 12th–14th centuries)

- Tanks were built by multiple patrons for cultivation.
- Inscriptions identify the grants, patrons and functions of the tanks.



Conceptual inscription–not a transcription

Modern Mission Kakatiya

- A restoration programme, not a medieval scheme.
- As per the official July 2014 enumeration, there are around 46,531 minor-irrigation sources, including tanks, percolation tanks, private kuntas, anicuts and check dams.
- These sources are not all Kakatiya-built.
- This is not a 2026 achievement count.


Restored tank under Mission Kakatiya (conceptual)

Restoration works under Mission Kakatiya

The aim is to restore storage through desilting and to repair the bunds, sluices, feeder channels and irrigation channels.

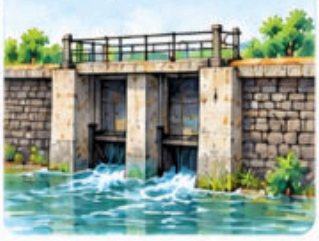
Desilting to restore storage



Repair bunds



Repair sluices



Restore feeder and irrigation channels



Remember these distinctions

1 Nayankara ≠ Manyam

Nayankara and manyam are different types of grants. They are not the same.


Nayankara (a grant type)


Manyam (a different grant type)

2 Sthala below nadu

Sthala is a smaller unit below nadu in the administrative hierarchy.

Nadu
↓
Sthala



3 Do not transfer a temple date to a lake

A temple foundation date does not by itself establish when a nearby lake was built.


Temple foundation date

Check separately


Lake construction date

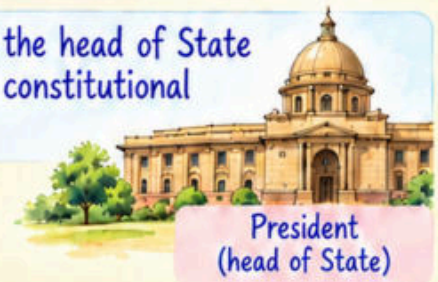
Conceptual illustrations and diagrams; not historical reconstructions or site surveys.

The key test: who governs, and whose confidence matters?

Compare India's parliamentary executive with the US presidential model.

India: Parliamentary model

President is the head of State and formal constitutional executive.



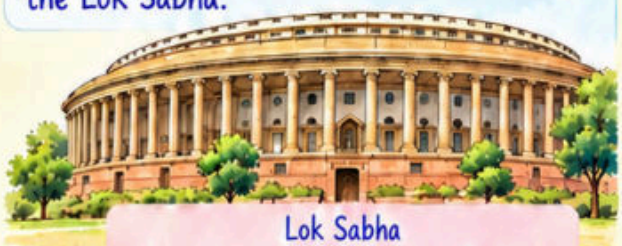
President
(head of State)

Prime Minister and Council of Ministers exercise real executive leadership.



Prime Minister and Council of Ministers
(real executive leadership)

The Council of Ministers is collectively responsible to the Lok Sabha.



Lok Sabha
(gives and can withdraw confidence)

Confidence of Lok Sabha

Council of Ministers: depends on Lok Sabha confidence.

USA: Presidential model

President combines head of State and head of government.



President
(head of State and head of government)

President does not need Congress's continuing confidence to remain in office.

President is elected separately.

Congress cannot remove the President merely for loss of legislative confidence. Impeachment is distinct.



Presidential election
(elects the President)

Congress
(legislative branch)

Two constitutional models

These are two constitutional models. They show how India and the USA organise executive leadership. They are not a rule that every country fits perfectly.

Conceptual institutional illustrations.

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

India: formal executive and real executive work together.

Article 53(1)

The union executive power is formally vested in the President of India.



President of India formal head of the Union executive.

Article 74(1)

The Council of Ministers with the Prime Minister as its head aids and advises the President in the exercise of the executive power of the Union.

advice



Council of Ministers headed by the Prime Minister aids and advises.

President acts according to advice.

The President acts in accordance with the advice of the Council of Ministers.



The President may require the Council of Ministers to reconsider its advice.

After reconsideration, the President must act in accordance with the advice tendered on reconsideration.

Article 75(3)

The Council of Ministers shall be collectively responsible to the Lok Sabha.



Working together in the Union executive.

The Constitution provides formal vesting of executive power in the President and day-to-day political executive leadership through the Council of Ministers headed by the Prime Minister. They work together as a single Union executive in accordance with the constitutional scheme.



No contradiction.

There is no contradiction between Article 53(1) and Article 74(1). Article 53(1) provides for formal constitutional vesting of the Union executive power in the President, while Article 74(1) and Article 75(3) provide for day-to-day political executive leadership and collective responsibility to the Lok Sabha. Both provisions operate together in the constitutional scheme.

Day 26 | Topic 253 | 253.02

Conceptual institutional illustrations.

Source: The Constitution of India (as on 1 May 2024), printed on 26, 34.

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Confidence links the ministry to the elected House.

Lok Sabha



Elected House

Confidence and accountability

Questions, debate, scrutiny and confidence test ensure parliamentary accountability.

Council of Ministers



Collectively responsible to the Lok Sabha.

Loss of confidence leads to resignation

If the Council of Ministers loses the confidence of the Lok Sabha, it must resign.



Loss of majority does not impeach the President.

Loss of majority in the Lok Sabha does not automatically impeach the President.



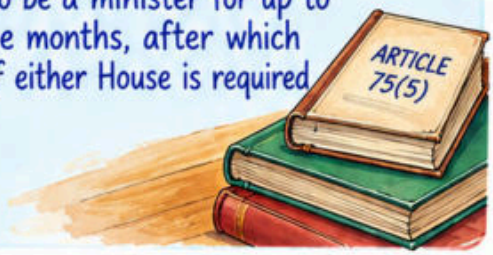
Role of the Rajya Sabha

The Rajya Sabha scrutinises the government and its work, but it cannot remove the government by a no-confidence motion.



Ministers may belong to either House

Ministers can be members of either the Lok Sabha or the Rajya Sabha. Article 75(5) permits a person who is not a member of either House to be a minister for up to six consecutive months, after which membership of either House is required to continue.



No-confidence is collective

A no-confidence motion is against the Council of Ministers as a whole. It does not mean that an ordinary criticism or censure of one minister automatically dismisses the entire Council of Ministers.



Day 26 | Topic 253 | 253.03

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

USA: separate institutions, not disconnected institutions

Congress
Legislative
Article I



Makes and passes laws for the United States.

President
Executive
Article II



Implements and enforces the laws.

Courts
Judicial
Article III



Interprets the law and decides cases.

Checks and balances: they check each other

1 Congress legislates.



Congress passes a bill.

2 President may veto a bill.



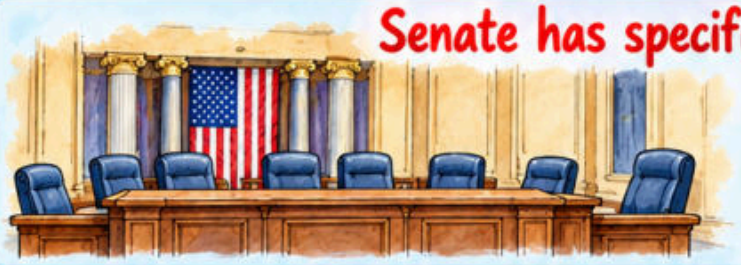
The President. may veto a bill.

3 Congress can override.



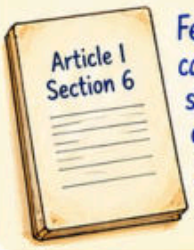
Congress can override a presidential veto with constitutional supermajorities.

Senate has specific roles.



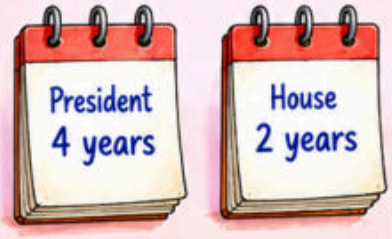
- The Senate has roles in specified executive appointments.
- The Senate has roles in specified treaties.

No simultaneous office.



Federal office-holders cannot simultaneously sit in either House of Congress (Article I, Section 6).

Terms of office.



Separate mandates may require negotiation.



Separate electoral mandates may require negotiation.



Important limit.

The President cannot dissolve Congress.

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

No-confidence and impeachment answer different questions.

India government:

Does Council retain Lok Sabha confidence?



A no-confidence motion is moved and passed in Lok Sabha.

↓

If the motion is passed, the ministry resigns.



↓

No wrongdoing charge is required.

India President:

Charge of violation of Constitution under Article 61.



Either House of Parliament may initiate the charge.

↓

Follow the constitutional special procedure.



↓

This is not a no-confidence process.

USA President:







House of Representatives impeaches. → Senate tries the case. → Conviction requires two-thirds of the members present.

Grounds for impeachment:

- treason
- bribery
- or other high crimes and misdemeanors.

Loss of Congress majority is not a removal ground for the President.

Caution:

Impeachment is not every possible end or interruption of presidential tenure.



≠ Resignation, death and incapacity arrangements are distinct.

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Read the thresholds: India and USA do not use one rule.

India – Article 61

Constitutional source: India 2024 text

1 Notice to initiate

At least 14 days' written notice signed by at least one-fourth of the total membership of the House that initiates the resolution.



2 Passing the resolution

The initiating House must pass the resolution by at least two-thirds of the total membership.



$\frac{2}{3}$ of the **TOTAL membership**

3 Other House investigates

The other House investigates the charge.



4 Sustaining the charge

If the other House sustains the charge by at least two-thirds of the total membership, the President is removed from office.



$\frac{2}{3}$ of the **TOTAL membership**

USA – Impeachment and Removal

Constitutional source: US Archives

1 House has sole power of impeachment

The House of Representatives has the sole power to impeach the President.



2 Senate tries the case

The Senate tries impeachments.



3 Conviction threshold

Conviction requires two-thirds of the members present.



$\frac{2}{3}$ of the **MEMBERS PRESENT**

4 Chief Justice presides

When the President is tried, the Chief Justice presides over the Senate.



KEY DIFFERENCE IN DENOMINATORS

India (Article 61) uses the **TOTAL membership** of the House.



$\frac{2}{3}$ of the **TOTAL membership**

USA uses the **MEMBERS PRESENT** for conviction.



$\frac{2}{3}$ of the **MEMBERS PRESENT**

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Four, two and five: distinguish the constitutional terms.

U.S. President

Term: 4 years



4 years

Separate schematic timelines—not to scale

The U.S. President remains in office for a fixed term of 4 years.

U.S. House of Representatives

Term: 2 years



2 years

Separate schematic timelines—not to scale

Members of the U.S. House of Representatives serve for a term of 2 years.

India Lok Sabha

Ordinary term: 5 years (unless dissolved sooner)



5 years

Separate schematic timelines—not to scale

The Lok Sabha has an ordinary term of 5 years, unless it is dissolved sooner.

Indian ministry tenure



The tenure of the Indian ministry depends on the confidence of the Lok Sabha, not a guaranteed 5 years.

Article 85(2)(b)

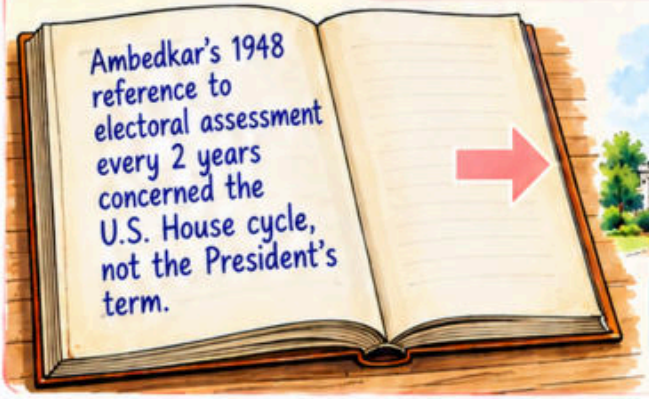


The President may dissolve the Lok Sabha.



The Rajya Sabha is not subject to dissolution.

Ambedkar's 1948 reference





Every 2 years (U.S. House cycle)



4 years (U.S. President's term)

The example is about constitutional periods, not the current election schedule.

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Ambedkar's choice: responsibility and stability

Dr. B. R. Ambedkar explained why the Constitution chose a parliamentary executive that is responsible to the legislature.



Ambedkar's analysis

(4 November 1948, Constituent Assembly speech)

A parliamentary executive remains in office only as long as it enjoys the continuing confidence of the legislature.

A non-parliamentary executive has a fixed tenure and does not depend on the continuing confidence of the legislature. →

Draft's preference

The Draft preferred more responsibility over more stability.

How accountability works in a parliamentary system

Daily questions and debate



The executive is questioned and scrutinised during legislative sittings. →

Confidence of the legislature



The government must retain the continuing confidence of the legislature. →

Periodic election



The people periodically elect the legislature, which holds the executive to account.

India's earlier experience



India's experience under the Acts of 1919 and 1935 showed the need for an accountable government.

Key point

- The desire for an accountable government was one of the reasons given in the NCERT.
- These are Ambedkar's historical comparative arguments, not a mathematical law that one system is always unstable or unaccountable.
- The choice reflects a judgment that responsibility to the legislature is more important than greater stability.

Day 26 | Topic 253 | 253.08

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Compare trade-offs without declaring a universal winner.

Parliamentary



Continuing legislative accountability

The executive remains accountable to the legislature.



Coordination can help policy.

Shared control between executive and legislature can help in policy making and implementation.



Fragile majority may cause instability.

A small or fragile majority may lead to frequent changes in government.



Strong party majority may weaken scrutiny.

A very strong party majority can reduce the effectiveness of legislative scrutiny.



Presidential



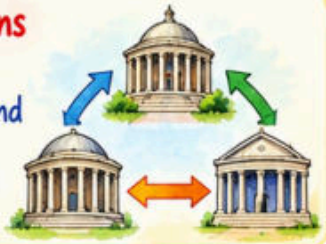
Fixed tenure can promote continuity.

The executive serves a fixed term, which can help policy continuity.



Separate institutions check power.

Executive, legislature and other institutions are separate and can check each other's power.



Competing mandates may produce deadlock.

Different mandates for executive and legislature may lead to deadlock.



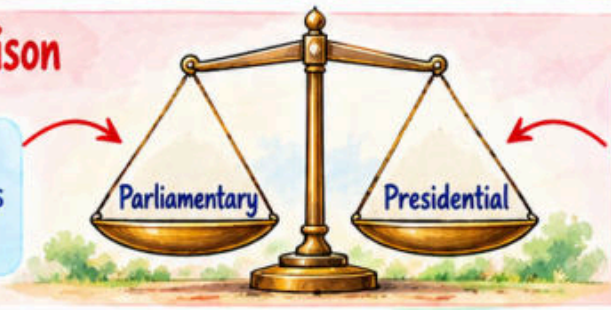
Fixed term can reduce flexibility.

A fixed term may make it harder to respond quickly to new situations.



Overall comparison

Each system has important advantages and potential risks.



The trade-offs depend on the party system, institutions, political culture and constitutional checks.

Key takeaway



- Neither system automatically guarantees democracy, efficiency or rights.
- The risks and benefits depend on the party system, institutions, political culture and constitutional checks.

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

A President's title does not identify the system.

The title of the head of state, such as President, does not by itself tell us whether a country follows a parliamentary or a presidential system.

Diagnostic questions

Read these together; hybrid systems need closer constitutional analysis.

1 Who heads the government?

Is the head of government the President, a Prime Minister, or another office?



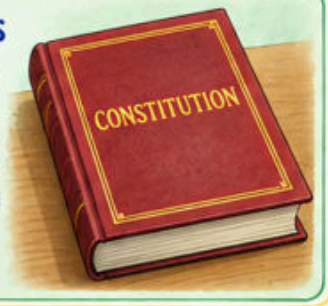
2 Does the executive require the legislature's continuing confidence?

Can the government be removed if it loses the confidence of the legislature?



3 How are executive powers divided by this country's constitution?

Are executive powers concentrated in a single office or shared between a President and a Prime Minister (or other offices)?



Two clear examples

India has a President but follows a parliamentary government.



United States of America follows a presidential system.



Hybrid models need their own constitutional reading.



Country classifications can vary across textbooks. Read constitutional powers and responsibility, not the title alone.

Relevant constitutional provisions for revision

Article 53



Formal vesting of executive power.

Article 74



President to act on the advice of Council of Ministers.

Article 75(3)



Collective responsibility of the Council of Ministers.

Article 75(5)



A minister who is not a member of either House for six consecutive months ceases to be a minister.

Article 61



Impeachment of the President.

Article 85



Dissolution of the Lok Sabha by the President.

Last cue: Confidence is not the same as impeachment, and the formal executive is not the same as the day-to-day political executive.

Day 26 | Topic 253 | 253.10

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Who governs—and who must retain confidence?

Article 74(1)

There shall be a Council of Ministers with the Prime Minister at the head to aid and advise the President.



President
Constitutional head

Advice

Reconsideration (if required)



Council of Ministers
with the Prime Minister at the head

Aids and advises

How the President acts

1. The President acts on the advice of the Council of Ministers.
2. The President may request the Council of Ministers to reconsider the advice.
3. After reconsideration, the President is bound to act in accordance with the advice tendered by the Council of Ministers.

Collective responsibility

The Council of Ministers is collectively responsible to the Lok Sabha.



Collective responsibility

Council of Ministers
(with the Prime Minister at the head)

Lok Sabha

Article 74(2)

Courts cannot inquire whether or what advice was tendered by ministers to the President.

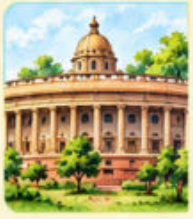
This does not mean that all underlying government action is immune from review.



Formal and political leadership are distinct



President
Constitutional head. Acts on the aid and advice of the Council of Ministers.



Prime Minister and Council of Ministers
Political executive. Collectively responsible to the Lok Sabha.

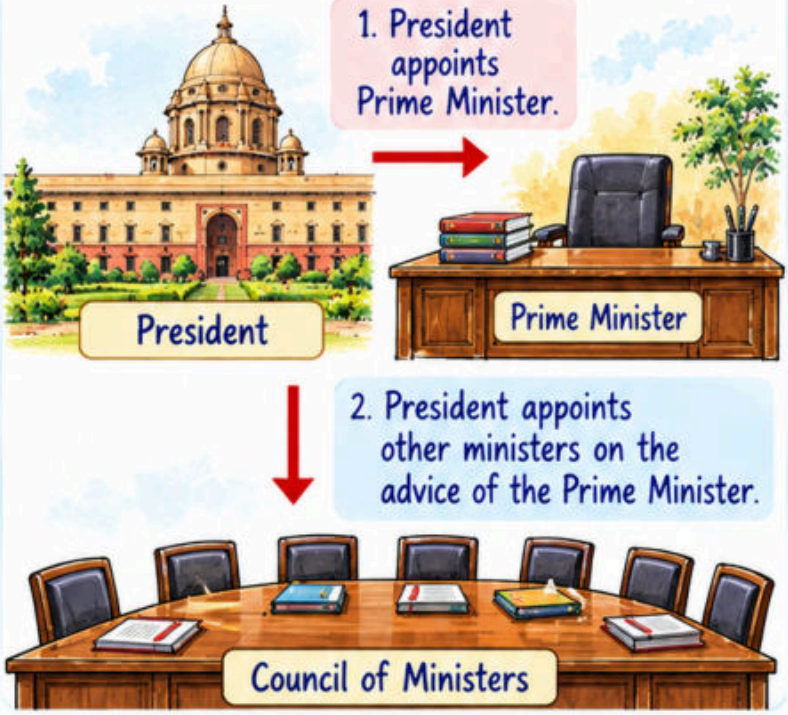
Day 26 | Topic 254 | 254.01

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Appointment is not unrestricted personal choice.

Article 75 (1)

The President appoints the Prime Minister.
The President appoints the other ministers on the advice of the Prime Minister.



Prime Minister must command Lok Sabha confidence.

The Prime Minister must have the confidence of the Lok Sabha.

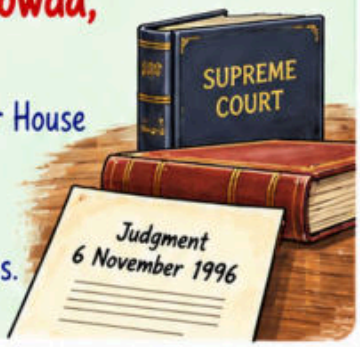


This requirement limits the President's choice.
The appointment is not an unrestricted personal choice.

S. P. Anand v H. D. Deve Gowda, 6 November 1996

A person who is not a member of either House may be appointed as Prime Minister.

The requirement of confidence and accountability to the Lok Sabha remains.



Article 75 (2)

Ministers hold office during the pleasure of the President, but this operates within the parliamentary framework.



This does not imply an automatic five-year ministry tenure.

Hung-house situation.

In a hung-house situation, the choice of Prime Minister is bounded by the requirement of confidence, not by arbitrary discretion.



Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Article 75: attach each rule to its own clause



Article 75 of the Constitution lays down key provisions about the Council of Ministers, including its composition, tenure, responsibility, oaths and emoluments.

75(1) Appointments

The Prime Minister is appointed by the President. Other Ministers are appointed by the President on the advice of the Prime Minister.



75(1A) 15% ceiling including PM

The total number of Ministers, including the Prime Minister, shall not exceed 15% of the total number of members of the Lok Sabha.



75(1B) Bar for disqualified party member

A person who is a member of a political party and is disqualified under Tenth Schedule paragraph 2 shall not be appointed as a Minister until the expiry of his term or until he is earlier declared elected to a House, whichever is earlier.



75(2) Pleasure of the President

The Council of Ministers shall hold office during the pleasure of the President.



75(3) Collective responsibility to Lok Sabha

The Council of Ministers shall be collectively responsible to the Lok Sabha.



75(4) Oaths of office and secrecy

The President shall administer to the Ministers the oaths of office and secrecy in the forms set out in the Third Schedule.



75(5) Six consecutive months without membership

A Minister who for any period of six consecutive months is not a member of either House of Parliament shall cease to be a Minister.



75(6) Salaries and allowances

The salaries and allowances of Ministers shall be such as Parliament may by law determine, and until such law is made, shall be those specified in the Second Schedule.



91st Amendment Act, 2003 | Inserted clauses 75(1A) and 75(1B) in Article 75.

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Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

15% is a ceiling — not a target.

Constitutional rule

The total number of ministers, including the Prime Minister, shall not exceed 15% of the total strength of the Lok Sabha.



Exact calculation for Lok Sabha strength 543

15% of 543
= 543 × 15/100

→

$543 \times \frac{15}{100}$
= **81.45**

→

The integer count cannot exceed **81** (ministers, including the Prime Minister). **Not 82** by rounding.

81 ≤ 81.45 ✓
Allowed (within the limit).

82 > 81.45 ✗
Not allowed (exceeds the limit).

Who is counted?

All ministerial ranks are included, not just the Cabinet.



Denominator

The 15% limit is on the total strength of the Lok Sabha only, not on both Houses combined.



Which House can ministers belong to?

Ministers may belong to either House of Parliament (Lok Sabha or Rajya Sabha).



Ceiling versus actual strength

This is a calculation for a Lok Sabha strength of 543, not a claim that 81 ministers are serving. Actual Council membership changes over time.



Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Six months: membership and voting are different.

Article 75(5)

A non-member minister — including the Prime Minister — must become a member of either House within six consecutive months from the date of appointment, otherwise he or she ceases to hold office at the end of that period.

Appointment to membership: timeline



Appointment as minister (non-member)





Become a member of either House

OR



Ceases to hold office at the end of the period

S. P. Anand, 1996

The Supreme Court in S. P. Anand (1996) confirms that the Prime Minister is not excluded from the requirement of Article 75(5).



Article 88: Right to speak and participate

A minister may speak and participate in either House, a joint sitting of the two Houses, and in a committee of which he or she is a named member.



Either House



Joint sitting of the two Houses



Committee of which named member

Article 88 does not grant a right to vote.

Voting rights: clear difference

Lok Sabha member



- ✓ Votes only in the Lok Sabha.
- ✗ Does not vote in the Rajya Sabha.

Rajya Sabha member



- ✓ Votes only in the Rajya Sabha.
- ✗ Does not vote in the Lok Sabha.

Non-member minister



- ✗ Cannot vote in either House.

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Cabinet sits inside the larger Council.

Council of Ministers

The Council of Ministers includes the Union Cabinet, Ministers of State (Independent Charge) and other Ministers of State.

Union Cabinet

= Prime Minister + Cabinet rank ministers



Prime Minister + Cabinet rank ministers

Ministers of State (Independent Charge)

A distinct rank. They head a ministry independently.

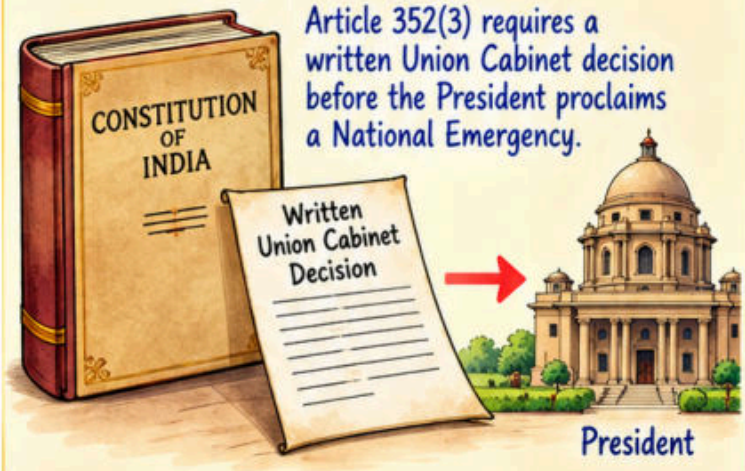


Ministers of State (other)

They work under the guidance of a Cabinet minister.



Article 352(3)



Article 352(3) requires a written Union Cabinet decision before the President proclaims a National Emergency.

What is the Union Cabinet?

The Cabinet is the Prime Minister and the other Cabinet rank ministers appointed under Article 75.



Prime Minister + Other Cabinet rank ministers

Not all ministers are Cabinet members.

The Council of Ministers is larger than the Cabinet. Ministers of State (Independent Charge) and other Ministers of State are part of the Council of Ministers, but they are not automatically members of the Cabinet.

Independent charge is a distinct rank.

A Minister of State (Independent Charge) holds a separate rank and heads a ministry independently. This does not give them Cabinet status.



Deputy minister (historical rank)

Deputy minister was a historical rank. It is not shown as a current appointment.

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Collective responsibility is not the same as individual tenure.

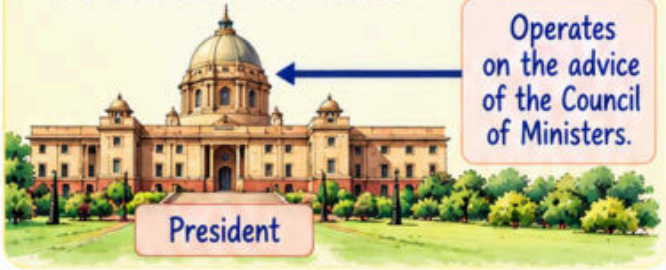
Article 75(3) – Whole Council

The Council of Ministers as a whole is collectively responsible to the Lok Sabha and must retain its confidence.



Article 75(2) – Individual Minister

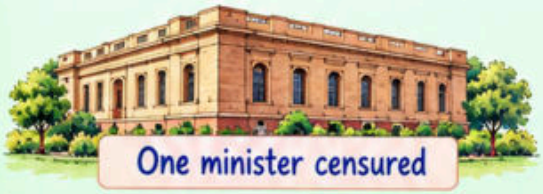
Each minister holds office during the pleasure of the President, who acts on the advice of the Council of Ministers.



Ordinary censure of one minister ≠ automatic dismissal of whole Council.

A censure or loss of confidence against an individual minister does not automatically dismiss the entire Council of Ministers.

≠



A successful no-confidence motion concerns the Council of Ministers as a whole and can lead to its dismissal.



Cabinet decisions and the principle of collective responsibility.

Ministers must support Cabinet decisions. If a minister cannot support a decision, the proper course is to resign. This follows the principle of collective responsibility, not unlimited individual discretion.



Minister from Rajya Sabha.

A minister who is a member of the Rajya Sabha is still part of the Council of Ministers and is collectively responsible to the Lok Sabha.

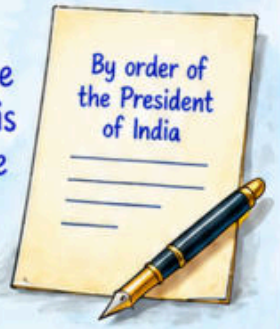


Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

From a policy file to government action.

Article 77(1)

Executive action of the Government of India is expressed in the name of the President.



Article 77(3)

Provides for rules for the transaction of business of the Government of India and for allocation of business among Ministers.



Allocation of Business Rules, 1961

Distribute subjects among Ministries and Departments.



Transaction of Business Rules, 1961

Organize the decision process of the Government of India.



Cabinet Secretariat

Directly under the Prime Minister. Provides secretarial assistance to the Cabinet and its committees, and facilitates inter-ministerial coordination.



From a policy file to action

A file moves through a defined process, with coordination and decisions at the appropriate level. Not all routine files require consideration by the Cabinet.

1. Ministry prepares proposal



The concerned Ministry prepares a proposal on its subject.

2. Coordination



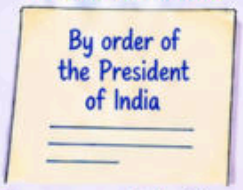
The proposal is examined and coordinated with other Ministries as required.

3. Decision



The decision is taken at the appropriate level as per the rules.

4. Action in the President's name



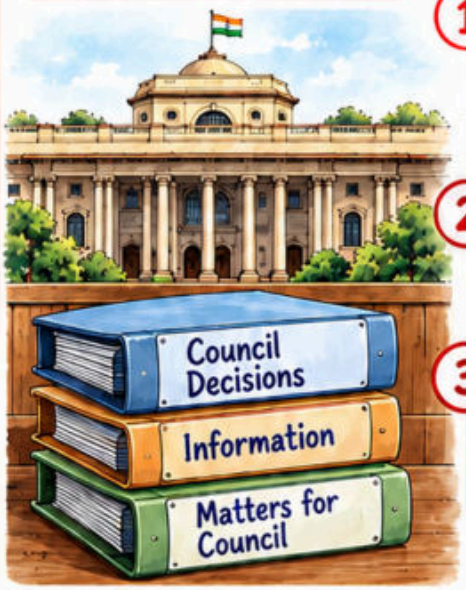
The approved decision is issued as executive action in the name of the President.

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Article 78 makes the PM an information link.

Article 78 requires the Prime Minister to keep the President informed about the work of the government. It creates an information link, not a transfer of decision making power.

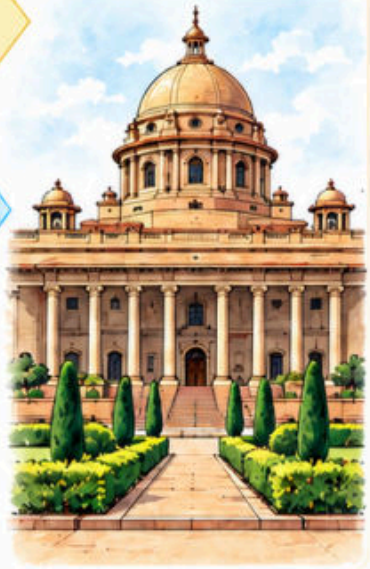
Prime Minister



1. Communicate Council decisions on administration and proposals for legislation.
2. Furnish information that the President calls for.
3. At the President's request: PM submits to the Council a matter decided by one Minister but not considered by the Council.

→ Council of Ministers

President



These provisions do not mean that the President personally takes all policy decisions. The President is kept informed through the Prime Minister.

Prime Minister heads the Council of Ministers.

The Prime Minister:

- heads the Council of Ministers.
- advises the President on the appointment of other Ministers and on the allocation of portfolios.



Special roles held by the Prime Minister.

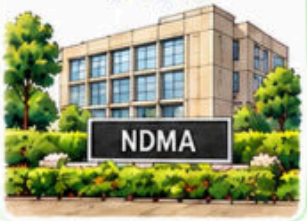
NITI Aayog

The Prime Minister is the Chairperson of NITI Aayog ex officio.



National Disaster Management Authority

The Prime Minister is the Chairperson of the NDMA ex officio.



The Prime Minister is not the chairperson of every disaster related body. The National Executive Committee (NEC) is headed by the Union Home Secretary.

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Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

A dated roster is not a constitutional rule.

PMO roster snapshot
as on 25 July 2026
(checked 1 November 2026)

Category	Number
Prime Minister	1
Cabinet Ministers	29
Ministers of State (Independent Charge)	5
Ministers of State	34
Total	69

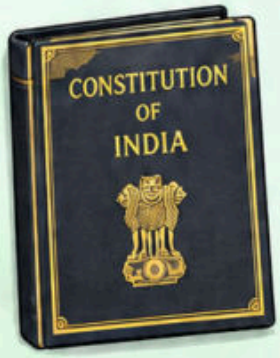
- 29 EXCLUDES Prime Minister.
- No Deputy Minister listed.
- 1 + 29 + 5 + 34 = 69.
- This is an official roster on 25 July 2026.
- Rosters can change over time.

Roster records a dated composition



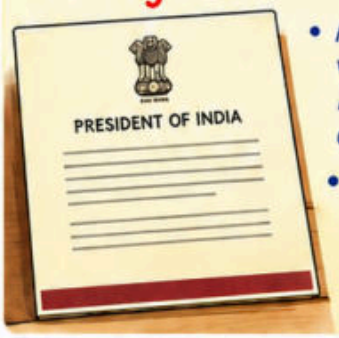
- The PMO roster shows the composition as on 25 July 2026.
- It is an administrative list, not a constitutional rule.
- The composition can change over time due to resignations, new appointments or portfolio changes.

Constitution ceiling is separate



- The Constitution prescribes a ceiling of 15% of the total strength of the Lok Sabha on the Council of Ministers.
- This constitutional limit is distinct from the actual count in the PMO roster.

Official Presidential communiqué 25 July 2026



- A minister's resignation was accepted under Article 75 (2) on the advice of the Prime Minister.
- A portfolio being given as an additional charge was also on the advice of the Prime Minister.

Other relevant provisions



15% cap
Total number of ministers cannot exceed 15% of the total strength of the Lok Sabha.



Six months
A person who is not a member of Parliament must become a member of either House within six consecutive months or cease to be a minister.



Third Schedule
Ministers take the oaths of office and secrecy as provided in the Third Schedule.

Article 88: no automatic vote



A minister who is not a member of either House of Parliament does not have an automatic right to vote in the proceedings of that House under Article 88.

Key takeaway



- The PMO roster is a dated administrative
- It is not a constitutional rule.
- The constitutional ceiling and the actual count are separate.
- Rosters change over time.

Day 26 | Topic 254 | 254.10

Source: pmindia.gov.in (Portfolios marked 25.07.2026)

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Planning turns scarce resources into chosen priorities.

A plan specifies the use of resources toward goals over time.
It is not just a budget or a list of wishes.

1. Resources

Resources are limited. They include land, water, minerals, energy, money and skilled people.



2. Priorities

Society chooses goals because resources are scarce. Important priorities may include food, industry, education and infrastructure.



3. Allocation

Resources are allocated to chosen priorities. Land, money, materials and skilled people are directed to different sectors.



4. Implementation

Resources are used to carry out projects and programmes in each sector over time.



More farmland and irrigation



Industries and production



Schools and learning facilities



Transport and other infrastructure

5. Review

Progress is checked against goals. Successes and gaps are identified. The plan is updated for the next period.



Planning over different time periods

India historically used five year plans.
Different time periods are linked.



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Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Four goals—not four identical priorities

The plans aimed at four broad goals. These goals guided development, but they were not given the same weight in every plan. Achieving one goal can sometimes be at the cost of another, so they have to be balanced carefully.

1 Growth

Growth means expanding the productive capacity of the economy so that more output is produced.



2 Modernisation

Modernisation includes using new technology as well as a modern social outlook, such as equal rights for women.



3 Self-reliance

In historical planning, self-reliance meant reducing foreign dependence, especially for food and goods that could be produced domestically.



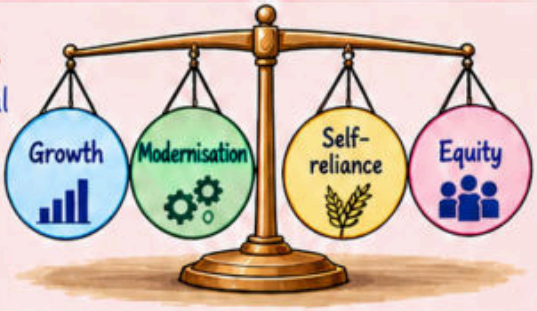
4 Equity

Equity means spreading the benefits of development and meeting basic needs such as food, education, health and other essential services.



The goals can trade off.

Giving more weight to one goal may mean giving less weight to another. Plans therefore did not give equal priority to all four goals.



Examples of trade off

- Investing more in heavy industry (growth) may leave fewer resources for basic services (equity).
- Rapid industrialisation may bring new technology (modernisation) but increase dependence on imported equipment (affecting self-reliance).

Important clarifications

- Self-reliance does not mean a permanent ban on all foreign trade. The idea was to reduce dependence, especially for food and goods that could be produced at home.
- Growth does not automatically lead to equity. Output can increase, but its benefits may not reach all sections of people without specific measures.

Main idea

The four goals—growth, modernisation, self-reliance and equity—together guided India's development planning. They are complementary but can also conflict, so each plan decided how much weight to give to each goal based on the country's needs at that time.

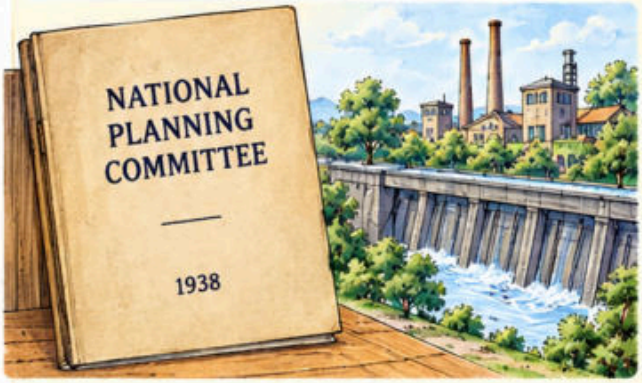
Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Before the Commission: two different initiatives.

1938 National Planning Committee

A Congress initiative set up when Subhas Chandra Bose was the Congress President.

- Set up in 1938 by the Indian National Congress.
- Jawaharlal Nehru chaired the committee.
- Meghnad Saha was a member.



Focus and significance

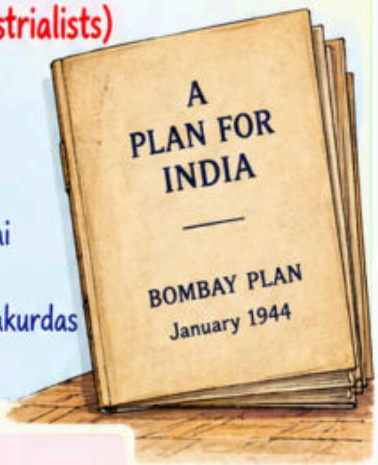
- Examined economic development and planning for India.
- An important early effort within the freedom movement to think about a planned economy.

January 1944 Bombay Plan

A proposal by eight leading industrialists. It was not a Congress committee and not officially adopted as a government plan.

Authors (eight industrialists)

- J. R. D. Tata
- G. D. Birla
- Ardeshir Dalal
- Lala Shri Ram
- Kasturbhai Lalbhai
- A. D. Shroff
- Purshottamdas Thakurdas
- John Mathai

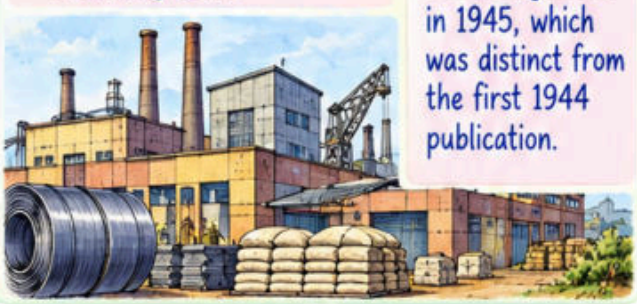


Main idea

- A detailed proposal for India's economic development.
- Presented by eight industrialists in January 1944.

1945 edition

A second edition was brought out in 1945, which was distinct from the first 1944 publication.



Timeline and documents

1938 — National Planning Committee set up by the Congress.



January 1944 — Bombay Plan published by eight industrialists.



1945 — Second edition of the Bombay Plan brought out in 1945 (distinct from the first 1944 publication).

Key takeaways

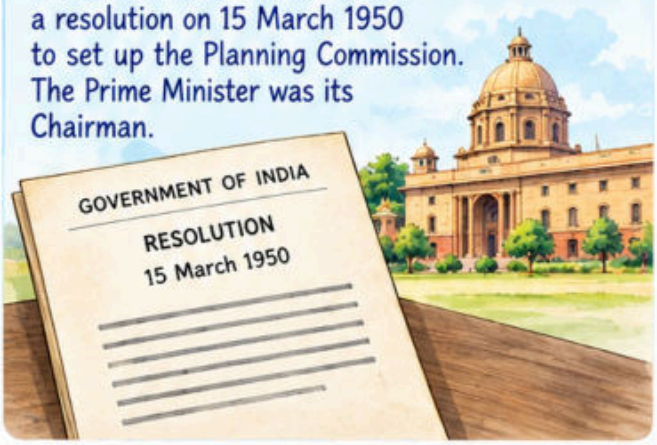
- The National Planning Committee and the Bombay Plan were two different initiatives.
- The first was a Congress initiative in 1938.
- The second was a proposal by eight industrialists in January 1944 and was not an official government plan.
- Both contributed to discussions on India's economic development before the setting up of a commission.
- Direct policy continuity between the two should not be claimed as an undisputed fact.

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

15 March 1950: a planning institution, not a ministry.

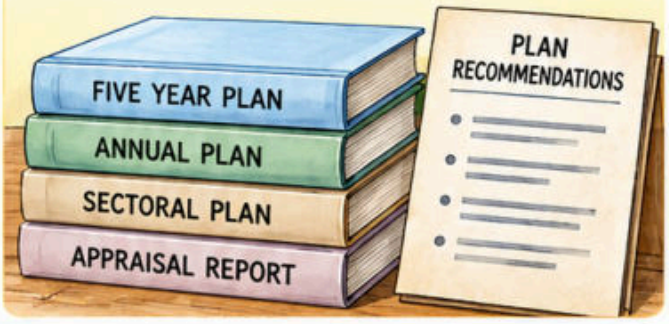
Planning Commission established

The Government of India issued a resolution on 15 March 1950 to set up the Planning Commission. The Prime Minister was its Chairman.



What was the Planning Commission?

It was a planning institution at the national level. It prepared plans, appraised progress and recommended adjustments. It was a historical body. It was not a ministry and did not implement schemes.



Functional cycle of the Planning Commission

1. Assess resources
Assess material capital and human resources.

2. Formulate balanced plan
Formulate a balanced plan for overall development.

3. Set priorities and allocation
Decide priorities, stages and allocation of resources across sectors.

4. Identify bottlenecks
Identify bottlenecks that may delay progress.

5. Implementation machinery
Evolve the implementation machinery.

6. Appraise progress
Appraise progress against plan targets.

7. Recommend adjustments
Recommend adjustments in strategy and allocation as needed.



Implementation by others

The Planning Commission did not implement schemes. Implementation was the responsibility of the concerned Union ministries and the State governments, according to the plans and policies.



Union ministries implement schemes

State governments implement schemes

Historical status

The Planning Commission was a historical institution. It was replaced in 2015. It is no longer in existence and is not today's authority for allocation of funds.



Key points

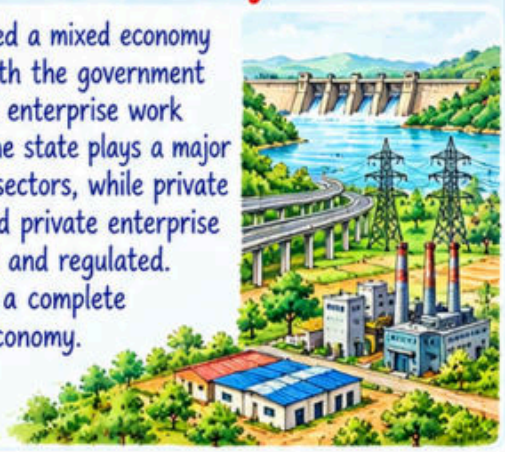
- Established by Government resolution on 15 March 1950.
- Prime Minister was the Chairman.
- Prepared plans, appraised progress and recommended adjustments.
- Not a ministry and did not implement schemes.
- Implementation was by Union ministries and State governments.
- A historical body, replaced in 2015, not today's allocation authority.

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

India chose a mixed economy, not a complete command economy.

1. What is a mixed economy?

India adopted a mixed economy in which both the government and private enterprise work together. The state plays a major role in key sectors, while private property and private enterprise are allowed and regulated. This is not a complete command economy.



2. Government and market: what, how, for whom

Question	Role of government (public sector)	Role of market (private enterprise)
What to produce?	Focus on basic goods, public infrastructure and strategic industries.	Produces a wide range of consumer and industrial goods.
How to produce?	Uses public investment, public sector units and planning.	Uses private capital, entrepreneurship and technology.
For whom to produce?	Seeks equitable development and social objectives.	Responds to consumer demand and creates employment and choice.

3. Examples of public and private sectors

Public infrastructure and public sector



- Dams and power projects
- Railways
- Steel plants and heavy industries
- Roads and other infrastructure

Private enterprise and private property



- Consumer goods industries
- Textiles and other manufacturing
- Agriculture and food processing
- Trade and services

4. Not a complete command economy

India did not choose state ownership of everything. Private property and private enterprise continued, but were subject to regulation and licensing in many industries.
The state and the private sector worked together within a planned framework to achieve national goals.



5. Goals of the mixed economy

Growth
Increase production and incomes.

Modernisation
Build modern industries and infrastructure.

Self-reliance
Reduce dependence on imports.

Equity
Promote balanced development and social justice.

6. Industrial Policy Resolution, 1948



The 1948 Industrial Policy Resolution laid the foundation for a mixed economy. It recognised the role of both the public and private sectors, identified key industries for the state and allowed important space for private enterprise.

7. Industrial Policy Resolution, 1956

The 1956 Industrial Policy Resolution expanded the role of the public sector in basic and strategic industries. Private industry was permitted in many areas, but was subject to licensing and regulation to align with national objectives.



8. Mahalanobis and the Second Five Year Plan

The Second Five Year Plan (1956–61), based on the Mahalanobis model, emphasised the development of heavy industries and capital goods to build long-term industrial capacity and self-reliance.



9. Why a mixed economy?

A mixed economy allowed India to use the strengths of both the government and the market. This approach helped the country pursue growth, modernisation, self-reliance and equity through planned development, without adopting a complete command economy.

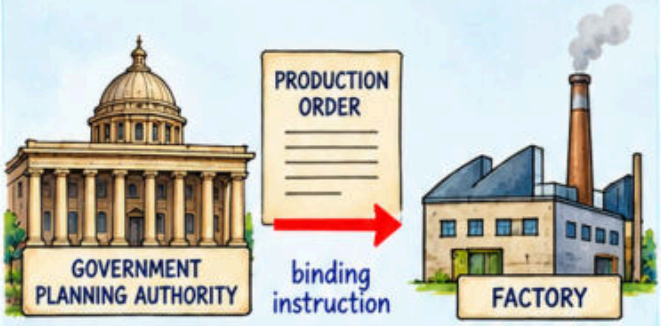


Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Orders or signals: distinguish planning mechanisms

Imperative / directive

Central, binding instructions determine production and resource allocation.



Indicative / inducement

Priorities, information, incentives and fiscal or monetary signals influence choices. Private firms retain choice within the law.

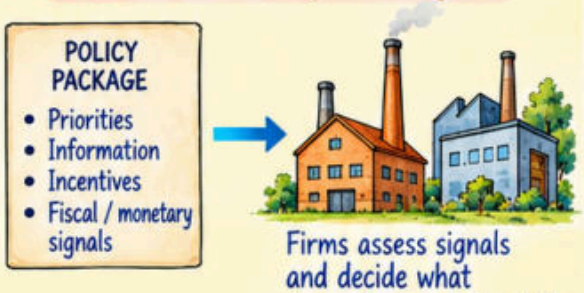


Comparison: how firms receive guidance

Imperative: binding order



Indicative: firms respond to signals



France: historical indicative example

France used an indicative approach with indicative plans, priorities for key sectors, and financial support, while leaving firms with choice.



India: reform period shift (gradual)

India moved over time from a more directive approach towards a greater role for indicative methods. The shift was gradual, with continued government role in setting priorities, providing information and using incentives. The reform period did not have a single, universally applicable eighth or ninth start date.



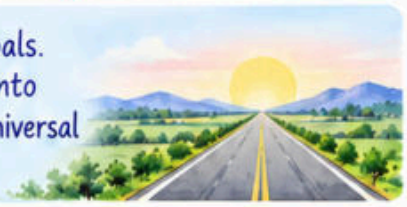
Important points

- Indicative planning does not mean no government. The government still sets priorities, provides information and uses incentives and macroeconomic policies.
- Imperative planning does not mean every public policy is a binding order. Many policies can be indicative or supportive.
- Both mechanisms can exist together in different sectors and at different times.

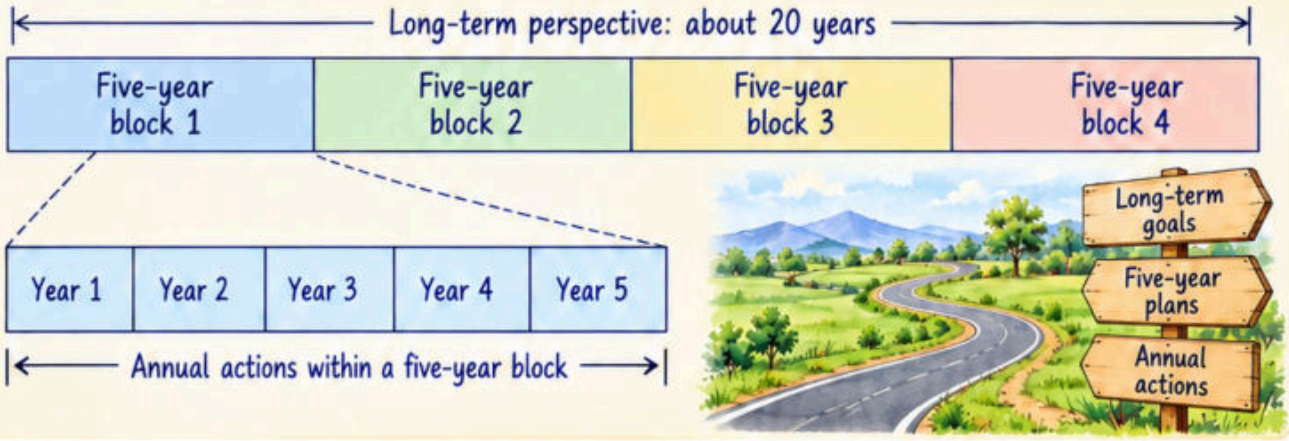
Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

One long horizon, shorter action plans.

A long-term perspective (about 20 years) helps to set broad goals. It is divided into shorter plans, such as five-year blocks, and then into annual actions. This is an NCERT example of planning horizons, not a universal fixed legal term.



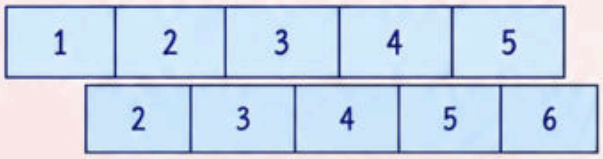
From long horizon to annual actions



Rolling plan

- The planning horizon is revised and extended periodically.
- Each year, the plan is updated. The current year is completed, a new year is added, and the long-term horizon is kept forward.
- This keeps the plan continuous and responsive to changing needs.

Illustrative five-year rolling horizon: after Year1, add Year6



Fixed plan

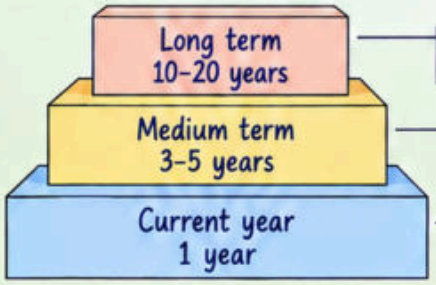
- The plan has a defined terminal period (such as 5 or 20 years).
- The time horizon remains fixed.
- Progress is reviewed during the period, but the terminal year does not change unless a new plan is adopted.



Fixed planning horizon with periodic reviews

Illustrative teaching model (Government college, 2013)

A commonly used teaching model shows three layers of planning, with annual revisits. This is an illustrative model, not a universal requirement.



- Broad goals and structural changes. Revisited annually.
- Programmes and sectoral targets. Updated annually.
- Annual action plan and budget. Revisited every year.



Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Money plans and real-resource plans must agree.

Financial plan (money side)

- Money outlay for the programme.
- Costs for different components such as land development, buildings, equipment and staff.
- Financing from government sources at different levels.



Physical plan (real resources)

- Materials needed, such as bricks, cement, steel and wood.
- Machinery and tools, such as mixers, vehicles and classroom equipment.
- Skills and manpower, such as builders, engineers and teachers.
- Production or service capacity, such as the number of classrooms and the number of students that can be taught.



Worked example: school construction needs both plans

Financial side: budget and financing

- Money outlay for land development, building construction, classroom equipment and staff salaries.
- Costs for different components.
- Financing approved from government sources at appropriate levels.



Physical side: resources and capacity

- Land available and cleared for construction.
- Bricks, cement, steel, wood and other materials.
- Machinery and equipment for construction and for classrooms.
- Skilled workers such as masons, carpenters and engineers.
- Teachers to run the school.
- Completed classrooms provide teaching capacity for the planned number of students.



Financial approval alone cannot remove physical bottleneck.

Even if money is approved, the school cannot be built without land, materials, machinery and skilled workers.



Physical target without funding is not credible.

Planning to build classrooms, buy equipment and hire teachers is not realistic if the required money is not available.



Centralised priorities and decentralised inputs

Village level
- Local needs and inputs.
- Information on land, materials and local capacity.

→

District level
- Combines local inputs.
- Checks resource availability and prepares district plan.

→

State level
- Sets broader priorities.
- Allocates funds and coordinates resources across districts.

→

National level
- Sets overall priorities.
- Provides major financing and policy support.

↑ Feedback on progress, constraints and new needs

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

Plan holidays were annual planning—not no planning.

1966 – 1969

Three Annual Plans were implemented due to difficult economic conditions.



1978

The Janata Government introduced a rolling plan experiment.



1980

The next government changed the approach and moved away from the rolling plan.



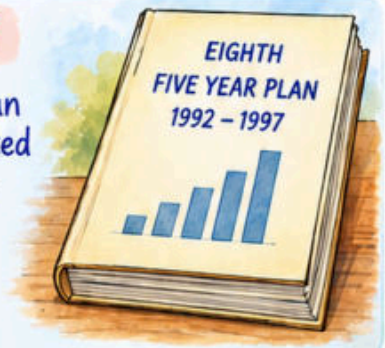
1990 – 91 and 1991 – 92

Two Annual Plans were implemented during a period of economic stress.



1992 – 1997

The Eighth Plan was implemented for 1992 – 97.



National Development Council (NDC)

- A historical forum of the Prime Minister and the Chief Ministers of the States.
- Set up on 6 August 1952.
- Approved the Five Year Plans.
- It played a key role in plan formulation and in building a shared national and state perspective.



What were Annual Plans?

Annual Plans were one-year plans prepared during certain periods instead of a full Five Year Plan. They kept the process of planning and public expenditure going. Plan holidays changed the format to Annual Plans, not a period with no planning.



Key Point

Plan holidays did not mean no planning: Annual Plans kept planning and development work going. The 1978 rolling-plan experiment was a separate change in planning approach.



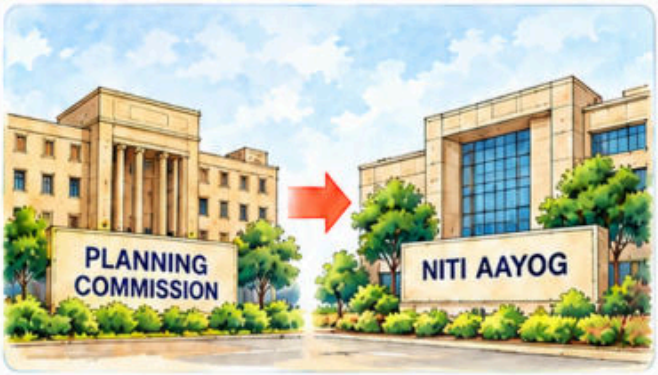
Day 26 | Topic 255 | 255.09

Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

2015 changed the institution; planning did not disappear.

What changed on 1 January 2015?

On 1 January 2015, NITI Aayog replaced the Planning Commission. NITI Aayog functions as a policy think tank, provides strategic advice and promotes cooperative federalism, rather than performing the earlier role of plan fund allocation.



Key dates in 2015

1 January 2015
NITI Aayog replaced the Planning Commission.

8 February 2015
First Governing Council meeting, as recorded by Indian Economic Service Arthapedia.

16 February 2015
Composition of NITI Aayog's Governing Council notified by the Cabinet Secretariat; confirmed in Lok Sabha answer of 11 December 2024.

What is NITI Aayog?

- A policy think tank.
- Provides strategic advice.
- Promotes cooperative federalism with States and Union Territories.
- Does not perform the earlier role of plan fund allocation.



Twelfth Plan continued; the five year plan series ended in 2017.

The Twelfth Five Year Plan (2012–17) continued after 2015. The series of Five Year Plans ended in 2017.

Twelfth Plan 2012 – 2017 → Five Year Plan series ended in 2017.

Revision diagram: from Planning Commission to NITI Aayog

Planning Commission (historical)



Prepared Five Year Plans and undertook plan fund allocation.

NITI Aayog (from 2015)



Policy think tank, strategic advice, cooperative federalism.

Planning as a process continues



Institutional change in 2015 did not mean the end of planning. Planning continued beyond 2015 and the Five Year Plan series ended in 2017.

Day 26 | Topic 255 | 255.10

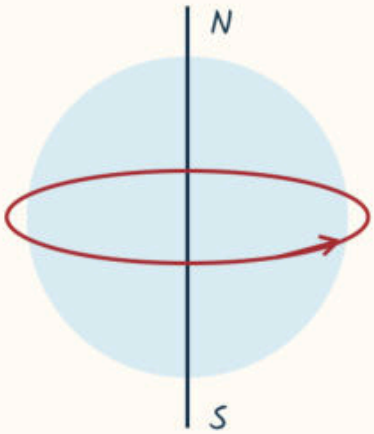
Conceptual institutional diagrams; chamber illustrations are not architectural reconstructions.

256.01 | EARTH AND SEASONS

One planet, two motions

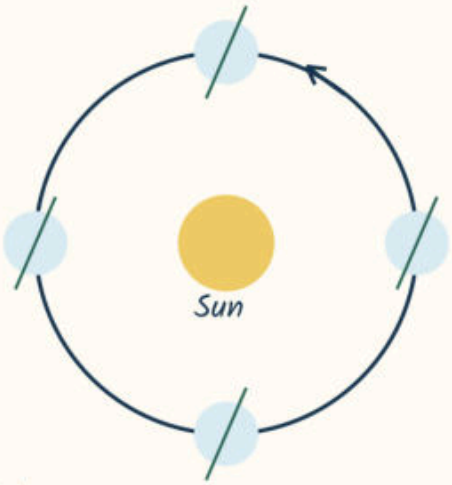
Rotation produces the daily cycle; revolution is the yearly journey around the Sun.

Rotation: spin on the axis



About 24 hours

Revolution: orbit the Sun



About one year

Circular orbit sketch: not a scale model; axes stay parallel.

A year has more than one definition

Sidereal: 365.256 days — measured against stars

Tropical: 365.242 days — seasonal cycle

The school 365¼ days is an approximation. Gregorian leap years are divisible by 4, except century years unless divisible by 400.

1900: no leap day | 2000: leap day | 2100: no leap day

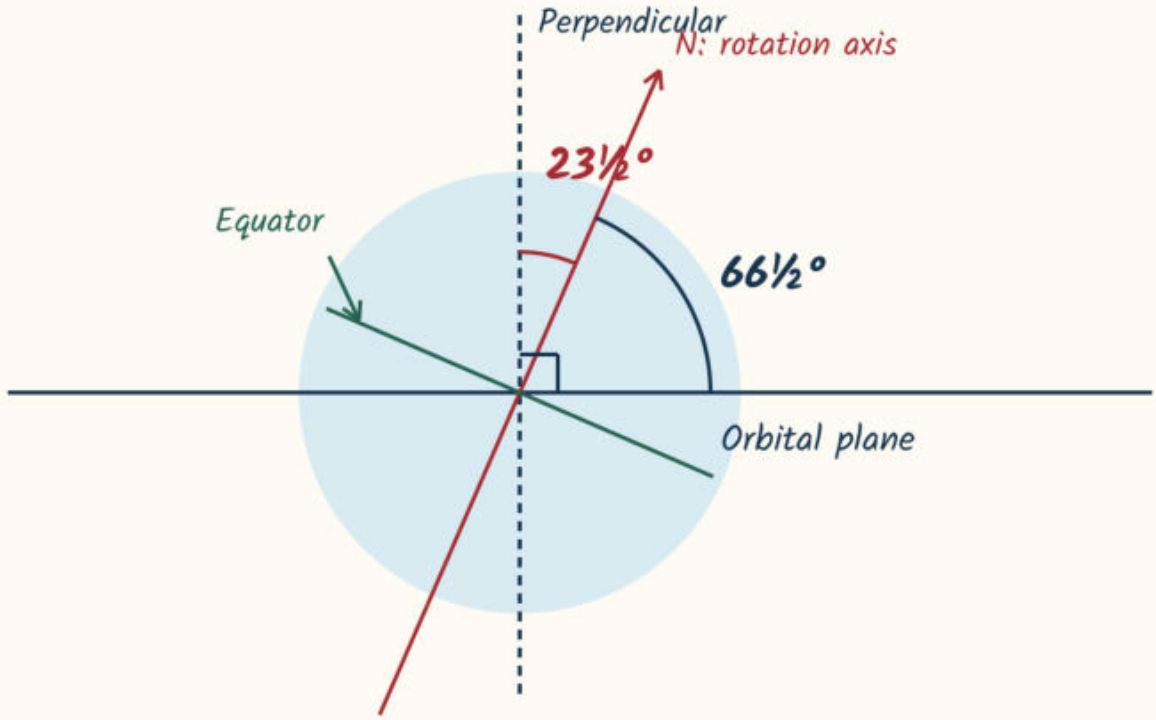
Source: NASA Earth Fact Sheet (15 Nov 2024); supplied NCERT calendar approximation. Schematic spheres, no maps.

Scientific schematics: no geographic boundaries; sizes and distances are not to scale unless stated.

256.02 | EARTH AND SEASONS

Two angles, one tilted axis

Measure from the reference line named in the question—not from whichever line looks closest.



23½° + 66½° = 90°

NASA lists obliquity as 23.44°. The familiar 23½° and 66½° are school approximations.

The axis points in approximately the same direction over one yearly orbit. It is not permanently fixed: precession and tilt vary over longer timescales.

Sources: NASA Earth Fact Sheet (IS Nov 2024); NASA Space Place. Geometry is a schematic, not a map.

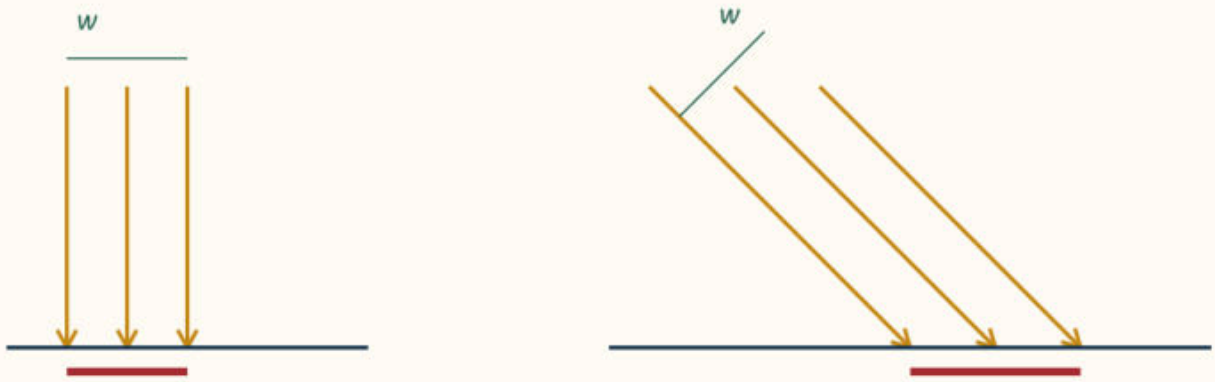
Scientific schematics: no geographic boundaries; sizes and distances are not to scale unless stated.

256.03 | EARTH AND SEASONS

Tilt changes intensity and duration

Two linked mechanisms explain why a hemisphere warms more in its summer.

1 Same beam width, different ground footprint



Steeper rays
smaller footprint

Slanting rays
larger footprint

For an equal-width beam, lower solar elevation spreads the incoming energy over more ground area. These beams illustrate geometry, not measured surface temperatures.

2 Longer daylight means more heating time

The hemisphere tilted toward the Sun has longer days and a higher midday Sun. The other hemisphere experiences the opposite seasonal tendency.

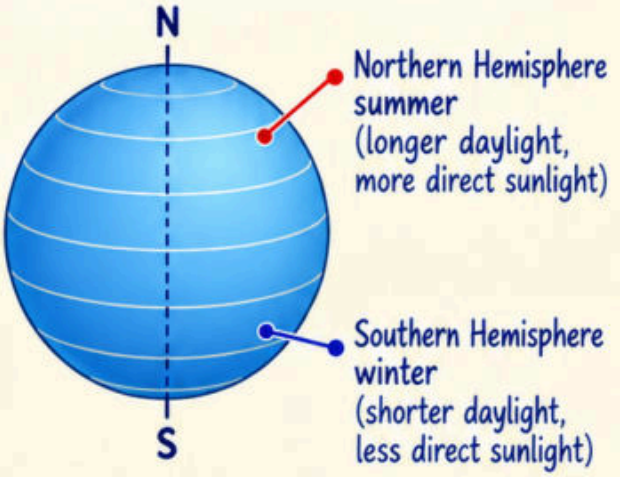
Higher Sun + longer day: stronger seasonal heating

Source: NASA Space Place, "What causes the seasons?" Beam diagrams are schematic; no invented measurements.

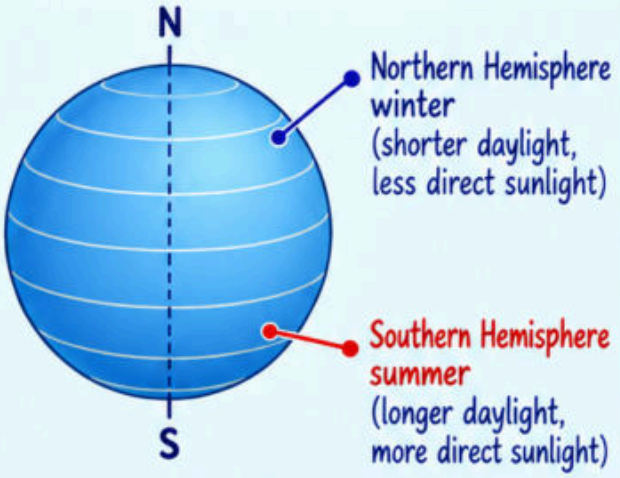
Scientific schematics: no geographic boundaries; sizes and distances are not to scale unless stated.

The two hemispheres share one distance—but opposite seasons.

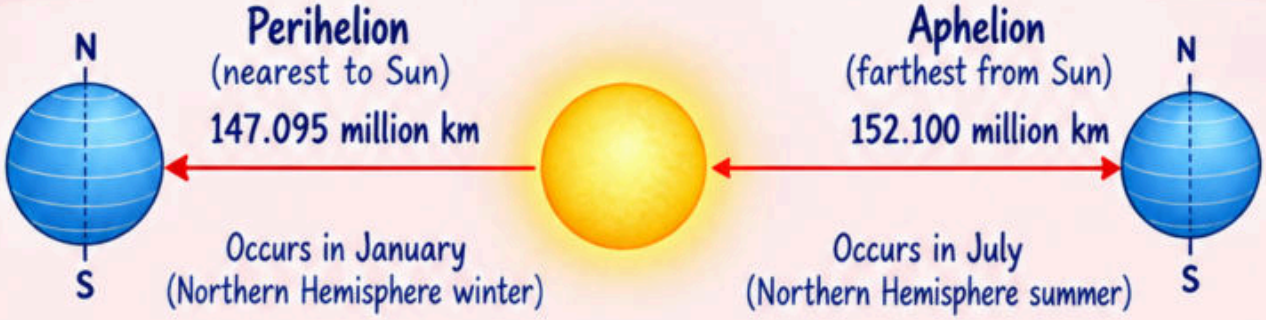
June: Northern Hemisphere summer, Southern Hemisphere winter



December: Northern Hemisphere winter, Southern Hemisphere summer



Earth's distance from the Sun is not constant.



Key numbers (NASA, 15 Nov 2024)

Perihelion distance (nearest, January)	147.095 million km
Aphelion distance (farthest, July)	152.100 million km
Mean orbital velocity	29.78 km/s
Orbital eccentricity	0.0167

What these numbers mean

- Earth is closer to the Sun in January (Northern Hemisphere winter) and farther in July (Northern Hemisphere summer).
- The tilt of Earth's axis is the main cause of opposite seasons in the two hemispheres. The variation in distance is real but has a smaller effect than the tilt.

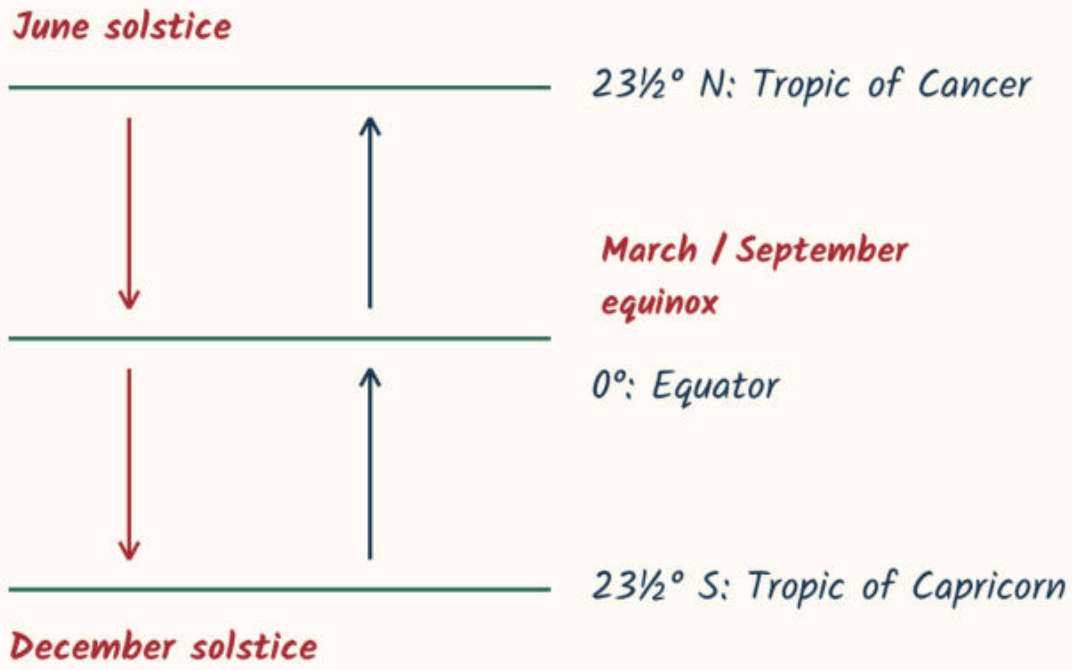
Day 26 | Topic 256 | 256.04

Scientific schematics: no geographic boundaries; sizes and distances are not to scale unless stated.

256.05 | EARTH AND SEASONS

Follow the overhead Sun

Subsolar latitude moves north and south; it does not remain over one tropic.



Marker	Northern half	Southern half
March	Spring	Autumn
June	Summer	Winter
September	Autumn	Spring
December	Winter	Summer

The Sun crosses the Equator twice each year. Dates depend on the year and time zone; "21 March" is not a universal annual date.

Sources: NASA Space Place; USNO seasons data. Latitudes shown at school approximation; no geographic map.

Scientific schematics: no geographic boundaries; sizes and distances are not to scale unless stated.

256.06 | EARTH AND SEASONS

Equinox is not an exact 12-hour promise

Astronomical equality and measured sunrise-to-sunset daylight are different ideas.

Geometric model

At equinox the Sun's centre crosses the celestial equator. In a simplified point-Sun, no-atmosphere model, day and night are about equal away from the poles.

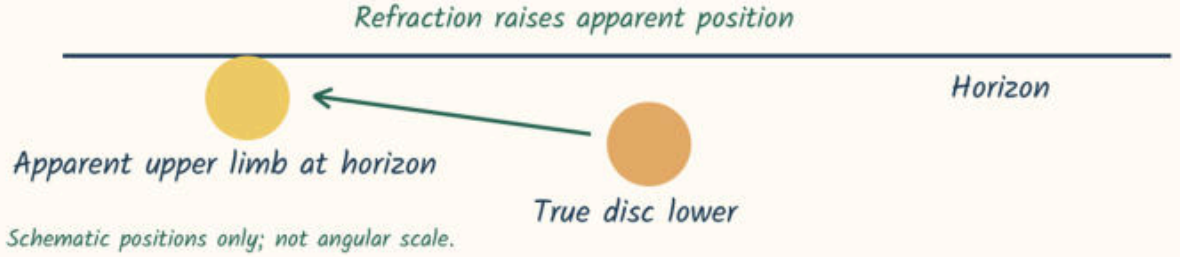
Observed sunrise and sunset

Sun has a disc → Use its upper limb

Atmosphere refracts light → Sun appears higher

Both effects extend visible daylight beyond the simple centre-of-Sun calculation.

Local equality depends on latitude and can occur on another date. The exact-12-hour rule is not universal, especially at the poles.



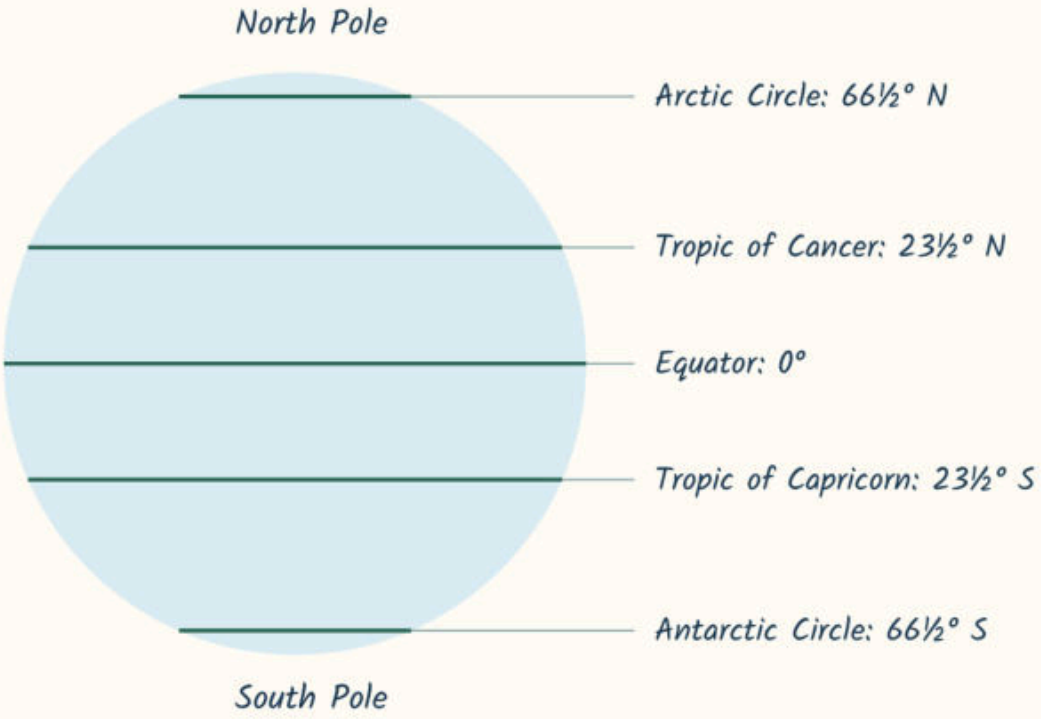
Source: US Naval Observatory, "Autumn Arrives", 19 Sept 2023. Its local 2023 example is not a global date.

Scientific schematics: no geographic boundaries; sizes and distances are not to scale unless stated.

256.07 | EARTH AND SEASONS

Polar circles: 90° minus the tilt

Tropics and polar circles arise from different geometric relationships.



90° − 23½° = 66½°

Near the polar-circle threshold, continuous day or night begins around a solstice in the ideal model. Toward a pole, the long spells approach half a year.

June: Arctic daylight, Antarctic darkness. December: reverse. NOT every place inside the polar zone has six months of each. Refraction and terrain affect actual observations.

Sources: NASA Space Place; supplied NCERT latitude framework. Plain mathematical sphere, no land boundaries.

Scientific schematics: no geographic boundaries; sizes and distances are not to scale unless stated.

256.08 | EARTH AND SEASONS

One instant, two clock readings

2026 seasonal markers: convert UT to IST by adding 5 hours 30 minutes.

Event	UT	IST
March equinox	20 Mar 14:46	20 Mar 20:16
June solstice	21 Jun 08:24	21 Jun 13:54
September equinox	23 Sep 00:05	23 Sep 05:35
December solstice	21 Dec 20:50	22 Dec 02:20

Midnight rollover is the trap

20:50 + 5:30 = 26:20 = next day 02:20

The December 2026 solstice is scheduled for 22 December in IST. As of 1 November 2026, it has not occurred. The astronomical event is the same instant in both columns.

Source: US Naval Observatory API /api/seasons?year=2026, tz=0; exact source times preserved. Checked 1 Nov 2026.

Scientific schematics: no geographic boundaries; sizes and distances are not to scale unless stated.

256.09 | EARTH AND SEASONS

Distance events are not solstices

Perihelion and aphelion describe orbital distance—not the north–south limit of the overhead Sun.

Nearest: perihelion

3 January 2026, 17:15 UT

= 3 January, 22:45 IST

Earth is nearest the Sun while the Northern Hemisphere is in winter.

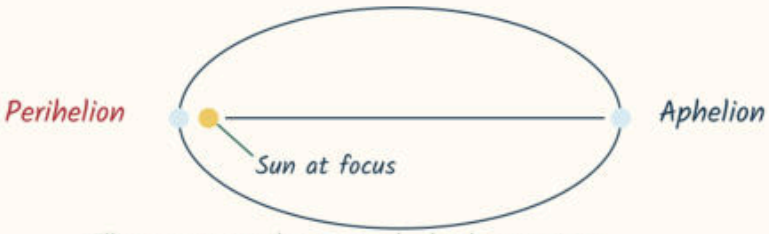
Farthest: aphelion

6 July 2026, 17:30 UT

= 6 July, 23:00 IST

Earth is farthest from the Sun while the Northern Hemisphere is in summer.

Solstices mark maximum north/south solar declination. Distance events fall roughly two weeks later.



Ellipse exaggerated; not actual orbital eccentricity.

Source: US Naval Observatory API /api/seasons?year=2026. Dates and times are for 2026 only.

Scientific schematics: no geographic boundaries; sizes and distances are not to scale unless stated.

256.10 | EARTH AND SEASONS

Read daylight data without overclaiming

A worked reading of the USNO coordinate example: 23.5° N, 80° E; IST.

Date 2026	Sunrise	Sunset	Difference
20 March	06:14	18:21	12 h 07 m
21 June	05:24	18:59	13 h 35 m
21 December	06:47	17:29	10 h 42 m

Worked subtraction

18:59 − 05:24 = 13:35

This is one coordinate, not a named city or an all-India daylight figure. The December value is predictive, not an observation already made as of 1 November 2026.

Tilt + revolution change solar angle and daylight duration, producing opposite seasons in the two hemispheres.

Source: USNO rise/set API, 23.5 N, 80 E, tz=5.5. All three dates and arithmetic verified on 1 Nov 2026.

Scientific schematics: no geographic boundaries; sizes and distances are not to scale unless stated.

Four legal protected-area categories

Wild Life (Protection) Act, 1972
Section 2(24A) defines
four protected-area categories.

Protected areas (Section 2(24A))

National Park

No livestock grazing.

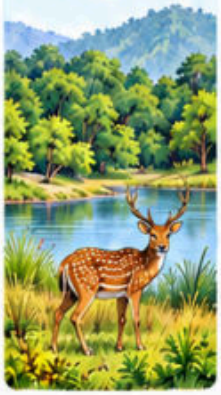
Rights must be settled before final notification.



Sanctuary

Certain existing rights may continue under law.

Grazing may be regulated, controlled or prohibited.



Conservation Reserve

Government-owned land, declared after consulting local communities.



Community Reserve

Private or community land voluntarily offered for conservation, outside national parks, sanctuaries and conservation reserves.



Tiger Reserve
(Section 38V, same Act)

- Separately provided in the Wild Life (Protection) Act, 1972.
- A landscape with a core and a buffer for long term conservation of tigers and their habitat.
- Can include one or more of the four protected-area categories.



Biosphere Reserve
(National / UNESCO MAB framework)

- Not created under the Wild Life (Protection) Act, 1972.
- A large landscape for conservation, sustainable development and research.
- Includes core, buffer and transition areas.
- Can overlap with any of the above protected areas, including tiger reserves.



Important points

- The four categories are defined in Section 2(24A) of the Wild Life (Protection) Act, 1972.
- Tiger reserve is separately provided in Section 38V of the same Act.
- Biosphere reserve is a national / UNESCO MAB framework, not created under this Act.
- The categories can overlap. Do not add or sum unlike categories.

Habitat illustrations are conceptual, not maps or exact site depictions; zoning shapes vary by site.

Sanctuary or national park?

Start with rights

Both are declared areas for wildlife protection, but the treatment of existing rights is different.

Key difference

A sanctuary may allow continuation of certain existing rights. A national park does not have this continuation provision and its final notification follows after rights vest in the State.

Wildlife sanctuary

- Collector may allow continuation of existing rights under Section 24(2)(c) with the Chief Wild Life Warden's consultation.
- Grazing and movement of livestock may be regulated, controlled or prohibited by the Chief Wild Life Warden under Section 33(d).

National park

- No provision for continuation of existing rights under Section 24(2)(c).
- Final notification is issued only after rights vest in the State under Section 35(4).
- Grazing of livestock is not allowed in a national park under Section 35(7).

Sanctuary habitat (regulated grazing)



Grazing and movement of livestock may be regulated, controlled or prohibited by the Chief Wild Life Warden under Section 33(d).

National park habitat (no grazing)



Grazing of livestock is not allowed in a national park under Section 35(7). Final notification is issued only after rights vest in the State under Section 35(4).

Habitat illustrations are conceptual, not maps or exact site depictions; zoning shapes vary by site.

Who declares – and who recommends?

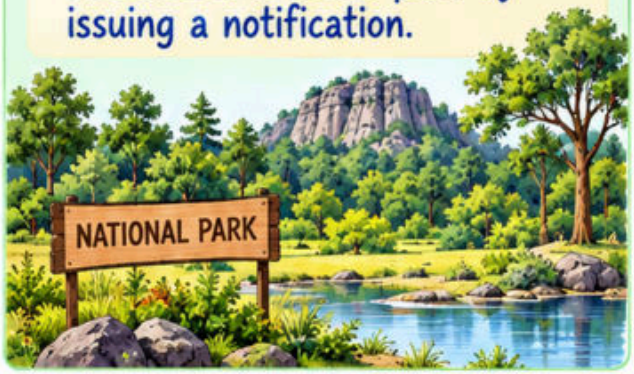
Sanctuary (Section 18 and 26A)

State Government
declares a sanctuary by issuing a notification.



National Park (Section 35)

State Government
declares a national park by issuing a notification.



Transferred or leased protected area (Section 38)

Central Government
may declare a sanctuary or a national park for an area that is transferred to, or leased by, it.



Boundary alteration (Section 26A(3) and 35(5))

The boundary of a sanctuary or a national park can be altered only on the recommendation of the National Board for Wildlife (NBWL).

A resolution of the State Legislature cannot by itself change the boundary.



Process for boundary alteration

National Board for Wildlife recommends boundary alteration. → State Government examines the recommendation. → State Government decides and issues a notification.

Declaration is not the same as management

Declaration

- Creates the legal status as a sanctuary or national park.
- Done by the appropriate government as explained above.

Management

- Day to day protection, conservation and administration.
- Carried out through the prescribed authorities and management measures after declaration.

Habitat illustrations are conceptual, not maps or exact site depictions; zoning shapes vary by site.

Conservation reserve or community reserve?

Government land

Government-owned land.



Private or community land

voluntarily offered for conservation.



Conservation reserve
Section 36A

Can be declared on government land. The State Government shall consult local communities before declaring a conservation reserve.



Community reserve
Section 36C

Declared on private or community land volunteered for conservation. Must be outside a national park, wildlife sanctuary and conservation reserve.





The Central Government can also declare a conservation reserve for transferred or leased areas under Section 38(2A), subject to Section 36A conditions. (as inserted by the 2022 amendment, effective 2023).

Management
Section 36B

A conservation committee advises the Chief Wild Life Warden on management of the conservation reserve.



Management
Section 36D

A community committee manages the community reserve and prepares a management plan.



Habitat illustrations are conceptual, not maps or exact site depictions; zoning shapes vary by site.

A tiger reserve has a core and a buffer.

Core area

- Inviolate area for tigers.
- Strict protection.
- Managed to keep critical tiger habitat inviolate, subject to statutory safeguards for rights.



Buffer area

- Surrounds the core area.
- Allows coexistence with local communities.
- Regulated use of forest resources for livelihoods.
- Supports conservation and reduces pressure on the core.



How a tiger reserve is notified

A State Government notifies a tiger reserve on the recommendation of the National Tiger Conservation Authority (NTCA) under Section 38V of the Wildlife (Protection) Act, 1972.



NTCA list of tiger reserves (as on 23 October 2026)

The National Tiger Conservation Authority (NTCA) maintains a list of 58 tiger reserves in India (as on 23 October 2026).

Total area:
Core area: 46,701.29 sq km
Buffer area: 37,786.54 sq km
Total: 84,487.83 sq km

Latest listed tiger reserve (as on 2026)

Madhav Tiger Reserve in Madhya Pradesh was the latest to be included in the list in 2025.



Nagarjunsagar Srisailam Tiger Reserve (Andhra Pradesh)

Area details:
Core area: 2,595.72 sq km
Buffer area: 700.59 sq km
Total area: 3,296.31 sq km



Habitat illustrations are conceptual, not maps or exact site depictions; zoning shapes vary by site.

A biosphere reserve connects protection with livelihoods.

A biosphere reserve, under UNESCO's Man and the Biosphere (MAB) programme, conserves biodiversity, supports sustainable development and provides opportunities for research, monitoring and education.

Zoning in a biosphere reserve

A biosphere reserve has three interlinked zones. The shape and size vary by place and are not always concentric.

CORE ZONE

- Strictly protected ecosystems.
- Conservation of biodiversity and natural processes.
- Minimal human use.

BUFFER ZONE

- Adjoins or surrounds the core.
- Compatible activities such as research, education, monitoring and sustainable resource use.
- Helps reduce pressure on the core.

TRANSITION ZONE

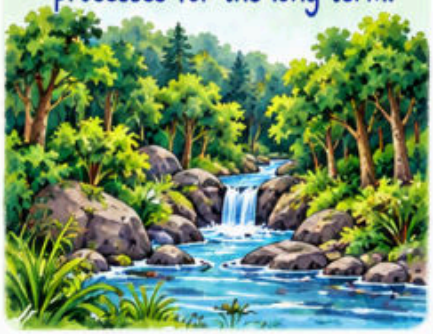
- Communities live and work here.
- Sustainable development activities such as agriculture, agroforestry and eco-friendly enterprises.
- Links conservation with livelihoods.



Three functions of a biosphere reserve

Conservation

- Protects biodiversity, ecosystems and natural processes for the long term.



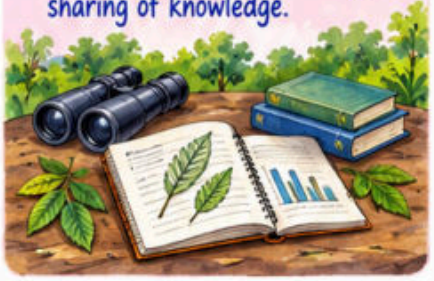
Sustainable development

- Supports nature-friendly livelihoods and responsible resource use.
- Helps people and nature thrive together.



Logistics, research, monitoring and education

- Provides a platform for long-term research and monitoring.
- Supports education, training and sharing of knowledge.



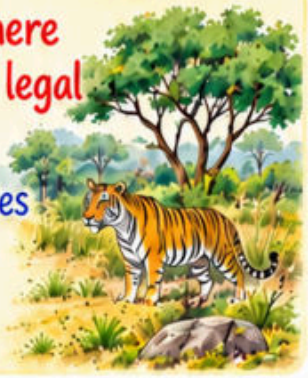
Habitat illustrations are conceptual, not maps or exact site depictions; zoning shapes vary by site.

A number without a date is a trap.

Numbers about protected areas change over time because of new notifications, revisions and reclassification. Always check the source and the date.

Tiger reserves and biosphere reserves can overlap these legal protected areas.

They are not extra categories in this four-category total. Do not add unlike counts.



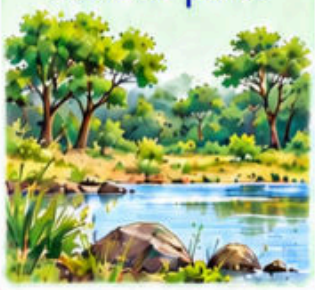
Dated snapshot: 27 November 2023 (WII)

Total protected areas in India (WII, 27 November 2023)

1,014 = 106 parks + 573 sanctuaries + 115 conservation + 220 community

Total area = 1,75,169.42 sq km (5.32%)

106
national parks



573
wildlife sanctuaries



115
conservation reserves



220
community reserves



Later official totals are different vintages.

10 February 2025 (Lok Sabha)

1,022
total protected areas

5.43% of India's area



2025 baseline, reported in New India Samachar, 1–15 June 2026

1,134
total protected areas



Key points to remember

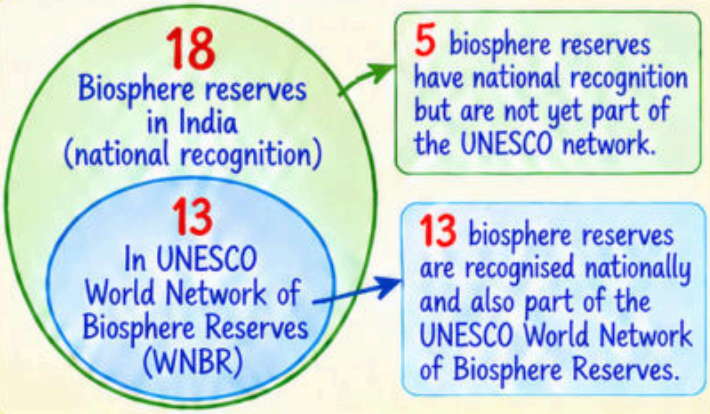
- The figures 1,014 (27 November 2023), 1,022 (10 February 2025) and 1,134 (2025 baseline, reported in New India Samachar, 1–15 June 2026) are from different sources and different dates.
- Percent of area also differs: 5.32% (27 November 2023) and 5.43% (10 February 2025).
- A number without a date can be misleading.
- Do not add tiger reserves or biosphere reserves: these designations can overlap the four categories.

Habitat illustrations are conceptual, not maps or exact site depictions; zoning shapes vary by site.

National recognition is not UNESCO recognition

India has 18 biosphere reserves recognised nationally.

Out of these, 13 are part of the UNESCO World Network of Biosphere Reserves (WNBR) as per PIB, 3 November 2025.



Cold Desert joined UNESCO network in September 2025

National recognition: 2009.
UNESCO entry: September 2025.
It became India's 13th site in the UNESCO network.



Panna (2011) – newest national designation

The Panna Biosphere Reserve was given national recognition in 2011. It is not the newest entry in the UNESCO World Network.



Smallest among all 18 (national list)

Dibru-Saikhowa
765 sq km

as per MoEFCC December 2023 list.



Smallest Indian biosphere reserve in the UNESCO network

Nokrek
820 sq km



Largest among all 18

Great Rann of Kutch
12,454 sq km



Global update – 5 June 2026

UNESCO announced that the World Network of Biosphere Reserves has 797 sites in 145 countries as on 5 June 2026.

14 new sites were added in 2026, but none are from India.



Total sites: 797
Countries: 145
New sites in 2026: 14
From India: None

Key takeaways

1. National recognition and UNESCO recognition are different.
2. India has 18 biosphere reserves, of which 13 are in the UNESCO World Network (as per PIB, 3 November 2025).
3. Cold Desert: national recognition in 2009; India's 13th UNESCO site in September 2025.
4. Panna (2011) is the newest national designation, but not the newest UNESCO entry.
5. Smallest among all 18: Dibru-Saikhowa (765 sq km).
6. Smallest Indian in UNESCO network: Nokrek (820 sq km).
7. Largest among all 18: Great Rann of Kutch (12,454 sq km).
8. UNESCO (5 June 2026): 797 sites in 145 countries. 14 new sites, none from India.

Habitat illustrations are conceptual, not maps or exact site depictions; zoning shapes vary by site.

ESZ modification did not remove the mining bar

KEY IDEA

The Supreme Court modified the Eco-Sensitive Zone (ESZ) directions on 26 April 2023. This modification did not remove the existing bar on mining inside National Parks and Sanctuaries and within 1 kilometre of their boundary.

TIMELINE

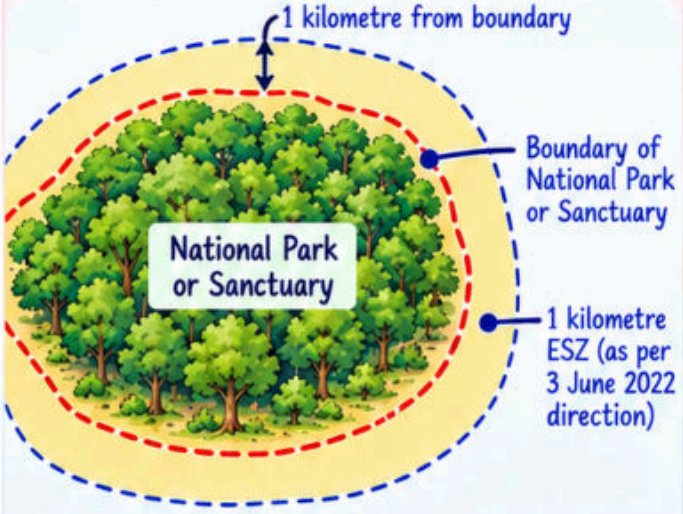
3 June 2022

Supreme Court directed a minimum 1 kilometre ESZ from the boundary of all National Parks and Sanctuaries.

26 April 2023

Supreme Court modified the 3 June 2022 direction. The minimum 1 kilometre ESZ direction does NOT apply where MoEFCC has issued draft/final notifications or received proposals, or where parks/sanctuaries are on inter-State/common boundaries.

HYPOTHETICAL FOREST BOUNDARY AND 1 km RING



This is a schematic diagram for illustration only. It does not represent an actual site or map.

PARA 65: CONTINUING MINING BAR

Mining is prohibited:

- inside a National Park or Sanctuary, and
- within 1 kilometre of the boundary of a National Park or Sanctuary.



ESZ WIDTH IS NOT UNIFORM EVERYWHERE

The actual width of the ESZ is notification-specific. It may be more or less than 1 kilometre depending on the particular notification or proposal.



WHAT CHANGED ON 26 APRIL 2023?

- The Supreme Court modified the 3 June 2022 direction.
- The minimum 1 kilometre ESZ direction does NOT apply where MoEFCC has issued draft/ final notifications or received proposals, or where parks/sanctuaries are on inter-State/ common boundaries.
- It also covers inter-State and common boundaries.
- The modification did not remove the mining prohibition inside National Parks and Sanctuaries and within 1 kilometre of their boundary (Para 65).
- Other applicable approvals and restrictions still apply beyond 1 kilometre.

Habitat illustrations are conceptual, not maps or exact site depictions; zoning shapes vary by site.

Keep three classification systems separate

Wildlife (Protection) Act legal categories

These are legal designations under Indian law to protect areas for wildlife conservation.

1. National Park

Strict protection for wildlife and habitats. Only regulated activities are allowed.



Example: Sri Venkateswara National Park

2. Wildlife Sanctuary

Protected area for wildlife with some regulated human use allowed.



Example: Coringa Sanctuary

3. Conservation Reserve

Government-owned land declared after local consultation.



4. Community Reserve

Voluntarily conserved private or community land, outside national parks, sanctuaries and conservation reserves.

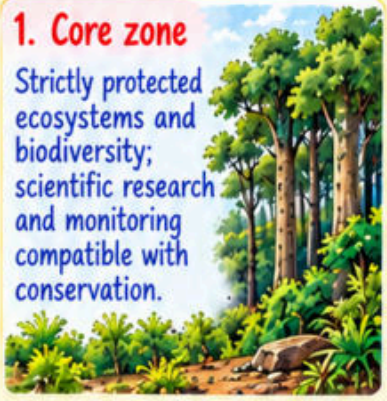


Biosphere Reserve zoning

A biosphere reserve has three zones with different levels of protection and use.

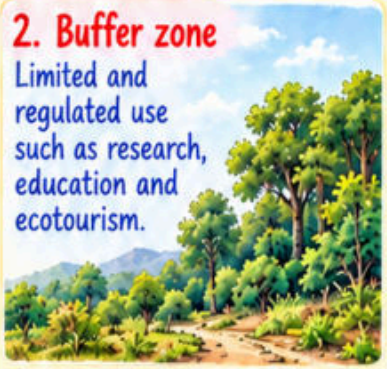
1. Core zone

Strictly protected ecosystems and biodiversity; scientific research and monitoring compatible with conservation.



2. Buffer zone

Limited and regulated use such as research, education and ecotourism.



3. Transition zone

Sustainable use with settlements, agriculture and other human activities.



Example:
Seshachalam Biosphere Reserve



IUCN management categories

These are international management categories for protected areas. They are NOT species risk categories. Each category has a different management objective.

Ia. Strict nature reserve

Strictly protected areas with tightly controlled and limited human visitation, use and impacts; scientific research and monitoring may occur.



Ib. Wilderness area

Large natural areas mostly free from human disturbance.



II. National park

Protection of ecosystems and recreation allowed in a controlled way.



III. Natural monument

Protection of specific natural features such as unique landforms, caves or old trees.



IV. Habitat/species management area

Active management to conserve specific habitats or species.



V. Protected landscape/seascape

Conservation with harmonious human use and strong cultural and natural values.



VI. Sustainable use area

Conservation of biodiversity with sustainable use of natural resources.



Habitat illustrations are conceptual, not maps or exact site depictions; zoning shapes vary by site.

Five components, two directions of attention.

Goleman's 1998 workplace model

Managing oneself

Directing attention to our own feelings, thoughts and behaviour.

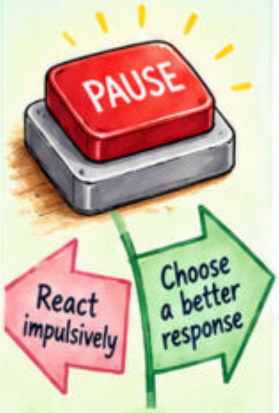
Self-awareness

Recognise feelings and their effects.



Self-regulation

Pause and redirect disruptive impulses.



Motivation

Persist toward meaningful goals.



Managing relationships

Directing attention to other people's feelings and working with them.

Empathy

Understand others' feelings.

Social skill

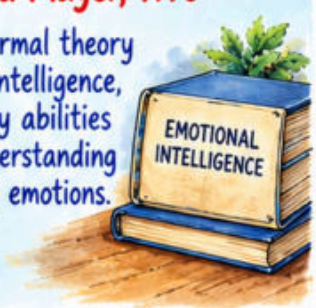
Build rapport and coordinate action.



Key development in the field of emotional intelligence

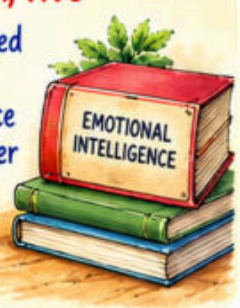
Salovey and Mayer, 1990

Proposed a formal theory of emotional intelligence, identifying key abilities related to understanding and managing emotions.



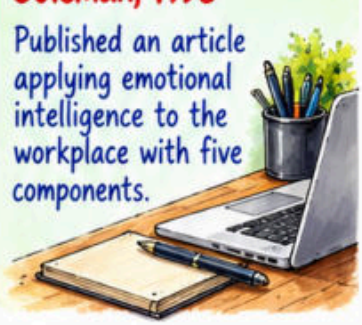
Goleman, 1995

Popularised emotional intelligence for a wider audience.



Goleman, 1998

Published an article applying emotional intelligence to the workplace with five components.



Illustrative public-service cases; identify the author, work and model version before matching a skill.

Self-awareness starts with an accurate self-picture.

What Goleman means

Self-awareness means knowing one's own feelings, strengths and limits accurately. It is the foundation of emotional intelligence.



How it works

Notice → Be aware of your feelings and reactions.

Name → Put the feeling into words.

Assess → Understand the cause and likely impact.

Seek feedback → Check with others to see how it affects them.

A reflective journal helps

Writing regularly gives a clearer and more accurate self-picture.



Hallmarks in 1998

Goleman identified three key aspects of self-awareness.



Self-confidence

A sense of self-worth and trust in one's own abilities.



Realistic self-assessment

An accurate view of one's strengths and limits.



Self-deprecating sense of humour

The ability to laugh at one's own faults, without a low sense of self-worth.

Hypothetical example: Mandal Revenue Officer

A new Mandal Revenue Officer is new to the role and has limited experience in land-survey work. This is an accurate self-picture of his current limit.

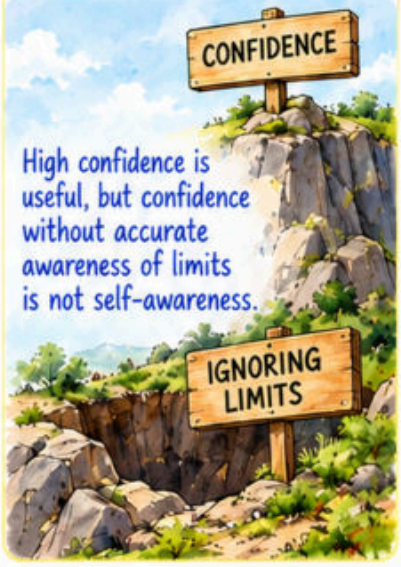
Before issuing first orders, he asks a senior surveyor to check them. He learns from the feedback and improves.



Realistic self-assessment

He acknowledges his limited land-survey experience and seeks a senior surveyor's review.

What this skill is not



High confidence is useful, but confidence without accurate awareness of limits is not self-awareness.

Illustrative public-service cases; identify the author, work and model version before matching a skill.

Self-regulation is a pause, not emotional suppression.

Self-regulation means managing our emotions and actions by pausing, thinking and choosing a proportionate response. It does not mean suppressing or ignoring emotions. Feelings can be present, but our behaviour stays aligned with our values, rules and long-term goals.



Functional decision flow

- **Trigger** — An event happens and I feel an emotion.
- **Notice impulse** — I recognise my first reaction.
- **Pause** — I give myself a brief pause.
- **Check evidence and rules** — I look at facts, relevant rules and the bigger picture.
- **Choose proportionate response** — I act in a balanced way that fits the situation and my responsibilities.

Hallmarks of self-regulation (Goleman, 1998)



Trustworthiness and integrity

Our actions are consistent with our values and rules.



Comfort with ambiguity

We stay calm when the situation is unclear or changing.



Openness to change

We are willing to adjust our plans when new information is available.

Hypothetical example: flood relief

After heavy rain, the tahsildar receives new information. Calmly, the tahsildar revises the distribution plan and explains the change so that the team can follow it.



Old plan (no longer valid)

- ~~Distribute at Village A~~
- ~~Use the school building~~
- ~~Send rations by road~~
- ~~Serve all listed items~~

Revised plan (updated)

- ☑ Distribute at Village B
- ☑ Use the community hall
- ☑ Send rations by boat instead of road
- ☑ Serve essential items available now

Where openness to change fits

Self-regulation



Openness to change belongs here. It helps us adjust our own thoughts, emotions and plans when new information comes.

Social skill



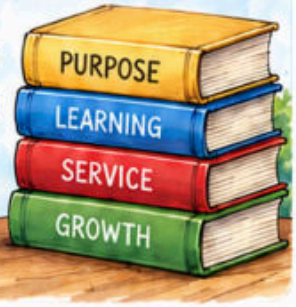
Leading change through others belongs to social skill. It involves influencing and guiding people to implement new plans.

Illustrative public-service cases; identify the author, work and model version before matching a skill.

Motivation keeps effort alive after setbacks.

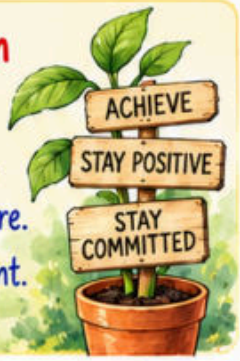
Goleman, 1998

People work for reasons beyond money or status; they pursue goals with energy and persistence.



Hallmarks of motivation (Goleman, 1998)

- A strong drive to achieve.
- Optimism even after failure.
- Organisational commitment.



Motivation in action: a functional loop

1. Goal

Set a meaningful goal for students' learning.



2. Practice

Plan and continue remedial teaching with focused effort.



3. Feedback

Check progress through regular reviews and simple assessments.



4. Adjustment

Modify methods based on feedback.



5. Renewed effort

Continue with fresh energy and persistence.



Feedback guides correction, not blind optimism.

Hypothetical example: a headmaster

After poor results, a headmaster continues remedial teaching, expecting improvement while checking progress and adjusting methods.



Motivation is not blind optimism.

Feedback shows what is working and what needs correction. Motivation keeps effort alive while adjustments are made.



Self-Motivation under Personal Competence

In the Consortium framework, initiative and optimism belong to Self-Motivation, within Personal Competence.



Illustrative public-service cases; identify the author, work and model version before matching a skill.

Empathy reads another person's perspective.

What is empathy?

Empathy means understanding another person's emotional makeup and responding with care.

It does not mean agreeing with every demand.



Goleman (1998) hallmarks



Expertise in building and retaining talent.



Cross-cultural sensitivity.



Service to clients and customers.

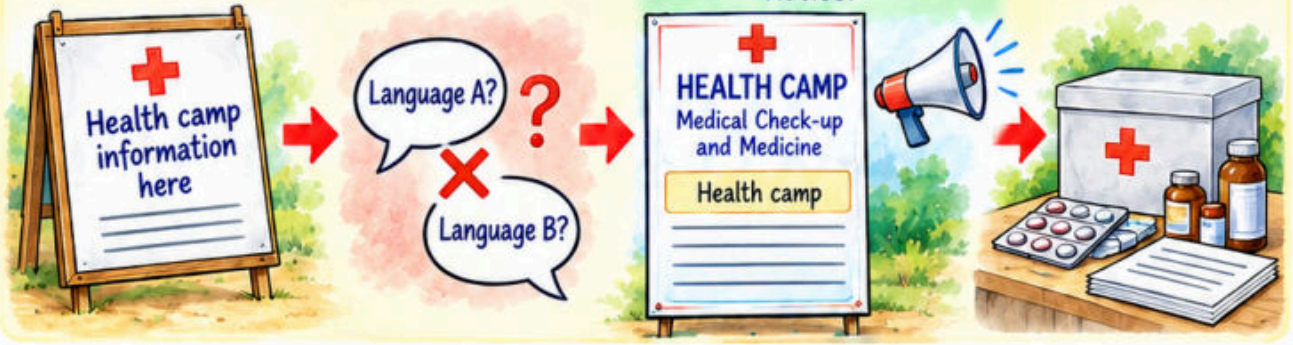
Empathy in action: overcoming a language barrier

Unfamiliar language.

Recognise exclusion.

Interpreters and understandable notice.

Better access to services.



Hypothetical public-service example

A municipal commissioner arranges interpreters for migrant workers so that they can understand notices and access public services.



Empathy and social skill

Empathy

Understanding another person's needs, feelings and perspective.



Social skill

Coordinating an appropriate response with others.



Illustrative public-service cases; identify the author, work and model version before matching a skill.

Social skill turns relationships into coordinated action.

Goleman (1998) hallmarks

- Effectiveness in leading change.
- Persuasiveness.
- Expertise in building and leading teams.

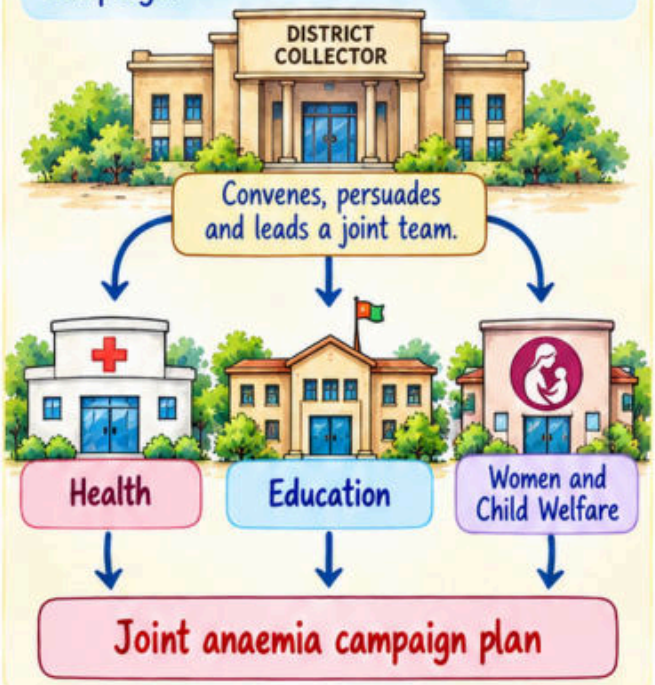
What is social skill?

Social skill is rapport and network building with a shared purpose, not empty charm.



Hypothetical example

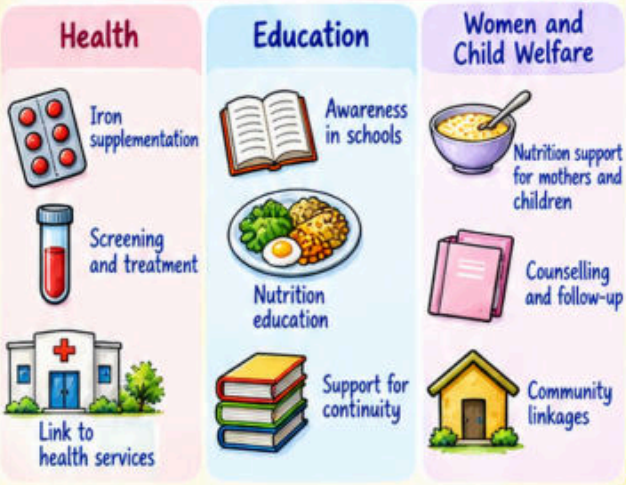
A district collector persuades departments and leads a joint team for an anaemia campaign.



From trust to action



Coordinated actions for the anaemia campaign



Empathy and social skill: different but connected

Building and retaining talent = Empathy

Empathy helps understand and support individuals, which builds and retains talent.

Building and leading teams = Social skill

Social skill brings people together, builds teams and keeps them working towards a shared purpose.

Illustrative public-service cases; identify the author, work and model version before matching a skill.

The 25-competence framework has its own labels

Daniel Goleman's framework groups emotional competence into five competency clusters with their own labels, containing twenty-five specific competences.

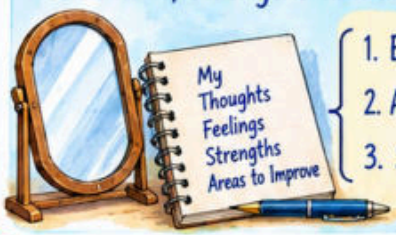


Personal Competence (12)

How we manage ourselves.

Self-Awareness (3)

Understanding our own emotions, strengths and limits.



1. Emotional awareness
2. Accurate self-assessment
3. Self-confidence

Self-Regulation (5)

Managing our emotions and behaviours.



1. Self-control
2. Trustworthiness
3. Conscientiousness
4. Adaptability
5. Innovativeness

Self-Motivation (4)

Harnessing inner drive to pursue goals.



1. Achievement drive
2. Commitment
3. Initiative
4. Optimism

Social Competence (13)

How we handle relationships with others.

Social Awareness (5)

Sensing and understanding the needs and perspectives of others.



1. Empathy
2. Service orientation
3. Developing others
4. Leveraging diversity
5. Political awareness

Social Skills (8)

Building and maintaining effective relationships.



1. Influence
2. Communication
3. Leadership
4. Change catalyst
5. Conflict management
6. Building bonds
7. Collaboration and cooperation
8. Team capabilities

Total number of competences

Personal Competence
3 + 5 + 4
= 12

+

Social Competence
5 + 8
= 13

=

Total
25
competences

Illustrative public-service cases; identify the author, work and model version before matching a skill.

Five components and four domains are different versions

Compare 1998 article five components listed exactly with later ESCI four domains and 12 competencies.

Goleman 1998 article Five components

1. Self-awareness
2. Self-regulation
3. Motivation
4. Empathy
5. Social skills

ESCI four domains and 12 competencies

Actual ESCI User Guide June 2011

Self-awareness
1 competency
1. Emotional self-awareness

Self-management
4 competencies
1. Emotional self-control
2. Achievement orientation
3. Positive outlook
4. Adaptability

Social awareness
2 competencies
1. Empathy
2. Organisational awareness

Relationship management
5 competencies
1. Coach and mentor
2. Inspirational leadership
3. Influence
4. Conflict management
5. Teamwork

What changed?

The 1998 article presented five components of emotional intelligence. The later ESCI framework reorganised these ideas into four broader domains and twelve specific competencies.

1998 Article	ESCI User Guide June 2011
Five components	Four domains 12 competencies

Version timeline

1998
ECI development as described in the ESCI User Guide timeline.

2007
ESCI reconceptualised.

2011
Actual ESCI User Guide June 2011 with four domains and 12 competencies.

Key takeaways

The five components and the four domains describe the same overall construct using different structures and levels of detail.

Broader components (1998 article)

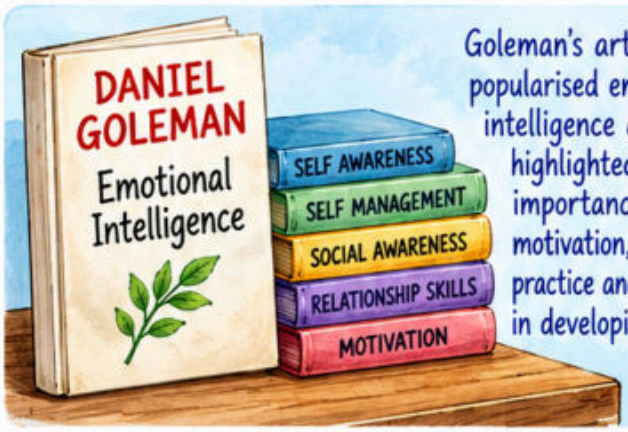
Specific competencies (later ESCI)

Always identify the author, work and version before comparing the components and domains.

1998 Article
2007 Reconceptualised
2011 ESCI User Guide

Illustrative public-service cases; identify the author, work and model version before matching a skill.

Learn the skills – but question sweeping claims.

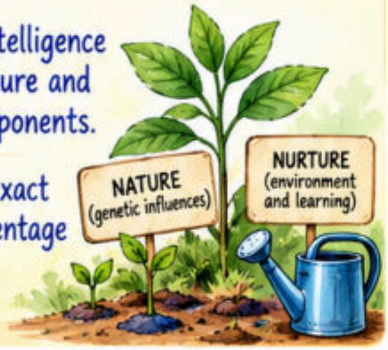


Goleman's article popularised emotional intelligence and highlighted the importance of motivation, extended practice and feedback in developing skills.

HISTORICAL AUTHOR CLAIM

Emotional intelligence has both nature and nurture components.

There is no exact genetic percentage stated.



GOLEMAN'S ARTICLE STRESSES

Motivation



Inner drive helps sustain effort.

Extended practice



Skills grow with continued practice.

Feedback

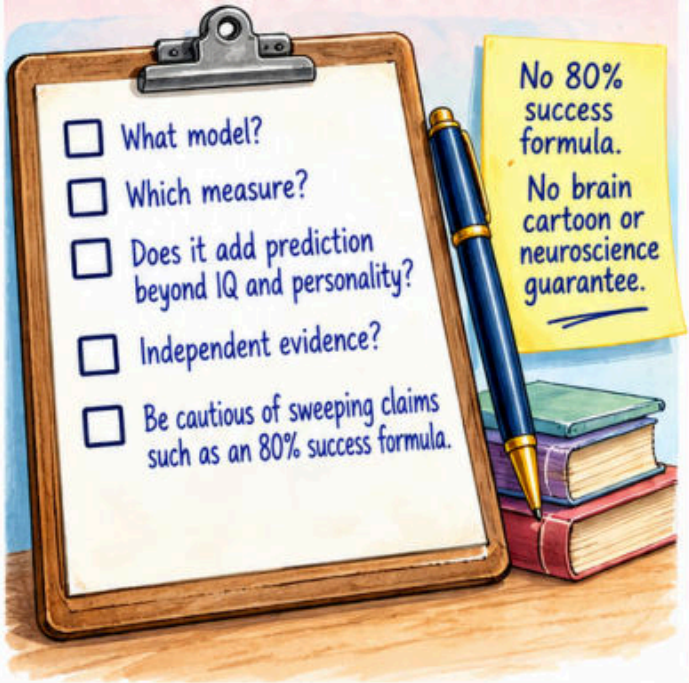


Meaningful feedback helps refine skills.

PRACTICE CYCLE



EVALUATION CHECKLIST



COMPARE TWO MODELS

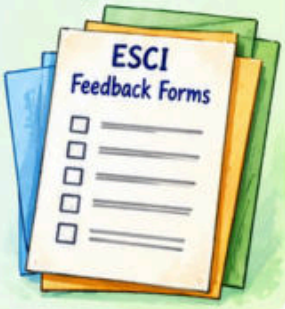
Ability model

- Measured by emotion problems using the MSCEIT (Mayer-Salovey-Caruso Emotional Intelligence Test).
- Focuses on performance on test items.



Competence model

- Measured by multirater behaviour feedback using the ESCI (Emotional and Social Competence Inventory).
- Focuses on observed behaviours from multiple raters.



Illustrative public-service cases; identify the author, work and model version before matching a skill.

Match the behaviour, not the similar-sounding word.

Hypothetical case 1

Admits limited survey experience.



→ Realistic self assessment →

Self-awareness



Hypothetical case 2

Calm response to changing relief rules.



→ Comfort with ambiguity →

Self-regulation



Hypothetical case 3

Persists after poor results.



→ Optimism →

Motivation



Hypothetical case 4

Interpreter at health camp.



→ Cross cultural sensitivity →

Empathy



Hypothetical case 5

Joins departments for campaign.



→ Team leadership →

Social skill



How to match: a simple workflow

Identify self or relationship. → Find the specific behaviour. → Match the framework version.



Quick revision: avoid similar-sounding words

Openness to change ≠ Leading change

Retaining talent ≠ Leading teams

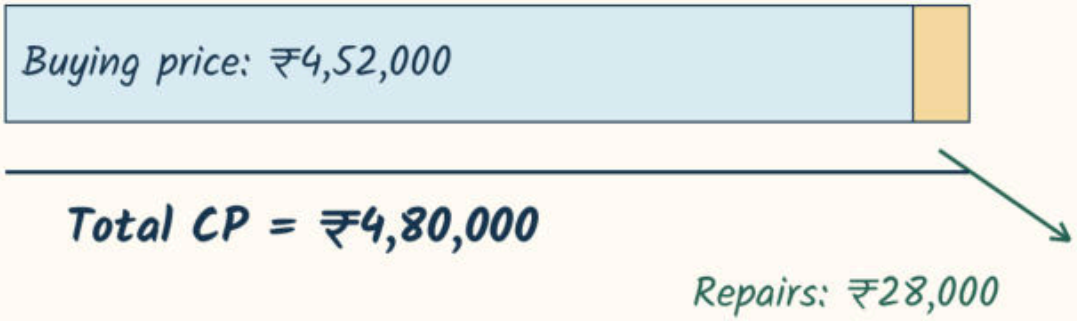
Illustrative public-service cases; identify the author, work and model version before matching a skill.

259.01 | PROFIT AND LOSS

Build the cost before counting the gain

Cost price is the investment to recover; selling price is the money received.

Worked house example



Each bar uses the same scale: ₹1,000 per unit of width.

SP = ₹4,92,000

Profit = SP − CP = ₹12,000

Profit % = 12,000 ÷ 4,80,000 × 100

= 2.5%

Leaving repairs out creates a false gain of ₹40,000. Include the stated overheads before applying a profit rate.

CP = buying price + relevant overhead expenses

Sources: supplied teaching examples; NIOS Mathematics 211, Lesson 8, 8.5.1. Arithmetic independently checked.

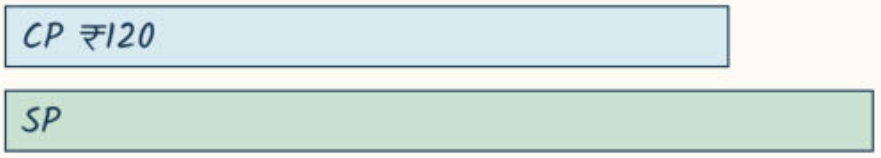
Mathematical teaching diagrams: proportional bars and exact item counts; worked examples are not market quotations.

259.02 | PROFIT AND LOSS

The price gap has a direction

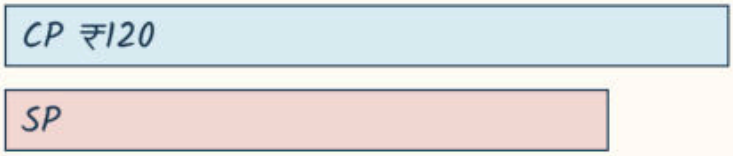
Compare SP with CP first. Then choose the sign and divide by CP.

GAIN: SP ₹144



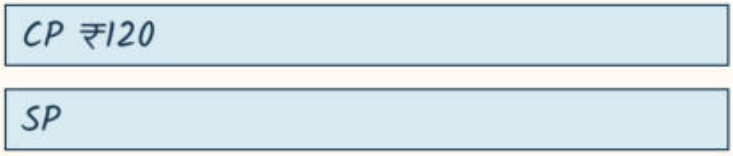
+24 rupees

LOSS: SP ₹100



−20 rupees

EVEN: SP ₹120



0 rupees

Gain: 24 ÷ 120 × 100 = 20%

Loss: 20 ÷ 120 × 100 = 16 2/3%

Even: SP = CP, so no gain or loss

Bars share a common scale. The denominator stays CP in both profit and loss calculations unless another base is explicitly named.

Sources: supplied teaching examples; NIOS Mathematics 211, Lesson 8, 8.5.1. Arithmetic independently checked.

Mathematical teaching diagrams: proportional bars and exact item counts; worked examples are not market quotations.

259.03 | PROFIT AND LOSS

Choose the denominator—not just the gap

A ₹300 profit can be 25% or 20%. The base decides which statement is being made.

CP ₹1,200 ; SP ₹1,500 ; profit ₹300

CP: ₹1,200 (4 equal parts)	₹300

1 part = ₹300

SP: ₹1,500 (5 equal parts)

On cost: 1 profit part ÷ 4 cost parts

300 ÷ 1,200 × 100 = 25%

This is the usual exam "profit per cent".

On sales: 1 profit part ÷ 5 sale parts

300 ÷ 1,500 × 100 = 20%

This is profit as a percentage of SP.

Business vocabulary: cost-based markup ≠ sales-based margin.

Sources: supplied teaching examples; NIOS Mathematics 211, Lesson 8, 8.5.1. Arithmetic independently checked.

Mathematical teaching diagrams: proportional bars and exact item counts; worked examples are not market quotations.

259.04 | PROFIT AND LOSS

Go forward by multiplication

Treat CP as 100 parts. A profit adds parts; a loss removes them.

CP ₹1,440, profit 12 1/2%



Each part = 1,440 ÷ 8 = ₹180

SP = 9 × 180 = ₹1,620

CP ₹120, loss 10%



SP = 120 × 0.9 = ₹108

At P% profit: SP = CP × (100 + P) ÷ 100

At L% loss: SP = CP × (100 − L) ÷ 100

P and L are the numerical rates: for 20% profit, use P = 20, not 0.20 in the expression 100 + P. The multiplier is 1.20.

Sources: supplied teaching examples; NIOS Mathematics 211, Lesson 8, 8.5.1. Arithmetic independently checked.

Mathematical teaching diagrams: proportional bars and exact item counts; worked examples are not market quotations.

259.05 | PROFIT AND LOSS

Undo a change by division

The percentage is of the unknown cost—not of the known selling price.

SP ₹540 at 20% profit

5 parts = cost ₹450	₹90

6 sale parts = ₹540; 1 part = ₹90

CP = 540 ÷ 1.2 = ₹450

Check: 450 + 20% of 450 = 540

Wrong shortcut

540 − 20% of 540 = ₹432

It subtracts a percentage of SP. The question gave a percentage of CP.

Reverse loss: SP ₹1,350 at 10% loss

CP = 1,350 ÷ 0.9 = ₹1,500

Check: 1,500 × 0.9 = 1,350

Sources: supplied teaching examples; NIOS Mathematics 211, Lesson 8, 8.5.1. Arithmetic independently checked.

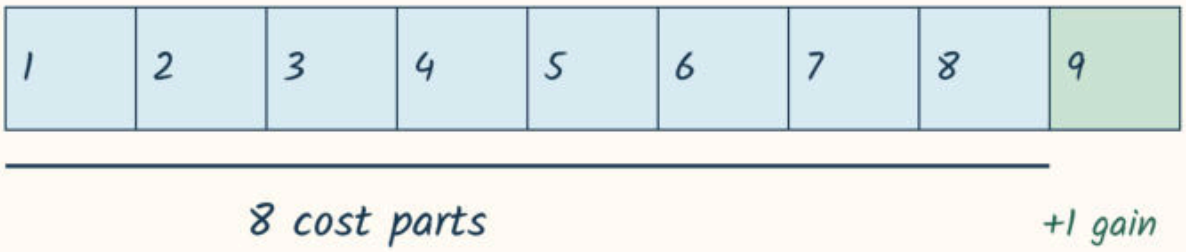
Mathematical teaching diagrams: proportional bars and exact item counts; worked examples are not market quotations.

259.06 | PROFIT AND LOSS

Fractions turn percentages into parts

In the SP/CP ratio, the denominator counts cost parts; the numerator counts selling-price parts.

12 1/2% profit means gain = CP/8



SP ₹1,800; one part ₹200; CP ₹1,600

Rate	SP/CP	Use it
Profit 10%	11/10	SP = CP × 11/10
Profit 16 2/3%	7/6	CP = SP × 6/7
Profit 20%	6/5	CP = SP × 5/6
Profit 25%	5/4	SP = CP × 5/4
Profit 33 1/3%	4/3	CP = SP × 3/4
Loss 12 1/2%	7/8	CP = SP × 8/7
Loss 25%	3/4	SP = CP × 3/4

Forward: multiply by SP/CP. Reverse: use its reciprocal.

Sources: supplied teaching examples; NIOS Mathematics 211, Lesson 8, 8.5.1. Arithmetic independently checked.

Mathematical teaching diagrams: proportional bars and exact item counts; worked examples are not market quotations.

259.07 | PROFIT AND LOSS

Equal selling prices do not cancel out

At equal profit and loss rates, the loss-making article had the larger cost.

Two cycles: each sold for ₹4,800

Cycle A: 20% profit Cycle B: 20% loss

A

CP ₹4,000

SP ₹4,800: gain ₹800

B

CP ₹6,000

SP ₹4,800: loss ₹1,200

Total CP = ₹10,000; total SP = ₹9,600

Net loss ₹400 ÷ ₹10,000 × 100 = 4%

Equal SP and equal x%: loss = $x^2/100$ per cent

For $0 < x < 100$ and equal SP: total CP = 2 SP ÷ $(1 - x^2/10{,}000)$. Therefore total SP is less than total CP by $x^2/10{,}000$ of the cost.

At 10% each way: loss 1%. At 0%: no gain or loss.

Sources: supplied teaching examples; NIOS Mathematics 211, Lesson 8, 8.5.1. Arithmetic independently checked.

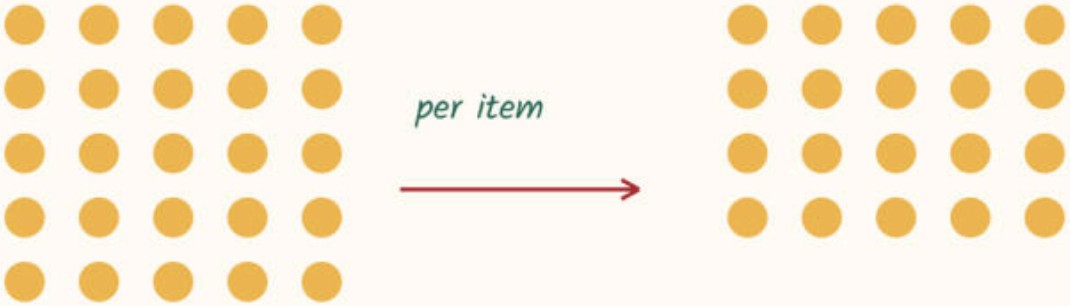
Mathematical teaching diagrams: proportional bars and exact item counts; worked examples are not market quotations.

259.08 | PROFIT AND LOSS

Different bundles? Compare one item

The quantities in the buying and selling bundles must not be mixed.

Oranges: buy 25 for ₹100; sell 20 for ₹100



25 items: cost ₹4 each

20 items: sell ₹5 each

Profit per orange = ₹5 − ₹4 = ₹1

Profit % = 1 ÷ 4 × 100 = 25%

₹100 on each side does not mean "no profit".

General rule: buy m for ₹a; sell n for ₹b

CP/item = a/m; SP/item = b/n

Profit % = [(b/n) ÷ (a/m) − 1] × 100

= [bm/(an) − 1] × 100

Sources: supplied teaching examples; NIOS Mathematics 211, Lesson 8, 8.5.1. Arithmetic independently checked.

Mathematical teaching diagrams: proportional bars and exact item counts; worked examples are not market quotations.

259.09 | PROFIT AND LOSS

Equal totals can hide unequal unit prices

"CP of x articles = SP of y articles" is an equation about total money.

CP of 15 articles = SP of 12 articles

15 × CP per article

12 × SP per article

Equal bar lengths mean equal total money.

15 CP = 12 SP; SP/CP = 15/12 = 5/4

Profit = (5 − 4)/4 of CP = 1/4 of CP

Profit % = 25%

General: x CP = y SP; SP/CP = x/y

Profit % = (x − y)/y × 100

If x < y, there is a loss: (y − x)/y × 100. The denominator is y, not x. Here 3/15 gives 20% of SP—not profit on CP.

Sources: supplied teaching examples; NIOS Mathematics 211, Lesson 8, 8.5.1. Arithmetic independently checked.

Mathematical teaching diagrams: proportional bars and exact item counts; worked examples are not market quotations.

259.10 | PROFIT AND LOSS

Check every result by rebuilding the deal

A reverse calculation is complete only when it reproduces the stated selling price.

1 New target profit, same cost

SP ₹258 at 20% gain; CP = 258 ÷ 1.2 = ₹215

For 30% gain: new SP = 215 × 1.3 = ₹279.50

Check: ₹64.50 gain ÷ ₹215 = 30%

2 Swapped bundles do not cancel

Buy 12 for ₹10: CP/item = 5/6

Sell 10 for ₹12: SP/item = 6/5

SP/CP = (6/5) ÷ (5/6) = 36/25; 44% gain

A reliable calculation path



Use the named base. Include stated overheads. Divide to reverse. Add rupee profits and losses before finding the overall percentage.

Sources: supplied teaching examples; NIOS Mathematics 211, Lesson 8, 8.5.1. Arithmetic independently checked.

Mathematical teaching diagrams: proportional bars and exact item counts; worked examples are not market quotations.

Heat and lightning: from recommendation to relief

Sixteenth Finance Commission: recommended inclusion

Recommended inclusion of heatwaves and lightning in the list of natural calamities for assistance from the State Disaster Response Fund (SDRF) and the National Disaster Response Fund (NDRF).



1 February 2026:

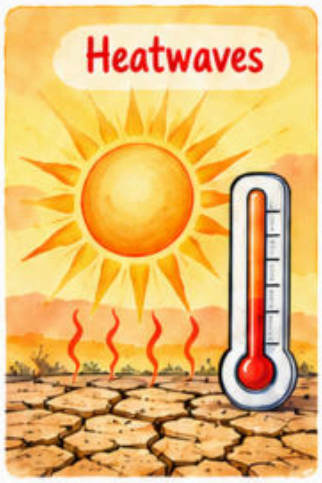
Finance Ministry memorandum records acceptance of the disaster-fund recommendations of the Sixteenth Finance Commission.



4 August 2026:

Lok Sabha reply confirms that the Ministry of Home Affairs (MHA) has included heatwaves and lightning for 2026–31, as per the accepted recommendations.







From inclusion to action: how relief and mitigation flow

SDRF / NDRF

relief assistance under norms.



Disaster Mitigation Funds

eligible Heat Wave Mitigation Projects.



Notified natural calamities ≠ a new category called national disasters.

Clear division of roles:

Commission recommends

The Sixteenth Finance Commission recommends inclusion based on assessment of needs and fiscal support.

→

MHA includes

The Ministry of Home Affairs includes heatwaves and lightning in the list of natural calamities for 2026–31, based on the accepted recommendations.

→

NDMA guides plans

NDMA issues guidelines to help States and Union territories prepare Heat Action Plans.

Inclusion is already confirmed—not merely proposed.

Position checked 1 November 2026.

Conceptual illustrations and exact source-based teaching diagrams; dates and data vintages are stated.

260.02 | HEAT, LIGHTNING AND DISASTER FINANCE

Notified status changes the funding route

Read the date: the old list and the 2026–31 position are not contradictory.

20 August 2025: historical list of 12

Cyclone, drought, earthquake, fire, flood, tsunami, hailstorm, landslide, avalanche, cloudburst, pest attack, frost and cold wave.

Local-disaster window

Up to 10% of annual SDRF allocation, subject to prescribed conditions and norms, for locally recognised disasters outside the notified list.

↓

2026–31: heatwave + lightning included

MHA inclusion brings these hazards within the notified SDRF/NDRF relief framework. They no longer depend on that local-disaster window for this route.

Eligible event → Applicable norms → Relief process

Notification is not a promise of unlimited or automatic compensation. Relief remains governed by the applicable norms and process.

Sources: PIB 20 August 2025, PRID 2158403; MHA Lok Sabha reply 2541, 4 August 2026, pp.2–3.

260.03 | HEAT, LIGHTNING AND DISASTER FINANCE

Two ratios answer two different questions

Accepted State-level corpus for 2026–27 to 2030–31: ₹2,04,401 crore.

What is the money for?



Response: ₹1,63,521 crore

SDMF: ₹40,880 crore

Who contributes?



States other than Northeastern and Hilly (NEH)



NEH States: Union to State = 90:10

Combined contributions

Union: ₹1,55,915.85 crore

States: ₹48,485.15 crore

Source: Finance Ministry Explanatory Memorandum, 1 February 2026, paras20–21. Official displayed amounts preserved.

260.04 | HEAT, LIGHTNING AND DISASTER FINANCE

Funds need both flexibility and accountability

National NDRF + NDMF allocation: ₹79,406 crore for 2026–31; separate from State corpus.

SDRF: reallocate between two purposes

Response and Relief	⟷	Recovery / Reconstruction

Unspent-balance gate

Balance > sum of past 3 years' annual SDRF allocations? Further releases may be temporarily withheld.

When balance falls below the threshold, withheld funds are released.

NDMIS data condition: from 2027–28

For a financial year, complete data entry AND validation by 31 May of the following year.

Necessary condition for the Disaster Management Grant.

2027–28 is a future applicability date as of 1 November 2026. Allocation is not the same as money already released or spent.

Source: Finance Ministry Explanatory Memorandum, 1 February 2026, paras21–25. No assumed release achievements.

260.05 | HEAT, LIGHTNING AND DISASTER FINANCE

Preparedness moves to the mitigation side

Compare award periods—not two descriptions of an unchanged rule.

Fifteenth FC: 2021–22 to 2025–26

Preparedness / capacity building under response

State corpus: ₹1,60,153 crore

National corpus: ₹68,463 crore

↓

Sixteenth FC: 2026–27 to 2030–31

Preparedness / capacity building under mitigation

State corpus: ₹2,04,401 crore

National corpus: ₹79,406 crore

SDMF and NDMF cover preparedness and capacity building under the accepted XVI-FC recommendation. The State SDRF:SDMF split is 80:20; do not assume this is the national split.

Sources: MHA Lok Sabha reply1895, 1 August2023, pp.2,7; Finance Ministry EM, 1 February2026, paras20–25.

260.06 | HEAT, LIGHTNING AND DISASTER FINANCE

A hot day is not automatically a heat wave

IMD bulletin criteria: station threshold, intensity test, then spatial and time conditions.

1. Maximum-temperature eligibility gate

Plains	Coast	Hills
At least 40°C	At least 37°C	At least 30°C

2. Intensity: departure from normal

4.5°C to 6.4°C: heat wave

More than 6.4°C: severe heat wave

OR actual maximum—plains only

At least 45°C: heat wave; at least 47°C: severe

↓

3. At least 2 stations in a met subdivision

At least 2 consecutive days; declare on day 2

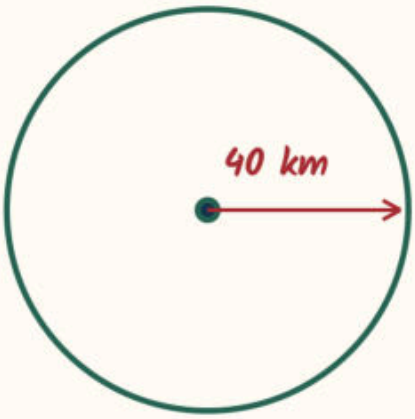
Worked station example: maximum 42°C, normal 36°C gives departure +6°C. The station meets the heat-wave test, but declaration still needs the 2-station/2-day conditions.

Source: IMD bulletin dated30 June2026, Annex7, PDFp9. Criteria reference, not a forecast for today.

260.07 | HEAT, LIGHTNING AND DISASTER FINANCE

Warning lead time must become action time

Damini and IMD nowcasts serve related—but different—time windows.



Damini: developed and maintained by IITM. Lightning in the user's vicinity during the last 15 minutes and likely occurrence in the next half hour.

Conceptual radius only—not a map or guaranteed safe boundary.



IMD thunderstorm nowcasts: 1–3 hours ahead

District/town-specific warnings support disaster managers and the public. Local-language communication must reach the last mile.

Source: Ministry of Earth Sciences, Lok Sabha reply3235, 9 August2023, p2. Dated capability description.

A Heat Action Plan turns a forecast into protection

The National Disaster Management Authority (NDMA) issued guidelines in October 2019 to help heatwave-prone States and Union territories prepare Heat Action Plans.

Why Heat Action Plans?

They help authorities use early warnings, plan ahead and take timely action to reduce the impact of heat waves on people's health, livelihoods and essential services.



Illustrative implementation sequence—not a claim of measured results

IMD warning

India Meteorological Department issues weather bulletin on likely heat wave conditions.



State and district coordination

Authorities review the warning, activate plans and coordinate across departments at state and district levels.



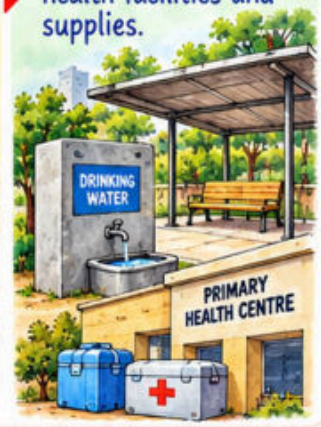
Last-mile communication

Warnings and advice reach people through multiple channels in local languages.



Prepared local services

Essential services are made ready, such as drinking-water points, shade in public spaces and availability of health facilities and supplies.



From factors to risk, and from action to safer outcomes

Outdoor exposure + vulnerability → Higher risk of heat-related harm



Early warning + practical preparation → Risk reduction



Three key principles for effective Heat Action Plans

1. Warning must reach the person at risk.



2. Coordination assigns responsibilities before the event.



3. Review reporting and response after the season.



Relief and mitigation serve different purposes

Relief responds to harm during and immediately after a heat wave.



Mitigation reduces risk before future events by strengthening systems and preparedness.



Source: MHA Lok Sabha reply 4 August 2026; PIB 20 August 2025.

Conceptual illustrations and exact source-based teaching diagrams; dates and data vintages are stated.

260.09 | HEAT, LIGHTNING AND DISASTER FINANCE

Keep the year—and the counting system

Historical NCRB deaths and a partial-season health-surveillance count cannot be merged.

NCRB heat / sun stroke deaths

Year	India	AP	Telangana
2018	890	97	107
2019	1,274	128	156
2020	530	50	98
2021	374	22	43
2022	730	47	62

NHRIDS: 1 March–26 July 2026 only

Area	Heatstroke cases	Confirmed deaths
India	4,853	20
Andhra Pradesh	540	4
Telangana	915	2

Different source, definition and time coverage. Do not claim a fall from 730 to 20, add the two series, or present 20 as the full-year 2026 total.

Sources: PIB20 August2025, NCRB annex; MHA Lok Sabha reply2541, 4 August2026, annexp4. No rounded figures.

A sound answer connects finance with prevention

Climate-sensitive disaster governance

Recognition: MHA includes heatwave and lightning for 2026-31.

Finance: relief norms plus mitigation funding.

Preparedness: IMD warnings, HAPs and last-mile communication.

Accountability: verified records, clear eligibility and validated data.

Describe the change → Explain relief access → Show prevention tools → Identify implementation challenges → Give a balanced way forward

Analytical challenges (not official findings)

Cause-of-death attribution can be difficult.



Remote communities may face reporting and warning gaps.



Verification should prevent false claims without excluding genuine victims.



Records, communication and on-ground protection



SYNTHESIS: Notification opens a funding route. Effective protection still needs timely warnings, local preparedness, reliable records and accountable delivery.

Revision cues:

- Recommendation ≠ implementation.
- Allocation ≠ expenditure.
- A historical annual count ≠ a partial-season surveillance count.

Synthesis from MHA reply 4 August 2026 and Finance Ministry memorandum 1 February 2026; analytical challenges are teaching inferences.

Conceptual illustrations and exact source-based teaching diagrams; dates and data vintages are stated.