

UPSC PREPARATION

Two Time Zones in India - Benefits and Problems

India's national timekeeper, Council of Scientific & Industrial Research-National Physical Laboratory(CSIR-NPL), estimates that the country's potential savings in energy consumption to be 20 million kWh a year if it follows two time zones.

Council of Scientific & Industrial Research-NPL suggested two time zones in India: They are IST-I for most of India and IST- II for the Northeastern region – separated by a difference of one hour

At present, the country observes a single time zone based on the longitude passing through 82°33'E. Under the new proposal, IST-I covers the regions falling between longitudes 68°7'E and 89°52'E and IST-II covers the regions between 89°52'E and 97°25'E. This will include all the northeastern states as well as Andaman and Nicobar Islands.

Indian Standard Time(IST)

- The Indian Standard Time is calculated from 82°30'E meridian(Indian Standard Meridian) passing through Mirzapur. Therefore, IST is plus 5.30 hours from the GMT.
- The standard meridian of India passes through 5 states namely Uttar Pradesh, Madhya Pradesh, Chattisgarh, Orissa, Andhra Pradesh

Issues of having a single Time Zone:

- India stretches 3,000km from east to west, spanning roughly around 30 degrees longitude with a two-hour difference in mean solar times. That means the sun rises nearly two hours earlier in the east of India than in the far west.
- The sun rises and sets earlier there than the official working hours, and the states in the northeast lose on the vital daylight.
- Hours of productivity in the eastern region is reduced because the rising and setting of the sun impact our body clocks or circadian rhythm. As it gets darker in the evening, the body starts to produce the sleep hormone melatonin.
- Researchers at the National Physical Laboratory said the single time zone was "badly affecting lives" as the sun rises and sets much earlier than official working hours.
- People in the east start using their lights earlier in the day and hence use more electricity.
- In winters, the problem was said to be worse as the sun set so early that more electricity was consumed "to keep life active".

Benefits of having two Time Zones in India

- The research paper by National Physical Laboratory establishes that India's potential savings in energy consumption could be around 20 million kWh a year if it follows two time zones as it helps in the usage of many daylight hours, which are now being wasted in the eastern region.
- Synchronises sunrise and sunset timings with office hours. People will be able to work better and plan better, according to natural cycles.
- We would have healthier and happier people who adhere to their circadian rhythm. Even now, unofficially, the tea gardens of Assam have been following 'Chaibagaan time' which is one hour ahead of the IST.

- A reduction in energy consumption will cut down India's [carbon footprint](#). Thus boosting India's resolve to fight climate change.

Problems of having two time zones:

- The possibilities of rail accidents would increase because of the two Time zones. Railway signals are not fully automated, and many routes have single tracks.
- Resetting clocks with each crossing of the time zone.
- The overlap between office timings reduces if there are two time zones. Important sectors like [banks](#), industries and MNCs would face difficulties in adjusting to the new time zones.
- The marking of the dividing line of the two zones would be a problem.
- Two time zones can have adverse political consequences as India apart from getting divided on the lines of religion, caste, race, language, etc, now will get divided on the lines of Time Zones.

Conclusion

The government and other stakeholders should arrive at a better solution to use the lost light hours and to suit the circadian rhythm of all the citizens of India. The government has to work towards gathering data and tracking changes accordingly for proper implementation of changes recommended.

Frequently Asked questions

How many time zones are in India?

India has one standard time zone called Indian Standard Time(IST). It is calculated from 82°30'E meridian passing through Mirzapur. Therefore, IST is plus 5.30 hours from the GMT.

What is the standard meridian of India?

The time along the Standard Meridian of India (82°30'E) passing through Mirzapur (in Uttar Pradesh) is taken as the standard time for the whole country.